

Technical Specifications



CONFORMS TO ANSI/UL STD. 1995,
CERTIFIED TO CAN/CSA STD. C22.2 NO. 236 AND
ANSI/AHRI STD. 390

PSH - SERIES

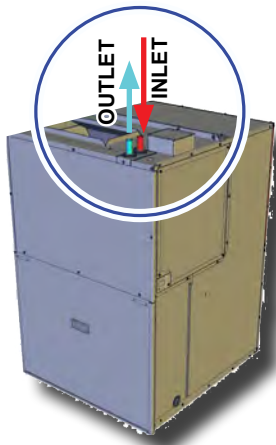
Hydronic Heating / Electric Cooling

Self contained, high efficiency thru-the-wall heating & cooling unit

Heating - 12000 - 63000 Btuh

Cooling - 12800 Btuh, 16500 Btuh, 19500 Btuh, 24400 Btuh

FEATURES

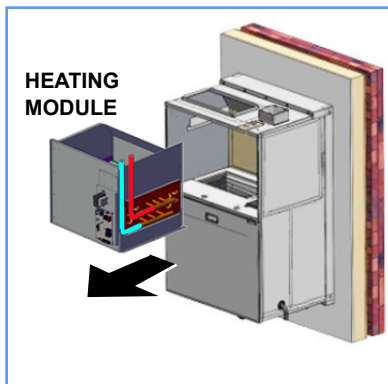


COMPATIBLE BOX SIZE

- Industry standard footprint for retrofit applications
- Appliance shell dimensions:
43-1/8" High x 28" Wide x 32" Deep
- Wall Sleeve dimensions where penetrating exterior wall:
44-7/8" High x 28-7/8" Wide
- Standard TAUPE color
- Custom color options are available

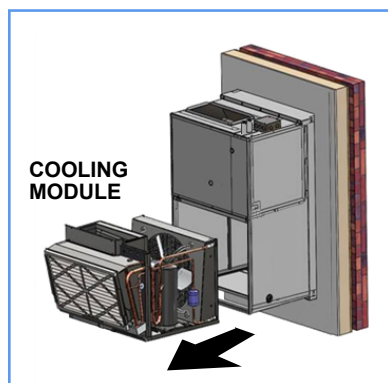
FEATURES

- Up to 10.8 EER
- Up to 24400 Btuh Cooling
- Easily removable R-410A Air conditioning module
- Micro-Channel Condenser and Evaporator Coils
- High efficiency Copeland scroll compressor
- Pre-wired and pre-charged
- Up to 63000 Btuh Heating
- Easily removable hydronic heating modules containing 3 row or 4 row hot water coil
- 24VAC color coded din rail mounted terminals for easy thermostat wire connections
- 24VAC output signal for activating field installed water circulating pump or isolation valve
- Factory installed freeze protection to prevent water coil from freezing during non-use.
- Activates water circulation at 40°F and deactivates at 60°F.
- Plug-and-play installation and service



CIRCULATION BLOWER

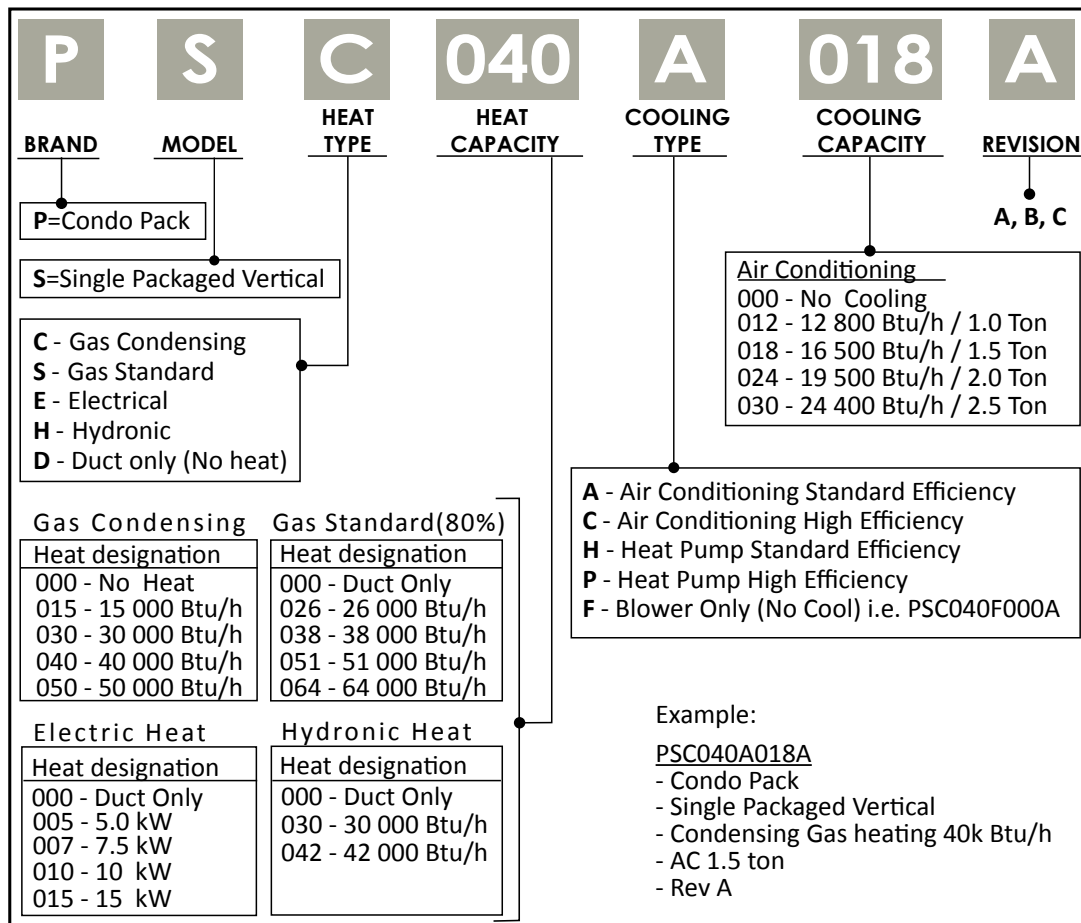
- Dual Inlet Blower for higher flow rates / reduced air noise
- Endura Pro Multi-Speed Electronically Commutated Motor for increased electrical efficiency



SERVICE ADVANTAGES

- Indoor access to all parts & maintenance needs
- Innovative, dual slide-out chassis can be partially or fully removed for efficient servicing.
- Hot water coils are equipped with manual drain and vent valves for flushing water and releasing of trapped air during installation or servicing.
- Extended water inlet & outlet copper tube connections (3/4" water pipe) for easy installation.
- With spare modules, building management can perform quick swap outs, maintaining indoor conditions in the apartment/condo, while troubleshooting non functioning units off line.
- All control harnesses are separated with modular quick disconnects so module swap outs do not require time consuming rewiring.

NOMENCLATURE



ELECTRICAL AND PHYSICAL DATA
TABLE 1.

Electric and Physical Data												
Model No.	Minimum Circuit Ampacity (A)	Max. Overcurrent protection device (A)	COMPRESSOR		OUTSIDE FAN MOTOR			INDOOR BLOWER				
			Comp. Rated Load Amps (RLA)	Comp Locked Rotor Amps (LRA)	Nominal RPM	Rated Load Amps	Cond. Motor HP	Wheel Dia x Width (in x in)	Rated Load Amps	HP		
PSH030A012A	10.7	15	5.5	26	1075	1	1/6	10 x 6	2.8	1/3	208-230/60/1	197-253
PSH030A018A	15.1	20	9	48		1	1/6					
PSH030A024A	20.7	30	13.5	58.3		1	1/6					
PSH030A030A	20.3	30	12.8	64		1.5	1/4					
PSH030F000A	3.5	15	NA	NA		NA	NA					
PSH042A012A	10.7	15	5.5	26		1	1/6					
PSH042A018A	15.1	20	9	48		1	1/6					
PSH042A024A	20.7	30	13.5	58.3		1	1/6					
PSH042A030A	20.3	30	12.8	64		1.5	1/4					
PSH042F000A	3.5	15	NA	NA		NA	NA					

HEATING MODULE PERFORMANCE MATRIX

TABLE 3.

Complete performance matrix from hydronic heating module								
Coil (FH x FL: 12" X 19")	Air FLOW (CFM)	GPM	Fluid Pressure Drop (Ft. Water)@ 130F	Coil Capacity (Btu/hr)				
				Inlet Water Temperature (F)				
				120F	130F	140F	150F	160F
CHHM030A (3 ROW)	388	1	0.65	11800	14000	16400	18900	21500
		2	2.28	14100	16800	19600	22400	25200
		3	4.77	14900	17800	20700	23700	26500
	529	1	0.65	13600	16100	18700	21700	24600
		2	2.28	16900	20100	23500	27000	30400
		3	4.77	18200	21700	25300	29000	32600
	744	1	0.65	15600	18500	21400	24700	28100
		2	2.28	20500	24300	28400	32700	36900
		3	4.77	22600	26800	31400	36000	40500
	908	1	0.65	16600	19700	22800	26200	29800
		2	2.28	22600	26700	31200	35900	40600
		3	4.77	25200	29800	34900	40100	45200
	971	1	0.65	16900	20100	23300	26700	30400
		2	2.28	23300	27600	32100	37000	41900
		3	4.77	26000	30900	36200	41500	46800
CHHM042A (4 ROW)	388	1	0.88	14000	16600	19300	22200	25100
		2	3.02	16700	19800	23200	26500	29800
		3	6.26	17600	21000	24400	27900	31400
	529	1	0.88	16100	19100	22100	25400	28800
		2	3.02	20400	24200	28200	32300	36400
		3	6.26	21900	26100	30400	34800	39100
	744	1	0.88	18300	21700	25200	28600	32600
		2	3.02	24800	29400	34200	39300	44400
		3	6.26	27500	32600	38000	43600	49000
	908	2	3.02	27300	32400	37500	43100	48800
		3	6.26	30800	36500	42600	48800	55100
		4	10.52	32700	38800	45300	51900	58400
		5	15.71	33900	40300	47100	53900	60500
	971	3	6.26	31900	37800	44100	50600	57100
		4	10.52	34000	40300	47200	54000	60800
		5	15.71	35400	42100	49100	56200	63100

*All specifications and designs can change without notice to allow for on-going improvements. Images may not be exactly as shown. Consult with your owner's manual for current information.
Check all local and national building codes and gas regulations. Napoleon® is a registered trade mark of Wolf Steel Ltd.

AIR FLOW

TABLE 4.

CFM at External Static Pressure (Inches of Water Column) for CHHM030A-3ROW COIL											
Speed Tap#	Motor Speed	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1	100%	999	967	939	909	875	833	780	682	595	544
2	85%	933	915	890	866	823	781	719	662	588	544
3	60%	779	755	734	707	673	643	609	578	537	484
4	35%	577	556	511	512	466	389	348	313	289	254
5	25%	472	421	388	340	292	251	229	199		

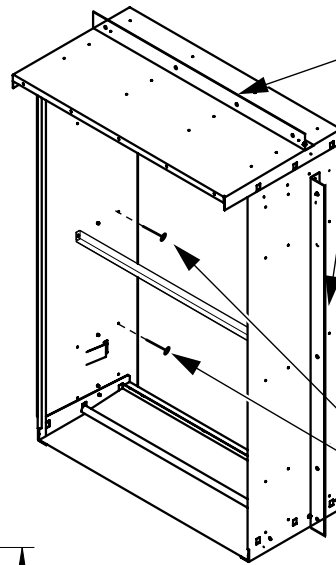
TABLE 5.

CFM at External Static Pressure (Inches of Water Column) for CHHM042A-4ROW COIL											
Speed Tap#	Motor Speed	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1	100%	980	943	918	883	852	800	750	633	578	495
2	85%	918	894	866	837	792	745	684	622	565	462
3	60%	768	737	716	684	656	622	582	555	515	461
4	35%	563	539	492	443	413	375	332	296	276	245
5	25%	458	404	371	322	276	234	218	198		

TABLE 6.

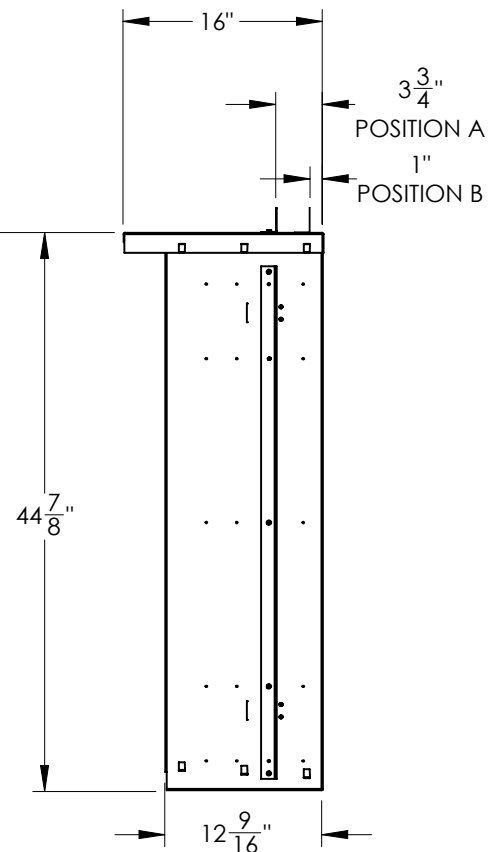
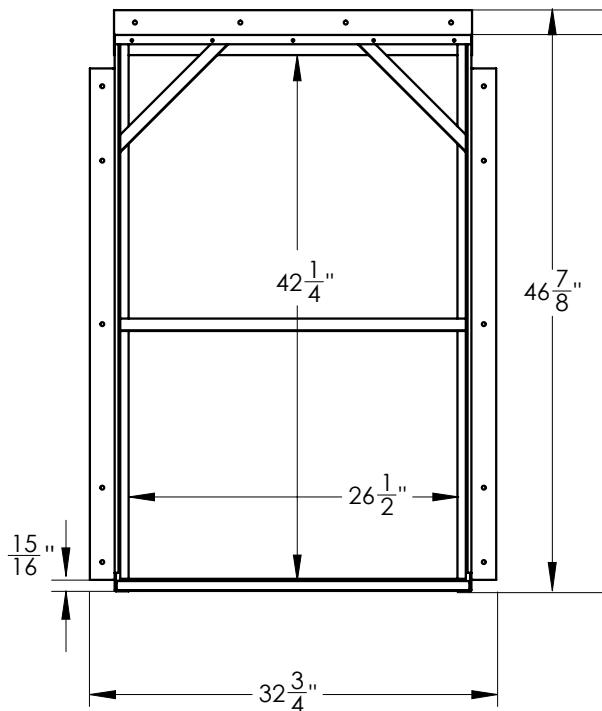
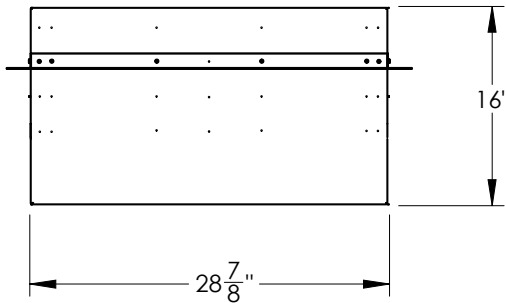
Available Motor Speed Taps								
Model No.	Heating/Cooling Module	Setting	Speed Tap#		Model No.	Heating/Cooling Module	Setting	Speed Tap#
PSH030A012A	CHHM030A	FACTORY	2		PSH042A012A	CHHM042A	FACTORY	2
		HI	1				HI	1
	CACM012A	FACTORY	5			CACM012A	FACTORY	5
		HI	4				HI	4
	G - continuous fan		3			G - continuous fan		3
PSH030A018A	CHHM030A	FACTORY	2	PSH042A018A	CHHM042A	FACTORY	2	
		HI	1			HI	1	
	CACM018A	FACTORY	3		CACM018A	FACTORY	3	
		HI	2*			HI	2*	
	G - continuous fan		5		G - continuous fan		5	
PSH030A024A	CHHM030A	FACTORY	2	PSH042A024A	CHHM042A	FACTORY	2	
		HI	1			HI	1	
	CACM024A	FACTORY	3		CACM024A	FACTORY	3	
		HI	2*			HI	2*	
	G - continuous fan		5		G - continuous fan		5	
PSH030A030A	CHHM030A	FACTORY	2	PSH042A030A	CHHM042A	FACTORY	2	
		HI	1*			HI	1*	
	CACM030A	FACTORY	1		CACM030A	FACTORY	1	
		HI	NA			HI	NA	
	G - continuous fan		5		G - continuous fan		5	
*IMPORTANT: Do not use common motor speed tap for multiple functions; Connecting (any combination of) air conditioning blower speed, heating blower speed, and continuous fan speed to the same motor speed tap will cause the unit to malfunction. Each of the three blower functions must be connected to separate motor speed taps.								

WALL SLEEVE DIMENSIONS

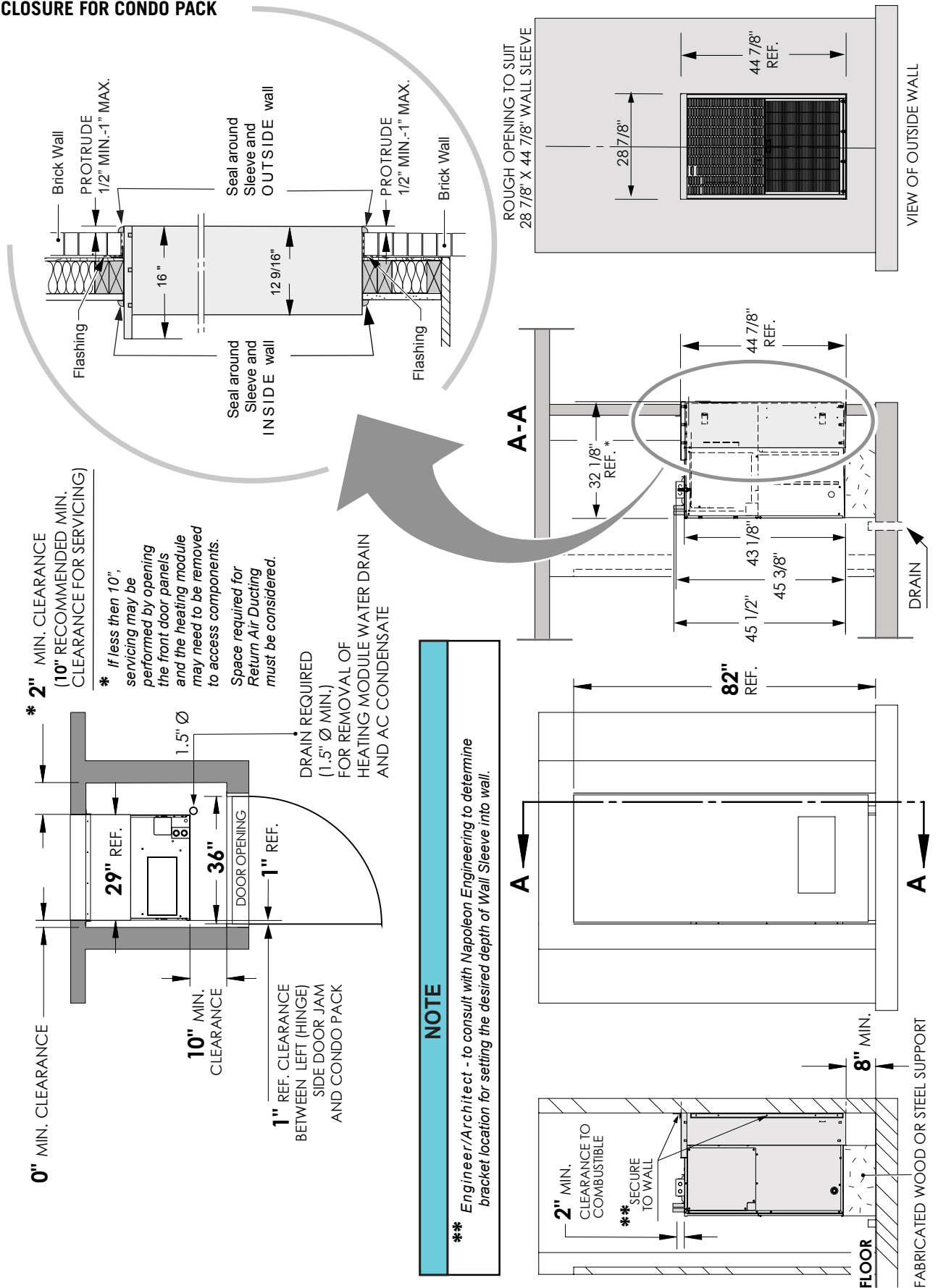


TO IMPROVE RIGIDITY AND REDUCTION IN VIBRATION WALL MOUNTING, BRACKETS CAN BE USED TO AFFIX WALL SLEEVE TO BUILDING SUBSTRUCTURE FROM INSIDE OR OUTSIDE BUILDING. ENGINEER/ARCHITECT TO CONSULT WITH NAPOLEON ENGINEERING TO DETERMINE BRACKET LOCATION FOR SETTING THE DESIRED DEPTH OF WALL SLEEVE INTO WALL.

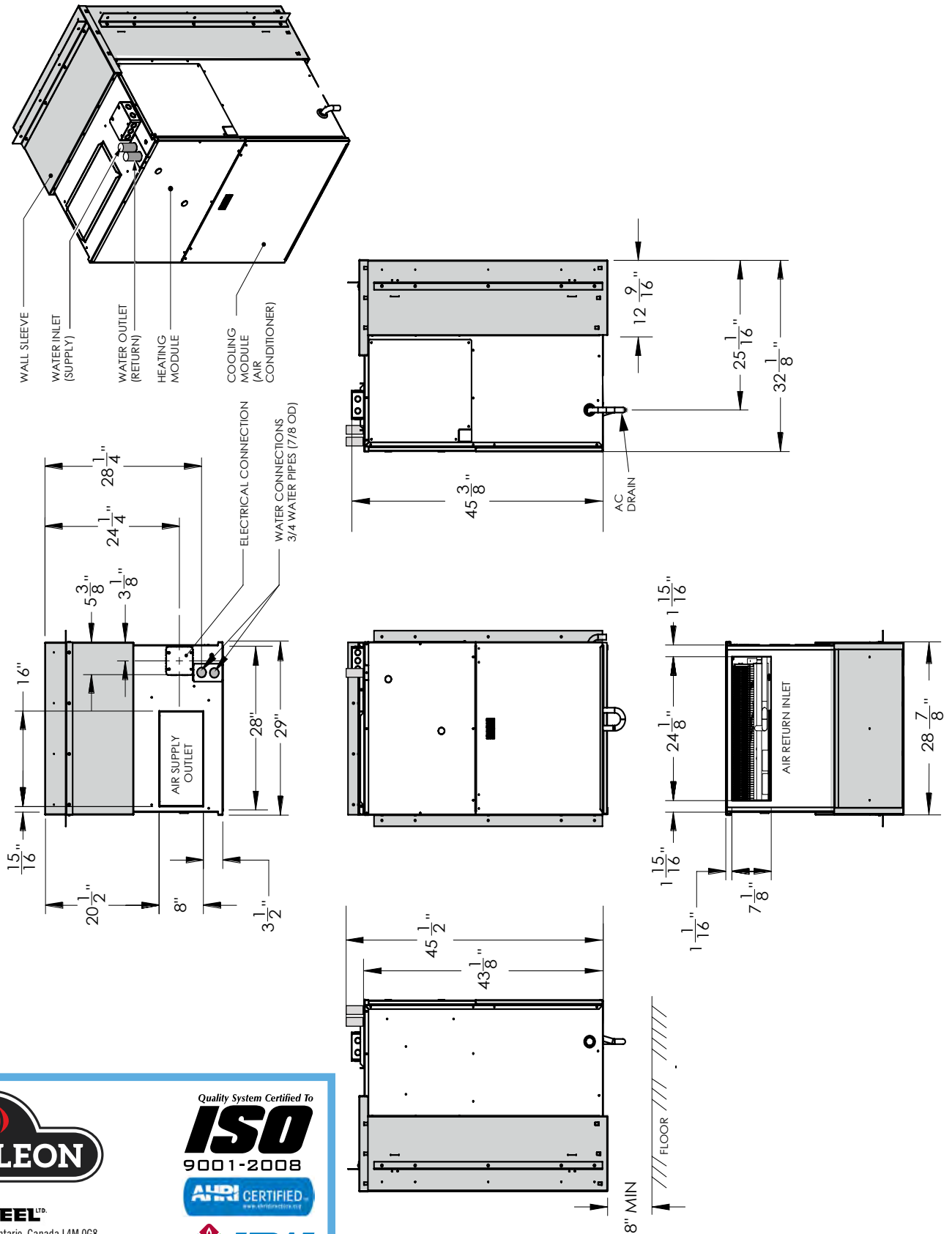
WALL SLEEVE IS DIRECTLY LAGGED TO WALL SUBSTRUCTURE.



ENCLOSURE FOR CONDO PACK



CONDO PACK SHOWN IN WALL SLEEVE



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