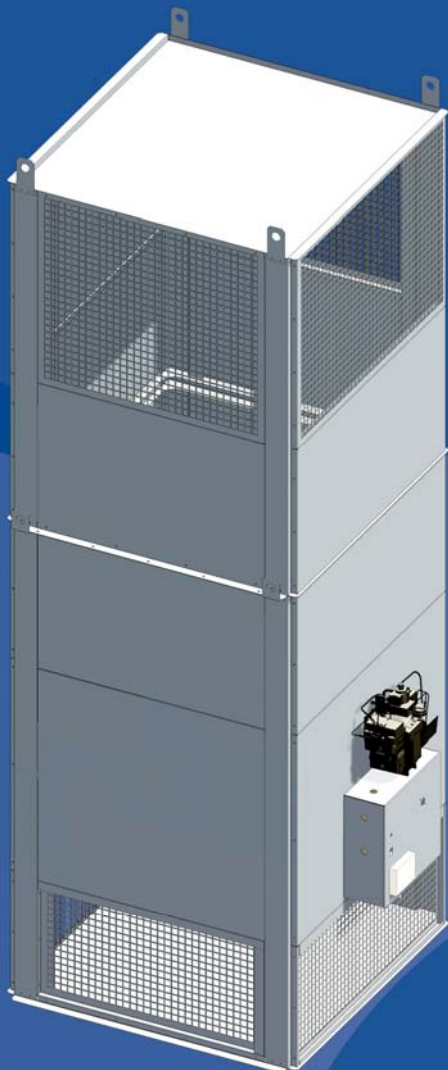




**7400-Series**





# **Rapid**<sup>®</sup> *Engineering LLC*

**Small Indirect-Fired Air Turnover Units  
For Heating and/or Cooling Applications**



## **Industry-Leading 85% Efficient Burner**

**Exceeds market benchmarks for  
drum-and-tube indirect-fired air turnover equipment.**

-  Can be ideal for smaller commercial, institutional and industrial spaces: Compact design allows unit to be placed in facilities with ceiling height as low as 13ft.
-  Dependable, Trustworthy Operation: Unit includes touchsafe electrical panel, factory-mounted rotary disconnect, high temperature limit switch and power cut-off switches at inlet plenum access as standard.
-  Helps minimize heat stratification: Can maintain uniform vertical and horizontal building temperatures.
-  Unique, Modular Design: Cooling module can be added to non-cool units in field.

**1.800.536.3461**

**www.rapidengineering.com**



# **RAPID® 7400-Series**

RAPID® small air turnover units are typically installed in new or retrofit commercial and industrial applications.

## **Reliable, Efficient System Operation Provided by:**

- Four-sided inlet and three-sided discharge plenums with grilles to provide consistent and efficient air movement throughout the space.
- High temperature limit switch, which monitors discharge temperature to prevent an overheating situation.
- Power burner with built-in combustion fan to eliminate induced draft fan in flues less than 40ft in length.
- Factory-mounted rotary disconnect which automatically cuts power to unit when control enclosure door is opened.
- Touch-safe electrical panel to prevent finger access to hazardous components.
- Two-stage, R410A A-frame cooling coil, mounted above heat exchanger.
- Unit-mounted seven-day programmable thermostat with fan-only and temporary override features.

## **Ease of Maintenance Provided by:**

- Filters housed in filter racks located on exterior of inlet plenum for easy cleaning and changing.
- Fan and fan motor easily accessible through inlet plenum.
- Exterior-mounted burner assembly provides unobstructed access for operation and maintenance.

## **Long Lasting Construction Provided by:**

- Fully-painted cabinet that provides long-lasting and visually-pleasing unit exterior.
- Heavy-duty durable propeller fan with 10 gauge blades and heavy-gauge welded venturi frame for low ambient sound.
- Multi-pass, drum-and-tube heat exchanger consisting of 321 stainless steel primary drum and mild steel secondary tubes.
- Premium efficiency, totally-enclosed fan-cooled (TEFC) motor as standard to protect against damage.
- Self-standing cabinet composed of 20 ga galvanized steel.

## **Suit Most Applications with Availability of:**

- Natural gas or LPG burner.
- Cooling coil assembly that can retrofit air-only or heat-only units in the field.
- Units for single-phase, three-phase and 575 V applications.
- Optional matching condenser unit for cool-only and heat-cool units.

# **RAPID® 7400-Series Applications**

## **Automotive Centers, Maintenance Facilities and Industrial Facilities**

- Heat-cool unit can quickly achieve space temperature setpoint after opening and closing of bay doors.

## **Commercial Spaces**

- Heat-cool units can maintain year-around comfort in open commercial spaces such as showrooms.

## **Indoor Sports Facilities**

- 100% return air operation helps provide quick recovery of space temperature when switching from unoccupied periods to occupied periods.

## **Pharmaceutical/Cosmetic Storage**

- Heat-cool unit can maintain strict FDA-stipulated temperature ranges for regulated products.

## **Retrofit Facilities**

- Units require no ductwork that could potentially conflict with other product or equipment in the space.

## **Warehousing and Storage Areas**

- Constant circulating airflow keeps dust from settling on boxes, helps prevent consumer perception of "old parts".

# RAPID® 7400-Series Technical Data and Clearances

Technical Data		7400-142					
		120/1/60	230/1/60	208/3/60	230/3/60	460/3/60	575/3/60
Airflow	[CFM]	10,000	10,000	10,000	10,000	10,000	10,000
	[m³/h]	16,990	16,990	16,990	16,990	16,990	16,990

Number of Propeller Fans	--	1	1	1	1	1	1
Propeller Fan Diameter	[in]	42	42	42	42	42	42
Sheave Type	--	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
Fan Motor Size	[HP]	3*	5	5	5	5	5
Fan Motor Type	--	Single Speed, Premium Efficiency, TEFC					

Total Input	[Btu/h x 1000]	400	400	400	400	400	400
	[kW]	117.2	117.2	117.2	117.2	117.2	117.2
Total Output	[Btu/h x 1000]	340	340	340	340	340	340
	[kW]	99.6	99.6	99.6	99.6	99.6	99.6
Efficiency	[%]	85	85	85	85	85	85
Gas Connection	[in]	3/4	3/4	3/4	3/4	3/4	3/4
	[cm]	1.9	1.9	1.9	1.9	1.9	1.9
Minimum Inlet Gas Pressure	[in wc]	5.5	5.5	5.5	5.5	5.5	5.5
Maximum Inlet Gas Pressure	[in wc]	14	14	14	14	14	14
Flue Diameter	[in]	5	5	5	5	5	5
	[cm]	12.7	12.7	12.7	12.7	12.7	12.7
Maximum Flue Length	[ft]	40	40	40	40	40	40
	[m]	12.2	12.2	12.2	12.2	12.2	12.2

Cooling Capacity	[T]	20	20	20	20	20	20
	[kW]	70.3	70.3	70.3	70.3	70.3	70.3
Refrigerant	--	R410A	R410A	R410A	R410A	R410A	R410A
Coil Design	--	A-frame	A-frame	A-frame	A-frame	A-frame	A-frame
Coil Circuits	--	2	2	2	2	2	2
Coil Circuit Design	--	Intertwined	Intertwined	Intertwined	Intertwined	Intertwined	Intertwined

Disconnect Fuse Size	[A]	50	40	25	25	15	12
Full Load Amps	[A]	39.0	24.5	18.0	17.0	9.5	8.2
Fan Motor Current Draw	[A]	34.0	20.5	14.0	13.0	6.5	5.2
Burner Current Draw @ 120V	[A]	12.0	12.0	12.0	12.0	12.0	12.0
Controls Current Draw @ 120V	[A]	5.0	5.0	5.0	5.0	5.0	5.0

\* Note that a 120/1/60 unit is not available for heat-cool operation

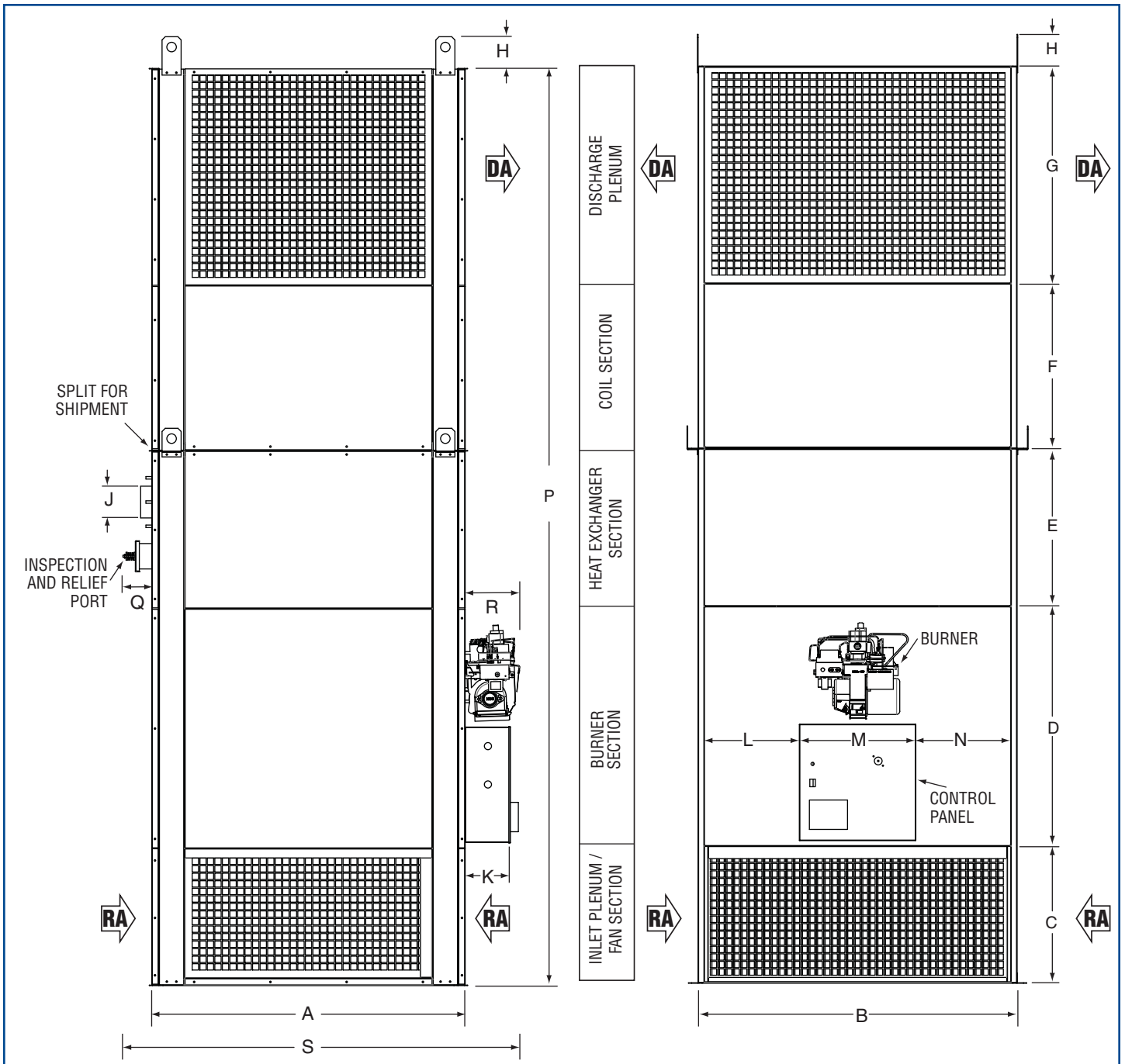
Weights		7400-142
Air-Only Unit	[lb]	1200.0
	[kg]	544.3
Heat-Only Unit	[lb]	1400.0
	[kg]	635.0
Cool-Only Unit	[lb]	1350.0
	[kg]	612.3
Heat-Cool Unit	[lb]	1550.0
	[kg]	703.1

Clearances to Combustibles		7400-142
Top	[in]	18.0
	[cm]	45.7
Sides	[in]	18.0
	[cm]	45.7
Around Flue	[in]	18.0
	[cm]	45.7



Unit ships in two pieces.

# RAPID® 7400-Series Dimension Data



DIMENSIONS																	
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
[in]	50.1	53.2	21.6	37.7	24.9	25.8	34.2	5.0	5.0	7.0	16.0	18.3	15.9	144.2	4.0	11.0	65.1
[cm]	127.3	135.1	54.9	95.8	63.2	65.5	86.9	12.7	12.7	17.8	40.6	46.5	40.4	366.3	10.2	27.9	165.4

## IMPORTANT NOTES:

- All dimensions are subject to change without notice.
- Due to height of unit, additional support is recommended for top of unit.

FILTERS			
Filter Qty		Filter Size	Filter Type
2	[in]	20 x 20 x 1	30% Polyester
	[cm]	50.8 x 50.8 x 2.5	
8	[in]	16 x 20 x 1	30% Polyester
	[cm]	40.6 x 50.8 x 2.5	

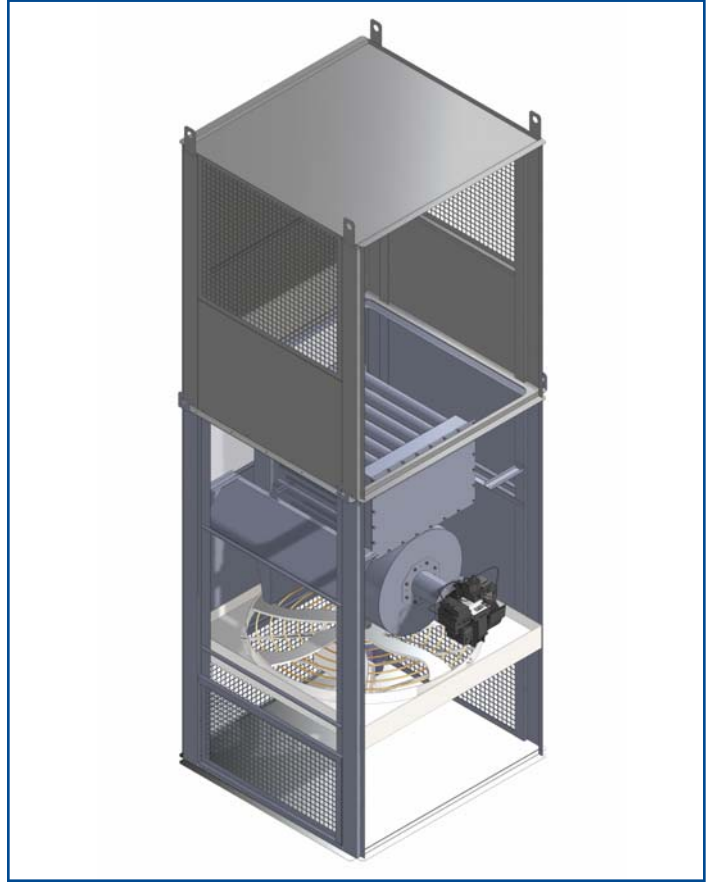
LEGEND
<b>DA</b> = Discharge Air
<b>RA</b> = Return Air

# RAPID® 7400-Series Configurations

## Air-Only Unit



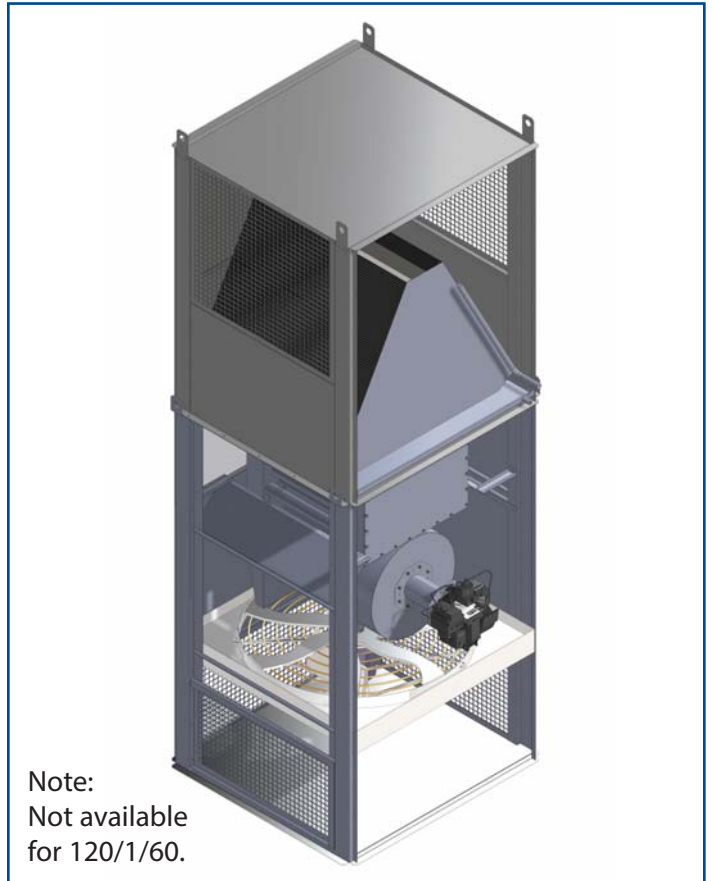
## Heat-Only Unit



## Cool-Only Unit



## Heat-Cool Unit



# Thank You for Your Business!

**Installation Code and Annual Inspections:**

All installation and service of RAPID® equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Rapid Engineering LLC and conform to all requirements set forth in the Rapid Engineering LLC manuals and all applicable governmental authorities pertaining to the installation, service, operation and labeling of the equipment. To help facilitate optimum performance and safety, Rapid Engineering LLC recommends that a qualified contractor conduct, at a minimum, annual inspections of your RAPID® equipment and perform service where necessary, using only replacement parts sold and supplied by Rapid Engineering LLC.

**Further Information:** Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through RAPID® representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

**These products are not for residential use.**

**This document is intended to assist licensed professionals in the exercise of their professional judgment.**

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