

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)										
Testing Agency:	Exova		Combo Designation:	N/A						
Date Issued:	March 19, 2012		Serial Number:	N/A						
Manufacturer:	Airmax Technologies		Options Installed:	Outdoor Temperature Sensor						
	71 Innovation Dr., Units 8&9									
	Vaughn, ON		Nameplate Information	N/A	Volts	N/A	Amps			
			Nominal Burner Input	34.0 kW	116,000	Btu/hr				
			Fuel Type	x	Nat. Gas	Oil				
					Propane					
PERFORMANCE RATING										
Thermal Performance Factor (TPF)			0.89							
Annual Electrical Consumption (AE)			1,704 kWh/y							
Function-Based Performance Ratings										
Space Heating	CSHE	89.4 (%)	Space Heating Capacity	14.1 kW						
Water Heating	WHPF	0.83	One-Hour DHW Delivery Rating (OHR)							
Recovery Efficiency		84 (%)	OHR	749 L						
Thermal standby loss - Circ fan off		see comments W	OHR (concurrent call for heat)	757 L						
Thermal standby loss - Circ fan on		see comments W								
<b>Selected Test Results</b>						Circulating Blower*				
Space Heating @ PLF 1	Net Efficiency	84 (%)	Average Electricity Use	545 W	425 W					
Space Heating @ PLF 0.4	Net Efficiency	90 (%)	Average Electricity Use	234 W	136 W					
Space Heating @ PLF 0.15	Net Efficiency	91 (%)	Average Electricity Use	191 W	110 W					
			Standby Power (P(circ))	71 W						
			Standby Power (P(cont))	9 W						
<b>Concurrent Space &amp; DHW Test Results</b>										
Water Draws at 49 ±3°C with & without concurrent call for heat										
Flow (l/min)	Time to reach temperature (minutes)		Time within ±3°C tolerance (minutes)							
	with	without heating call	with	without heating call						
3	0.2	0.3	Indefinite	Indefinite						
15*	1.5	1.3	Indefinite	Indefinite						
Note: Space heating active during draws with concurrent call-for-heat			Daily Electricity use for water heating (E <sub>24h-SUT</sub> )							
* Maximum Flow (V <sub>max</sub> ) was 13 l/min			0.32 kWh							
			Annual electricity use for water heating (AE <sub>DHW</sub> )							
			116.6 kWh							
Description of Major Combo Components										
Fancoil: Airmax Technologies; Model Maxair 70eLV; Serial #0000001, Hydronic Furnace										
Heat Generator: Flowmax Technologies; Model Flowmax 120; Serial #EG3411440514, Tankless Water Heater										
Blower/Motor: 1/2 H.P. High Efficiency EC Motor										
Other: Water heater incorporates an integral pump										
Thermostatic Mixing Valve: Wilkins A. Zurin ZW1017C										
<b>Test Agency Comments:</b>			Filter Rating					not installed	MERV	
Water heater DHW temperature set to 126°F (52°C) for all tests			Segregated DHW System					x	Yes	No
Water heater space heat temperature set to 140°F (60°C) for all tests			Water Circulation					x	Yes	No
Circulating blower set to 'high speed' unless otherwise specified			DHW Priority					x	Yes	No
Circulating blower control in 'continuous' mode for all space heat tests										
Fan coil controls activate pump 'exercise' for 0.5 mins. every 24 hrs. if no demand for space heating										
All controls set to factory default unless otherwise specified										
Tankless water heater - thermal standby test not applicable										
Conversions:						Reference Report:				
249 Pascals = 1" of Water						12-06-M0043-2				
1 kW = 3413 Btu/h										

Figure 12 – Combo Performance Specification Summary

<b>COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)</b>				
Testing Agency:	Exova		Combo Designation:	N/A
Date Issued:	January 6, 2014		Serial Number:	N/A
Manufacturer:	Airmax Technologies 209 Citation Dr., Units 5 & 6 Concord, ON		Options Installed:	
			Nameplate Information	N/A Volts N/A Amps
			Nominal Burner Input	25.0 kW 85,583 Btu/hr
			Fuel Type	x Nat. Gas Oil Propane
<b>PERFORMANCE RATING</b>				
<b>Thermal Performance Factor (TPF)</b>		0.86		
<b>Annual Electrical Consumption (AE)</b>		1,040 kWh/y		
<b>Function-Based Performance Ratings</b>				
<u>Space Heating</u>	CSHE	86 (%)	Space Heating Capacity	10.2 kW
<u>Water Heating</u>	WHPF	0.82	One-Hour DHW Delivery Rating (OHR)	
Recovery Efficiency		84 (%)	OHR	515 L
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	504 L
Thermal standby loss - Circ fan on	see comments	W		
<b>Selected Test Results</b>				Circulating Blower*
Space Heating @ PLF 1	Net Efficiency	95 (%)	Average Electricity Use	375 W 288 W
Space Heating @ PLF 0.4	Net Efficiency	89 (%)	Average Electricity Use	192 W 287 W
Space Heating @ PLF 0.15	Net Efficiency	79 (%)	Average Electricity Use	75 W 289 W
			Standby Power (P(circ))	97 W
			Standby Power (P(cont))	6 W
<b>Concurrent Space &amp; DHW Test Results</b>				* Measured when blower running
Water Draws at 49 ±3°C with & without concurrent call for heat				
Flow	Time to reach temperature		Time within ±3°C tolerance	
(l/min)	(minutes)		(minutes)	
	with	without heating call	with	without heating call
3	0.6	0.6	Indefinite	Indefinite
8*	0.75	0.75	Indefinite	Indefinite
Note: Circ. blower active during draws with concurrent call-for-heat			Daily Electricity use for water heating (E <sub>24h-SUT</sub> ) 0.22 kWh	
* Maximum Flow (V <sub>max</sub> ) was 8 l/min			Annual electricity use for water heating (AE <sub>DHW</sub> ) 80 kWh	
<b>Description of Major Combo Components</b>				
Fancoil: Airmax Technologies; Model Maxair 50e; Serial #0000794, Hydronic Furnace				
Heat Generator: Flowmax Technologies; Model Flowmax 85; Serial #EG3413070075, Tankless Water Heater				
Blower/Motor: 1/2 H.P. High Efficiency EC Motor				
Other: Water heater incorporates an integral pump Thermostatic Mixing Valve				
<b>Test Agency Comments:</b>				
Water heater DHW temperature set to 140F (60°C) for all tests			Filter Rating	not installed <u>        </u> MERV
Water heater space heat temperature set to 140°F (60°C) for all tests			Segregated DHW System	<u>        </u> x    Yes <u>        </u> No
Circulating blower set to 'heating speed' unless otherwise specified			Water Circulation	<u>        </u> x    Yes <u>        </u> No
Fan coil controls activate pump 'exercise' cycle every 24 hrs. Exercise cycle initiated water heater burner operation.			DHW Priority	<u>        </u> x    Yes <u>        </u> No
All controls set to factory default unless otherwise specified				
Tankless water heater - thermal standby test not applicable				
Conversions: 249 Pascals = 1" of Water      1 kW = 3413 Btu/h			Reference Report: 13-06-M026-1a	

Figure 9 – Combo Performance Specification Summary

<b>COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)</b>					
Testing Agency:	<u>Exova</u>	Combo Designation:	<u>N/A</u>		
Date Issued:	<u>March 7, 2014</u>	Serial Number:	<u>N/A</u>		
Manufacturer:	<u>Airmax Technologies</u> <u>209 Citation Dr., Units 5 &amp; 6</u> <u>Concord, ON</u>	Options Installed:	<u>Outdoor Reset Sensor</u>		
		Nameplate Information	<u>N/A</u>	Volts	<u>N/A</u> Amps
		Nominal Burner Input	<u>24.6</u> kW	<u>83,939</u>	Btu/hr
		Fuel Type	<u>x</u>	Nat. Gas	<u>Oil</u>
			<u>Propane</u>		
PERFORMANCE RATING					
<b>Thermal Performance Factor (TPF)</b>	<u>0.79</u>				
<b>Annual Electrical Consumption (AE)</b>	<u>1,791 kWh/y</u>				
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	79 (%)	Space Heating Capacity	12.6 kW	
<u>Water Heating</u>	WHPF	0.82	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		82 (%)	OHR	510 L	
Thermal standby loss - Circ fan off	see comments W		OHR (concurrent call for heat)	517 L	
Thermal standby loss - Circ fan on	see comments W				
<u>Selected Test Results</u>			Circulating Blower*		
Space Heating @ PLF 1	Net Efficiency	81 (%)	Average Electricity Use	569 W	478 W
Space Heating @ PLF 0.4	Net Efficiency	81 (%)	Average Electricity Use	344 W	476 W
Space Heating @ PLF 0.15	Net Efficiency	75 (%)	Average Electricity Use	137 W	482 W
			Standby Power (P(circ))	97 W	
			Standby Power (P(cont))	7 W	
			* Measured when blower running		
<u>Concurrent Space &amp; DHW Test Results</u>					
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	0.6	0.6	Indefinite	Indefinite	
9*	1.3	1.3	Indefinite	Indefinite	
Note: Circ. blower active during draws with concurrent call-for-heat					
* Maximum Flow (V <sub>max</sub> ) was 9 l/min					
Description of Major Combo Components					
Fancoil:	Airmax Technologies; Model Max 50e; Serial #0000794, Hydronic Furnace				
	Test results are also applicable to Airmax Technologies Models Max 50e EP2 and Max 50e EP3				
Heat Generator:	Flowmax Technologies; Model Flowmax 90; Serial #EG3413275668, Tankless Water Heater				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Water heater incorporates an integral pump				
	Thermostatic Mixing Valve				
<b>Test Agency Comments:</b>					
Water heater DHW temperature set to 140F (60°C) for all tests			Filter Rating	<u>not installed</u>	MERV
Water heater space heat temperature set to 140°F (60°C) for all tests			Segregated DHW System	<u>x</u> Yes	<u>    </u> No
ESP set to 1.2" w.c. with circulating blower at 'cooling speed'			Water Circulation	<u>    </u> Yes	<u>x</u> No
Circulating blower set to 'heating speed' unless otherwise specified			DHW Priority	<u>x</u> Yes	<u>    </u> No
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:				Reference Report:	
249 Pascals = 1" of Water      1 kW = 3413 Btu/h				13-06-M426-2a	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)							
Testing Agency:	Exova		Combo Designation:	N/A			
Date Issued:	January 6, 2014		Serial Number:	N/A			
Manufacturer:	Airmax Technologies 209 Citation Dr., Units 5 & 6 Concord, ON		Options Installed:				
			Nameplate Information	N/A	Volts	N/A	Amps
			Nominal Burner Input	44.5 kW	152,000	Btu/hr	
			Fuel Type	x	Nat. Gas		Oil
					Propane		
PERFORMANCE RATING							
Thermal Performance Factor (TPF)			0.80				
Annual Electrical Consumption (AE)			835 kWh/y				
Function-Based Performance Ratings							
<u>Space Heating</u>	CSHE	78 (%)	Space Heating Capacity	9 kW			
<u>Water Heating</u>	WHPF	0.90	One-Hour DHW Delivery Rating (OHR)				
Recovery Efficiency		93 (%)	OHR	1,092 L			
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	1,079 L			
Thermal standby loss - Circ fan on	see comments	W					
<u>Selected Test Results</u>			Circulating Blower*				
Space Heating @ PLF 1	Net Efficiency	86 (%)	Average Electricity Use	362 W	239 W		
Space Heating @ PLF 0.4	Net Efficiency	79 (%)	Average Electricity Use	156 W	207 W		
Space Heating @ PLF 0.15	Net Efficiency	73 (%)	Average Electricity Use	61 W	210 W		
			Standby Power (P(circ))	96 W			
			Standby Power (P(cont))	4 W			
			* Measured when blower running				
<u>Concurrent Space &amp; DHW Test Results</u>			Daily Electricity use for water heating				
Water Draws at 49 ±3°C with & without concurrent call for heat			(E <sub>24h-SUT</sub> ) 0.12 kWh				
Flow (l/min)	Time to reach temperature (minutes)	Time within ±3°C tolerance (minutes)	Annual electricity use for water heating				
	with	without heating call	with	without heating call			
3	0.3	0.3	Indefinite	Indefinite			
15	0.25	0.25	Indefinite	Indefinite			
Note: Circ. blower active during draws with concurrent call-for-heat							
Description of Major Combo Components							
Fancoil: Airmax Technologies; Model Maxair 50e; Serial #0000794, Hydronic Furnace							
Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3							
Heat Generator: Rinnai Corporation; Model RU80i (REU-KB2530FFUD-US); Serial #EL. BA-25109, Tankless Water Heater							
Blower/Motor: 1/2 H.P. High Efficiency EC Motor							
Other: External water pump installed							
Thermostatic Mixing Valve							
<b>Test Agency Comments:</b>			Filter Rating				
Water heater DHW temperature set to 140F (60°C) for all tests			not installed				
Circulating blower set to 'heating speed' unless otherwise specified			MERV				
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'			Segregated DHW System				
Fan coil controls activate pump 'exercise' cycle every 24 hrs.			x Yes				
Exercise cycle initiates water heater burner operation.			x Yes				
All controls set to factory default unless otherwise specified			DHW Priority				
Tankless water heater - thermal standby test not applicable			x Yes				
Conversions:			Reference Report:				
249 Pascals = 1" of Water			13-06-M0426-3				
1 kW = 3413 Btu/h							

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	May 22, 2014		Serial Number:	N/A	
Manufacturer:	Airmax Technologies 209 Citation Dr., Units 5 & 6 Concord, ON		Options Installed:		
			Nameplate Information	N/A	Volts
			Nominal Burner Input	44.5 kW	152,000 Btu/hr
			Fuel Type	x	Nat. Gas
					Oil
					Propane
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.83		
Annual Electrical Consumption (AE)			1,988 kWh/y		
Function-Based Performance Ratings					
Space Heating	CSHE	82 (%)	Space Heating Capacity	13.4 kW	
Water Heating	WHPF	0.90	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		93 (%)	OHR	1,092 L	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	1,079 L	
Thermal standby loss - Circ fan on	see comments	W			
<b>Selected Test Results</b>			<b>Circulating Blower*</b>		
Space Heating @ PLF 1	Net Efficiency	93 (%)	Average Electricity Use	934 W	777 W
Space Heating @ PLF 0.4	Net Efficiency	83 (%)	Average Electricity Use	379 W	782 W
Space Heating @ PLF 0.15	Net Efficiency	77 (%)	Average Electricity Use	154 W	782 W
			Standby Power (P(circ))	448 W	
			Standby Power (P(cont))	3 W	
<b>Concurrent Space &amp; DHW Test Results</b>			* Measured when blower running		
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow (l/min)	Time to reach temperature (minutes)	Time within ±3°C tolerance (minutes)		Daily Electricity use for water heating (E <sub>24h-SUT</sub> )	
		with	without heating call	with	without heating call
3	0.3	0.3	Indefinite	Indefinite	
15	0.25	0.25	Indefinite	Indefinite	
Annual electricity use for water heating (AE <sub>DHW</sub> ) 43.6 kWh					
Note: Circ. blower active during draws with concurrent call-for-heat					
Description of Major Combo Components					
Fancoil: Airmax Technologies; Model Maxair 70e; Serial #0000336, Hydronic Furnace Also applies to Airmax Technologies Model(s) Maxair 70e EP2 and 70e EP3					
Heat Generator: Rinnai Corporation; Model RU80i (REU-KB2530FFUD-US); Serial #EL. BA-25109, Tankless Water Heater					
Blower/Motor: 3/4 H.P. High Efficiency EC Motor					
Other: External water pump installed Thermostatic Mixing Valve					
<b>Test Agency Comments:</b>			Filter Rating not installed MERV		
Water heater DHW temperature set to 140F (60°C) for all tests			_____		
Circulating blower set to 'heating speed' unless otherwise specified			_____		
ESP set to 1.2" w.c. with circulating blower set operating at 'heating speed'			Segregated DHW System _____ Yes x No		
Fan coil controls activate pump 'exercise' cycle every 24 hrs.			Water Circulation x Yes _____ No		
Exercise cycle initiates water heater burner operation.			DHW Priority _____ Yes x No		
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions: 249 Pascals = 1" of Water 1 kW = 3413 Btu/h				Reference Report: 13-06-M0426-4	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	June 6, 2014		Serial Number:	N/A	
Manufacturer:	Airmax Technologies 209 Citation Dr., Units 5 & 6 Concord, ON		Options Installed:		
			Nameplate Information	N/A	Volts N/A Amps
			Nominal Burner Input	44.5 kW	152,000 Btu/hr
			Fuel Type	x Nat. Gas	Oil
				Propane	
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.80		
Annual Electrical Consumption (AE)			1,211 kWh/y		
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	78 (%)	Space Heating Capacity	10.4 kW	
<u>Water Heating</u>	WHPF	0.90	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		93 (%)	OHR	1,092 L	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	1,079 L	
Thermal standby loss - Circ fan on	see comments	W			
<u>Selected Test Results</u>				Circulating Blower*	
Space Heating @ PLF 1	Net Efficiency	90 (%)	Average Electricity Use	555 W	462 W
Space Heating @ PLF 0.4	Net Efficiency	79 (%)	Average Electricity Use	224 W	461 W
Space Heating @ PLF 0.15	Net Efficiency	73 (%)	Average Electricity Use	94 W	462 W
			Standby Power (P(circ))	85 W	
			Standby Power (P(cont))	5 W	
<u>Concurrent Space &amp; DHW Test Results</u>			* Measured when blower running		
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	0.3	0.3	Indefinite	Indefinite	
15	0.25	0.25	Indefinite	Indefinite	
Daily Electricity use for water heating (E <sub>24h-SUT</sub> )			0.12 kWh		
Annual electricity use for water heating (AE <sub>DHW</sub> )			44.6 kWh		
Note: Circ. blower active during draws with concurrent call-for-heat					
Description of Major Combo Components					
Fancoil: Airmax Technologies; Model Maxair 50e LV; Serial # n/a, Hydronic Furnace					
Heat Generator: Rinnai Corporation; Model RU80i (REU-KB2530FFUD-US); Serial #EL. BA-25109, Tankless Water Heater					
Blower/Motor: 1/2 H.P. High Efficiency EC Motor					
Other: External water pump installed					
Thermostatic Mixing Valve					
<b>Test Agency Comments:</b>			Filter Rating not installed MERV		
Water heater DHW temperature set to 140F (60°C) for all tests			_____		
Circulating blower set to 'heating speed' unless otherwise specified			_____		
ESP set to 0.5" w.c. with circulating blower set operating at 'cooling speed'			Segregated DHW System _____ Yes <u>x</u> No		
Fan coil controls activate pump 'exercise' cycle every 24 hrs.			Water Circulation <u>x</u> Yes _____ No		
Exercise cycle initiates water heater burner operation.			DHW Priority _____ Yes <u>x</u> No		
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:				Reference Report(s):	
249 Pascals = 1" of Water 1 kW = 3413 Btu/h				13-06-M0426-3, 13-06-M0426-5	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	June 22, 2014		Serial Number:	N/A	
Manufacturer:	Airmax Technologies		Options Installed:		
	209 Citation Dr., Units 5 & 6				
	Concord, ON		Nameplate Information	N/A	Volts
			Nominal Burner Input	34.0 kW	116,013 Btu/hr
			Fuel Type	x	Nat. Gas
					Oil
					Propane
<b>PERFORMANCE RATING</b>					
<b>Thermal Performance Factor (TPF)</b>			0.82		
<b>Annual Electrical Consumption (AE)</b>			2,117		
<b>Function-Based Performance Ratings</b>					
<u>Space Heating</u>	CSHE	83 (%)	Space Heating Capacity	15 kW	
<u>Water Heating</u>	WHPF	0.80	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		83 (%)	OHR	631 L	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for	629 L	
Thermal standby loss - Circ fan on	see comments	W			
<u>Selected Test Results</u>			Circulating Blower*		
Space Heating @ PLF 1	Net Efficiency	93 (%)	Average Electricity Use	922 W	807 W
Space Heating @ PLF 0.4	Net Efficiency	84 (%)	Average Electricity Use	400 W	804 W
Space Heating @ PLF 0.15	Net Efficiency	77 (%)	Average Electricity Use	156 W	808 W
			Standby Power (P(circ))	80 W	
			Standby Power (P(cont))	7 W	
<u>Concurrent Space &amp; DHW Test Results</u>			* Measured when blower running		
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	0.4	0.3	Indefinite	Indefinite	
11	1.1	1.2	Indefinite	Indefinite	
Note: Circ. blower active during draws with concurrent call-for-heat					
* Maximum Flow (V <sub>max</sub> ) was 11 l/min					
<b>Description of Major Combo</b>					
Fancoil:	Airmax Technologies; Model Maxair 70e; Serial #0000336, Hydronic Furnace				
	Also applies to Airmax Technologies Model(s) Maxair 70e EP2 and 70e EP3				
Heat Generator:	Flowmax Technologies; Model Flowmax 120; Serial #EG3413070075, Tankless Water Heater				
Blower/Motor:	3/4 H.P. High Efficiency EC Motor				
Other:	Water heater incorporates an integral pump				
	Thermostatic Mixing Valve				
<b>Test Agency Comments:</b>			Filter Rating		
Water heater DHW temperature set to 126F (52°C) for all tests			not installed		
Water heater space heat temperature set to 140F (60°C) for all tests			MERV		
Circulating blower set to 'heating speed' unless otherwise specified			Segregated DHW System		
ESP set to 1.2" w.c. with circulating blower set operating at 'heating speed'			x Yes		
Fan coil controls activate pump 'exercise' cycle every 24 hrs.			Water Circulation		
Exercise cycle initiates water heater burner operation.			x Yes		
All controls set to factory default unless otherwise specified			DHW Priority		
Tankless water heater - thermal standby test not applicable			x Yes		
Conversions:			Reference Report:		
249 Pascals = 1" of Water      1 kW = 3413 Btu/h			13-06-M0426-6		

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	June 26, 2014		Serial Number:	N/A	
Manufacturer:	Airmax Technologies 209 Citation Dr., Units 5 & 6 Concord, ON		Options Installed:		
			Nameplate Information	N/A	Volts N/A Amps
			Nominal Burner Input	34.0 kW	116,013 Btu/hr
			Fuel Type	x Nat. Gas	Oil
				Propane	
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.84		
Annual Electrical Consumption (AE)			1,444		
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	85 (%)	Space Heating Capacity	11.5 kW	
<u>Water Heating</u>	WHPF	0.80	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		83 (%)	OHR	631 L	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	629 L	
Thermal standby loss - Circ fan on	see comments	W			
<u>Selected Test Results</u>				Circulating Blower*	
Space Heating @ PLF 1	Net Efficiency	92 (%)	Average Electricity Use	581 W	473 W
Space Heating @ PLF 0.4	Net Efficiency	87 (%)	Average Electricity Use	270 W	475 W
Space Heating @ PLF 0.15	Net Efficiency	80 (%)	Average Electricity Use	102 W	479 W
			Standby Power (P(circ))	100 W	
			Standby Power (P(cont))	8 W	
			* Measured when blower running		
<u>Concurrent Space &amp; DHW Test Results</u>					
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	w without heating call	with	w without heating call	
3	0.4	0.3	Indefinite	Indefinite	
11	1.1	1.2	Indefinite	Indefinite	
Note: Circ. blower active during draws with concurrent call-for-heat					
* Maximum Flow (V <sub>max</sub> ) was 11 l/min					
Description of Major Combo Components					
Fancoil:	Airmax Technologies; Model Maxair 50e; Serial #0000794, Hydronic Furnace Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3				
Heat Generator:	Flowmax Technologies; Model Flowmax 120; Serial #EG3413070075, Tankless Water Heater				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Water heater incorporates an integral pump Thermostatic Mixing Valve				
<b>Test Agency Comments:</b>			Filter Rating		
Water heater DHW temperature set to 126F (52°C) for all tests			not installed MERV		
Water heater space heat temperature set to 140F (60°C) for all tests					
Circulating blower set to 'heating speed' unless otherwise specified			Segregated DHW System		
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'			x Yes No		
Fan coil controls activate pump 'exercise' cycle every 24 hrs.			Water Circulation		
Exercise cycle initiates water heater burner operation.			x Yes No		
All controls set to factory default unless otherwise specified			DHW Priority		
Tankless water heater - thermal standby test not applicable			x Yes No		
Conversions:			Reference Report:		
249 Pascals = 1" of Water 1 kW = 3413 Btu/h			13-06-M0426-7		

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	December 10, 2014		Serial Number:	N/A	
Manufacturer:	Airmax Technologies Inc.		Options Installed:	Navien 'ComfortAir'+ kit.	
	Navien America Inc.			Outdoor Reset Control	
			Nameplate Information	120 Volts	N/A Amps
			Nominal Burner Input	58.5 kW	199,900 Btu/hr
			Fuel Type	x Nat. Gas	Oil
				Propane	
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.90		
Annual Electrical Consumption (AE)			2,888 kWh/y		
Function-Based Performance Ratings					
Space Heating	CSHE	90 (%)	Space Heating Capacity	17.1 kW	
Water Heating	WHPF	0.94	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		96 (%)	OHR	1437 L (See Report)	
Thermal standby loss - Circ fan off	see comments W		OHR (concurrent call for heat)	1433 L (See Report)	
Thermal standby loss - Circ fan on	see comments W				
<b>Selected Test Results</b>			Circulating Blower*		
Space Heating @ PLF 1	Net Efficiency	93 (%)	Average Electricity Use	558 W	421 W
Space Heating @ PLF 0.4	Net Efficiency	89 (%)	Average Electricity Use	556 W	416 W
Space Heating @ PLF 0.15	Net Efficiency	91 (%)	Average Electricity Use	243 W	417 W
			Standby Power (P(circ))	111 W	
			Standby Power (P(cont))	13 W	
<b>Concurrent Space &amp; DHW Test Results</b>			* Measured when blower running		
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	Not Achievable		Not Achievable		
4 <sup>1</sup>	1.0	0.8	Indefinite	Indefinite	
15	0.5	0.5	Indefinite	Indefinite	
<sup>1</sup> Water draw performed at V <sub>min</sub> (See Report)					
Daily Electricity use for water heating (E <sub>24h-SUT</sub> )			0.32 kWh		
Annual electricity use for water heating (AE <sub>DHW</sub> )			116 kWh		
Description of Major Combo Components					
Fancoil:	Airmax Technologies Inc.; Model MAX 50e; Serial # 0001183 Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3				
Heat Generator:	Navien; Model NPE 240A; Serial # 7414X14725Z1198 Tankless Water Heater				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Navien 'ComfortAir'+ kit. Outdoor Reset Control				
<b>Test Agency Comments:</b>			Filter Rating not installed MERV		
Water heater temperature set to 120°F (49°C) for all tests			Segregated DHW System Yes x No		
Water heater temperature set to 180°F (82°C) for space heating tests			Water Circulation x Yes No		
Space heating configured as 'single stage' operation			DHW Priority See Report		
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'					
Circulating blower set to 'high speed' unless otherwise specified					
Controls activate pump 'exercise' for 30 sec. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:			Reference Report:		
249 Pascals = 1" of Water 1 kW = 3413 Btu/h			14-06-M0387-1a		

Figure 9 – Combo Performance Specification Summary

<b>COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)</b>					
Testing Agency: <u>Exova</u>	Combo Designation: <u>N/A</u>				
Date Issued: <u>December 10, 2014</u>	Serial Number: <u>N/A</u>				
Manufacturer: <u>Airmax Technologies Inc.</u>	Options Installed: <u>Navien 'ComfortAir+' kit.</u>				
<u>Navien America Inc.</u>					
	Nameplate Information	<u>120</u> Volts	<u>N/A</u> Amps		
	Nominal Burner Input	<u>58.5</u> kW	<u>199,900</u> Btu/hr		
	Fuel Type	<u>x</u> Nat. Gas	<u>        </u> Oil		
		<u>        </u> Propane			
<b>PERFORMANCE RATING</b>					
<b>Thermal Performance Factor (TPF)</b>		<u>0.92</u>			
<b>Annual Electrical Consumption (AE)</b>		<u>1,625 kWh/y</u>			
<b>Function-Based Performance Ratings</b>					
<u>Space Heating</u>	CSHE	92 (%)	Space Heating Capacity	17.1 kW	
<u>Water Heating</u>	WHPF	0.94	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		96 (%)	OHR	1437 L (See Report)	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	1433 L (See Report)	
Thermal standby loss - Circ fan on	see comments	W			
<b>Selected Test Results</b>			<b>Circulating Blower*</b>		
Space Heating @ PLF 1	Net Efficiency	93 (%)	Average Electricity Use	558 W	421 W
Space Heating @ PLF 0.4	Net Efficiency	95 (%)	Average Electricity Use	290 W	166 W
Space Heating @ PLF 0.15	Net Efficiency	84 (%)	Average Electricity Use	127 W	166 W
			Standby Power (P(circ))	111 W	
			Standby Power (P(cont))	13 W	
			* Measured when blower running		
<b>Concurrent Space &amp; DHW Test Results</b>					
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow (l/min)	Time to reach temperature (minutes)		Time within ±3°C tolerance (minutes)		
	with	without heating call	with	without heating call	
3	Not Achievable		Not Achievable		
4 <sup>1</sup>	1.0	0.8	Indefinite	Indefinite	
15	0.5	0.5	Indefinite	Indefinite	
<sup>1</sup> Water draw performed at V <sub>min</sub> (See Report)					
Daily Electricity use for water heating (E <sub>24h-SUT</sub> )			0.32 kWh		
Annual electricity use for water heating (AE <sub>DHW</sub> )			116 kWh		
<b>Description of Major Combo Components</b>					
Fancoil:	Airmax Technologies Inc.; Model MAX 50e; Serial # 0001183 Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3				
Heat Generator:	Navien; Model NPE 240A; Serial # 7414X14725Z1198 Tankless Water Heater				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Navien 'ComfortAir+' kit. Outdoor Reset Control				
<b>Test Agency Comments:</b>					
Water heater temperature set to 120°F (49°C) for all tests			Filter Rating	not installed    MERV	
Water heater temperature set to 180°F (82°C) for space heating tests			Segregated DHW System	<u>        </u> Yes	<u>  x  </u> No
Space heating configured as 'two stage' operation			Water Circulation	<u>  x  </u> Yes	<u>        </u> No
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'			DHW Priority	<u>        </u> See Report	
Circulating blower set to 'high speed' unless otherwise specified					
Controls activate pump 'exercise' for 30 sec. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:				Reference Report:	
249 Pascals = 1" of Water      1 kW = 3413 Btu/h				14-06-M0387-1b	

Figure 9 – Combo Performance Specification Summary



COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency: <u>Exova</u>		Combo Designation: <u>N/A</u>			
Date Issued: <u>December 11, 2014</u>		Serial Number: <u>N/A</u>			
Manufacturer: <u>Airmax Technologies Inc.</u>		Options Installed: <u>Navien 'ComfortAir+' kit.</u>			
<u>Navien America Inc.</u>		<u>Outdoor Reset Control</u>			
		Nameplate Information	<u>120</u> Volts	<u>N/A</u> Amps	
		Nominal Burner Input	<u>58.5</u> kW	<u>199,900</u> Btu/hr	
		Fuel Type	<u>x</u> Nat. Gas	<u>        </u> Oil	
			<u>        </u> Propane		
PERFORMANCE RATING					
Thermal Performance Factor (TPF)		<u>0.88</u>			
Annual Electrical Consumption (AE)		<u>1,203 kWh/y</u>			
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	87 (%)	Space Heating Capacity	10.6 kW	
<u>Water Heating</u>	WHPF	0.94	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		96 (%)	OHR	1437 L (See Report)	
Thermal standby loss - Circ fan off	see comments W		OHR (concurrent call for heat)	1433 L (See Report)	
Thermal standby loss - Circ fan on	see comments W				
<u>Selected Test Results</u>			Circulating Blower*		
Space Heating @ PLF 1	Net Efficiency	96 (%)	Average Electricity Use	553 W	417 W
Space Heating @ PLF 0.4	Net Efficiency	90 (%)	Average Electricity Use	203 W	165 W
Space Heating @ PLF 0.15	Net Efficiency	78 (%)	Average Electricity Use	87 W	165 W
			Standby Power (P(circ))	111 W	
			Standby Power (P(cont))	13 W	
<u>Concurrent Space &amp; DHW Test Results</u>			* Measured when blower running		
<u>Water Draws at 49 ±3°C with &amp; without concurrent call for heat</u>					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	Not Achievable		Not Achievable		
4 <sup>1</sup>	1.0	0.8	Indefinite	Indefinite	
15	0.5	0.5	Indefinite	Indefinite	
<sup>1</sup> Water draw performed at V <sub>min</sub> (See Report)					
			Daily Electricity use for water heating (E <sub>24h-SUT</sub> )	0.32 kWh	
			Annual electricity use for water heating (AE <sub>DHW</sub> )	116 kWh	
Description of Major Combo Components					
Fancoil: Airmax Technologies Inc.; Model MAX 50e; Serial # 0001183 Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3					
Heat Generator: Navien; Model NPE 240A; Serial # 7414X14725Z1198 Tankless Water Heater					
Blower/Motor: 1/2 H.P. High Efficiency EC Motor					
Other: Thermostatic Mixing Valve: Honeywell AM101-US-1 Navien 'ComfortAir+' kit. Outdoor Reset Control					
Test Agency Comments:					
Water heater temperature set to 120 °F (49°C) for all tests			Filter Rating	not installed	MERV
Water heater temperature set to 140 °F (60°C) for space heating tests			Segregated DHW System	<u>        </u> Yes	<u>  x  </u> No
Space heating configured as 'two stage' operation			Water Circulation	<u>  x  </u> Yes	<u>        </u> No
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'			DHW Priority	<u>        </u> See Report <u>        </u>	
Circulating blower set to 'high speed' unless otherwise specified					
Controls activate pump 'exercise' for 30 sec. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions: 249 Pascals = 1" of Water      1 kW = 3413 Btu/h				Reference Report: 14-06-M0387-1d	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	December 12, 2014		Serial Number:	N/A	
Manufacturer:	Airmax Technologies Inc.		Options Installed:	Navien 'ComfortAir+' kit.	
	Navien America Inc.			Outdoor Reset Control	
			Nameplate Information	120 Volts	N/A Amps
			Nominal Burner Input	44.0 kW	150,000 Btu/hr
			Fuel Type	x Nat. Gas	Oil
				Propane	
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.91		
Annual Electrical Consumption (AE)			1,487 kWh/y		
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	90 (%)	Space Heating Capacity	10.6 kW	
<u>Water Heating</u>	WHPF	0.94	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		97 (%)	OHR	1140 L (See Report)	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	1131 L (See Report)	
Thermal standby loss - Circ fan on	see comments	W			
<u>Selected Test Results</u>			Circulating Blower*		
Space Heating @ PLF 1	Net Efficiency	96 (%)	Average Electricity Use	561 W	417 W
Space Heating @ PLF 0.4	Net Efficiency	93 (%)	Average Electricity Use	258 W	164 W
Space Heating @ PLF 0.15	Net Efficiency	82 (%)	Average Electricity Use	116 W	165 W
			Standby Power (P(circ))	111 W	
			Standby Power (P(cont))	13 W	
			* Measured when blower running		
<u>Concurrent Space &amp; DHW Test Results</u>			Daily Electricity use for water heating		
Water Draws at 49 ±3 °C with & without concurrent call for heat			(E <sub>24h-SUT</sub> ) 0.32 kWh		
Flow (l/min)	Time to reach temperature (minutes)		Time within ±3 °C tolerance (minutes)		
	with	without heating call	with	without heating call	
3	1.8	2.3	Indefinite	Indefinite	
15	0.4	0.3	Indefinite	Indefinite	
			Annual electricity use for water heating (AE <sub>DHW</sub> ) 117 kWh		
Description of Major Combo Components					
Fancoil:	Airmax Technologies Inc.; Model MAX 50e; Serial # 0001183 Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3				
Heat Generator:	Navien; Model NPE 180A; Serial # 7410Y1471471061 Tankless Water Heater				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Navien 'ComfortAir+' kit. Outdoor Reset Control				
<b>Test Agency Comments:</b>			Filter Rating not installed MERV		
Water heater temperature set to 120 °F (49 °C) for all tests			Segregated DHW System <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Water heater temperature set to 140 °F (60 °C) for space heating tests			Water Circulation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Space heating configured as 'two stage' operation			DHW Priority <input type="checkbox"/> See Report <input type="checkbox"/>		
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'					
Circulating blower set to 'high speed' unless otherwise specified					
Controls activate pump 'exercise' for 30 sec. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions: 249 Pascals = 1" of Water      1 kW = 3413 Btu/h			Reference Report: 14-06-M0387-2a		

Figure 9 – Combo Performance Specification Summary

<b>COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)</b>					
Testing Agency: <u>Exova</u>		Combo Designation: <u>N/A</u>			
Date Issued: <u>December 12, 2014</u>		Serial Number: <u>N/A</u>			
Manufacturer: <u>Airmax Technologies Inc.</u>		Options Installed: <u>Navien 'ComfortAir+' kit.</u>			
<u>Navien America Inc.</u>		<u>Outdoor Reset Control</u>			
		Nameplate Information	<u>120</u> Volts	<u>N/A</u> Amps	
		Nominal Burner Input	<u>44.0</u> kW	<u>150,000</u> Btu/hr	
		Fuel Type	<u>x</u> Nat. Gas	<u>        </u> Oil	
			<u>        </u> Propane		
<b>PERFORMANCE RATING</b>					
<b>Thermal Performance Factor (TPF)</b>		<u>0.93</u>			
<b>Annual Electrical Consumption (AE)</b>		<u>1,631 kWh/y</u>			
<b>Function-Based Performance Ratings</b>					
<u>Space Heating</u>	CSHE	92 (%)	Space Heating Capacity	12.2 kW	
<u>Water Heating</u>	WHPF	0.94	One-Hour DHW Delivery Rating (OHR)		
Recovery Efficiency		97 (%)	OHR	1140 L (See Report)	
Thermal standby loss - Circ fan off	see comments	W	OHR (concurrent call for heat)	1131 L (See Report)	
Thermal standby loss - Circ fan on	see comments	W			
<u>Selected Test Results</u>			Circulating Blower*		
Space Heating @ PLF 1	Net Efficiency	95 (%)	Average Electricity Use	567 W	417 W
Space Heating @ PLF 0.4	Net Efficiency	96 (%)	Average Electricity Use	286 W	166 W
Space Heating @ PLF 0.15	Net Efficiency	84 (%)	Average Electricity Use	131 W	167 W
			Standby Power (P(circ))	111 W	
			Standby Power (P(cont))	13 W	
<u>Concurrent Space &amp; DHW Test Results</u>			* Measured when blower running		
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow (l/min)	Time to reach temperature (minutes)	Time within ±3°C tolerance (minutes)		Daily Electricity use for water heating (E <sub>24h-SUT</sub> )	
		with	without heating call	with	without heating call
3	1.8	2.3	Indefinite	Indefinite	0.32 kWh
15	0.4	0.3	Indefinite	Indefinite	Annual electricity use for water heating (AE <sub>DHW</sub> )
					117 kWh
<b>Description of Major Combo Components</b>					
Fancoil: Airmax Technologies Inc.; Model MAX 50e; Serial # 0001183 Also applies to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3					
Heat Generator: Navien; Model NPE 180A; Serial # 7410Y1471471061 Tankless Water Heater					
Blower/Motor: 1/2 H.P. High Efficiency EC Motor					
Other: Thermostatic Mixing Valve: Honeywell AM101-US-1 Navien 'ComfortAir+' kit. Outdoor Reset Control					
<b>Test Agency Comments:</b>					
Water heater temperature set to 120°F (49°C) for all tests			Filter Rating	<u>not installed</u>	MERV
Water heater temperature set to 150°F (66°C) for space heating tests			Segregated DHW System	<u>        </u> Yes	<u>  x  </u> No
Space heating configured as 'two stage' operation			Water Circulation	<u>  x  </u> Yes	<u>        </u> No
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'			DHW Priority	<u>        </u> See Report	<u>        </u>
Circulating blower set to 'high speed' unless otherwise specified					
Controls activate pump 'exercise' for 30 sec. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions: 249 Pascals = 1" of Water      1 kW = 3413 Btu/h				Reference Report: 14-06-M0387-2b	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)				
Testing Agency:	Exova		Combo Designation:	N/A
Date Issued:	January 12, 2015		Serial Number:	N/A
Manufacturer:	Airmax Technologies Inc.		Options Installed:	Navien 'ComfortAir+' kit.
	Navien America Inc.			Outdoor Reset Control
			Nameplate Information	120 Volts N/A Amps
			Nominal Burner Input	44.0 kW 150,000 Btu/hr
			Fuel Type	x Nat. Gas Oil
				Propane
PERFORMANCE RATING				
Thermal Performance Factor (TPF)		0.93		
Annual Electrical Consumption (AE)		1,358 kWh/y		
Function-Based Performance Ratings				
<u>Space Heating</u>	CSHE	93 (%)	Space Heating Capacity	14.9 kW
<u>Water Heating</u>	WHPF	0.94	Space Heating Airflow	922 SCFM @ PLF 1
Recovery Efficiency		97 (%)	Space Heating ESP	1.0 " w.c. (see report)
Thermal standby loss - Circ fan off	see comments W		One-Hour DHW Delivery Rating (OHR)	
Thermal standby loss - Circ fan on	see comments W		OHR	1140 L (See Report)
			OHR (concurrent call for heat)	1131 L (See Report)
			Circulating Blower*	
<u>Selected Test Results</u>				
Space Heating @ PLF 1	Net Efficiency	96 (%)	Average Electricity Use	780 W 633 W
Space Heating @ PLF 0.4	Net Efficiency	96 (%)	Average Electricity Use	199 W 82 W
Space Heating @ PLF 0.15	Net Efficiency	86 (%)	Average Electricity Use	117 W 82 W
			Standby Power (P(circ))	91 W
			Standby Power (P(cont))	14 W
<u>Concurrent Space &amp; DHW Test Results</u>				
Water Draws at 49 ±3°C with & without concurrent call for heat				
Flow	Time to reach temperature		Time within ±3°C tolerance	
(l/min)	(minutes)		(minutes)	
	with	without heating call	with	without heating call
3	1.8	2.3	Indefinite	Indefinite
15	0.4	0.3	Indefinite	Indefinite
			Daily Electricity use for water heating (E <sub>24h-SUT</sub> )	0.32 kWh
			Annual electricity use for water heating (AE <sub>DHW</sub> )	117 kWh
			* Measured when blower running	
Description of Major Combo Components				
Fancoil:	Airmax Technologies Inc.; Model MAX 70e; Serial # 0000029 Also applies to Airmax Technologies Model(s) Maxair 70e EP2 and 70e EP3			
Heat Generator:	Navien; Model NPE 180A; Serial # 7410Y1471471061 Tankless Water Heater			
Blower/Motor:	3/4 H.P. High Efficiency EC Motor			
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Navien 'ComfortAir+' kit. Outdoor Reset Control			
<b>Test Agency Comments:</b>			Filter Rating not installed MERV	
Water heater temperature set to 120°F (49°C) for all DHW tests			Segregated DHW System Yes x No	
Water heater temperature set to 150°F (66°C) for space heating tests			Water Circulation x Yes No	
Space heating configured as 'two stage' operation			DHW Priority x Yes No	
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'				
Circulating blower set to 'high speed' unless otherwise specified				
Controls activate pump 'exercise' for 30 sec. every 24 hours.				
All controls set to factory default unless otherwise specified				
Tankless water heater - thermal standby test not applicable				
Conversions:			Reference Report:	
249 Pascals = 1" of Water 1 kW = 3413 Btu/h			14-06-M0387-2a, 15-06-M0016-1	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	January 25, 2015		Serial Number:	N/A	
Manufacturer:	Airmax Technologies Inc.		Options Installed:	Outdoor Reset Control	
			Nameplate Information	120 Volts	N/A Amps
			Nominal Burner Input	34.0 kW	116,013 Btu/hr
			Fuel Type	x Nat. Gas	Oil
				Propane	
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.88		
Annual Electrical Consumption (AE)			1,884 kWh/y		
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	89 (%)	Space Heating Capacity	20.5 kW	
<u>Water Heating</u>	WHPF	0.80	Space Heating Airflow	1,189 SCFM @ PLF 1	
Recovery Efficiency		83 (%)	Space Heating ESP	1.0 " w.c. (see report)	
Thermal standby loss - Circ fan off	see comments W		One-Hour DHW Delivery Rating (OHR)		
Thermal standby loss - Circ fan on	see comments W		OHR	710 L (See Report)	
			OHR (concurrent call for heat)	709 L (See Report)	
				Circulating Blower*	
<u>Selected Test Results</u>			Average Electricity Use	958 W	812 W
Space Heating @ PLF 1	Net Efficiency	90 (%)	Average Electricity Use	324 W	228 W
Space Heating @ PLF 0.4	Net Efficiency	94 (%)	Average Electricity Use	144 W	229 W
Space Heating @ PLF 0.15	Net Efficiency	80 (%)	Standby Power (P(circ))	91 W	
			Standby Power (P(cont))	14 W	
			* Measured when blower running		
<u>Concurrent Space &amp; DHW Test Results</u>			Daily Electricity use for water heating	(E <sub>24h-SUT</sub> ) 0.34 kWh	
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	0.7	0.7	Indefinite	Indefinite	
13 <sup>1</sup>	1.7	1.7	Indefinite	Indefinite	
<sup>1</sup> Water draw performed at V <sub>max</sub> (See Report)			Annual electricity use for water heating	(AE <sub>DHW</sub> ) 123 kWh	
Description of Major Combo Components					
Fancoil:	Airmax Technologies Inc.; Model MAX 100e; Serial # n/a Also applies to Airmax Technologies Model(s) Maxair 100e EP2 and 100e EP3				
Heat Generator:	Flowmax; Model 120 (95); Serial # EG3414095292 Tankless Water Heater				
Blower/Motor:	1 H.P. High Efficiency EC Motor				
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Outdoor Reset Control				
<b>Test Agency Comments:</b>			Filter Rating	not installed	MERV
Water heater temperature set to 120°F (49°C) for all DHW tests			Segregated DHW System	x Yes	No
Water heater temperature set to 150°F (66°C) for space heating tests			Water Circulation	x Yes	No
Space heating configured as 'two stage' operation			DHW Priority	x Yes	No
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'					
Circulating blower set to 'high speed' unless otherwise specified					
Controls activate pump 'exercise' for 8 mins. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:				Reference Report:	
249 Pascals = 1" of Water      1 kW = 3413 Btu/h				15-06-M0016-2	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	February 20, 2015		Serial Number:	N/A	
Manufacturer:	Airmax Technologies Inc. 209 Citation Dr., Unit 5 & 6 Vaughan, ON		Options Installed:	Outdoor Reset Control	
			Nameplate Information	120 Volts	N/A Amps
			Nominal Burner Input	34.0 kW	116,013 Btu/hr
			Fuel Type	x Nat. Gas	Oil
				Propane	
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.90		
Annual Electrical Consumption (AE)			2,927 kWh/y		
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	92 (%)	Space Heating Capacity	11.1 kW	
<u>Water Heating</u>	WHPF	0.80	Space Heating Airflow	760 SCFM@ PLF 1	
Recovery Efficiency		83 (%)	Space Heating ESP	0.5 " w.c. (see report)	
Thermal standby loss - Circ fan off	see comments W		One-Hour DHW Delivery Rating (OHR)		
Thermal standby loss - Circ fan on	see comments W		OHR	710 L (See Report)	
			OHR (concurrent call for heat)	709 L (See Report)	
<u>Selected Test Results</u>				Circulating Blower*	
Space Heating @ PLF 1	Net Efficiency	85 (%)	Average Electricity Use	582 W	471 W
Space Heating @ PLF 0.4	Net Efficiency	95 (%)	Average Electricity Use	574 W	469 W
Space Heating @ PLF 0.15	Net Efficiency	89 (%)	Average Electricity Use	238 W	188 W
			Standby Power (P(circ))	89 W	
			Standby Power (P(cont))	9 W	
			* Measured when blower running		
<u>Concurrent Space &amp; DHW Test Results</u>					
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow	Time to reach temperature		Time within ±3°C tolerance		
(l/min)	(minutes)		(minutes)		
	with	without heating call	with	without heating call	
3	0.7	0.7	Indefinite	Indefinite	
13 <sup>1</sup>	1.7	1.7	Indefinite	Indefinite	
<sup>1</sup> Water draw performed at V <sub>max</sub> (See Report)					
			Daily Electricity use for water heating (E <sub>24h-SUT</sub> )	0.34 kWh	
			Annual electricity use for water heating (AE <sub>DHW</sub> )	123 kWh	
Description of Major Combo Components					
Fancoil:	Airmax Technologies Inc.; Model MAX 50eLV; Serial # n/a				
Heat Generator:	Flowmax; Model 120 (modified Flowmax 95 (see Report)); Serial # EG3414095292 Tankless Water Heater				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Outdoor Reset Control				
<b>Test Agency Comments:</b>			Filter Rating	not installed	MERV
Water heater temperature set to 120°F (49°C) for all DHW tests			Segregated DHW System	x Yes	No
Water heater temperature set to 140°F (60°C) for space heating tests			Water Circulation	x Yes	No
Space heating configured as 'single stage' operation			DHW Priority	x Yes	No
ESP set to 0.5" w.c. with circulating blower set operating at 'cooling speed'					
Circulating blower set to 'high speed' unless otherwise specified					
Circulating blower in 'continuous' mode for sapce heat tests					
Controls activate pump 'exercise' for 8 mins. every 24 hours.					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:				Reference Report:	
249 Pascals = 1" of Water      1 kW = 3413 Btu/h				15-06-M0016-3 Rv1	

Figure 9 – Combo Performance Specification Summary

COMBO PERFORMANCE SPECIFICATION SUMMARY (Ref. CSA Standard P.9-11)					
Testing Agency:	Exova		Combo Designation:	N/A	
Date Issued:	March 30, 2015		Serial Number:	N/A	
Manufacturer:	Airmax Technologies Inc. 209 Citation Dr., Unit 5 & 6 Vaughan, ON		Options Installed:	Outdoor Reset Control	
			Nameplate Information	120 Volts	N/A Amps
			Nominal Burner Input	25.0 kW	85,304 Btu/hr
			Fuel Type	x Nat. Gas	Oil
					Propane
PERFORMANCE RATING					
Thermal Performance Factor (TPF)			0.88		
Annual Electrical Consumption (AE)			2,657 kWh/y		
Function-Based Performance Ratings					
<u>Space Heating</u>	CSHE	95 (%)	Space Heating Capacity	10.9 kW	
<u>Water Heating</u>	WHPF	0.65	Space Heating Airflow	712 SCFM @ PLF 1	
Recovery Efficiency		76 (%)	Space Heating ESP	1.1 " w.c. (see report)	
Thermal standby loss - Circ fan off	see comments W		One-Hour DHW Delivery Rating (OHR)		
Thermal standby loss - Circ fan on	see comments W		OHR	551 L (See Report)	
			OHR (concurrent call for heat)	525 L (See Report)	
				Circulating Blower*	
<u>Selected Test Results</u>			Average Electricity Use	532 W	432 W
Space Heating @ PLF 1	Net Efficiency	90 (%)	Average Electricity Use	482 W	386 W
Space Heating @ PLF 0.4	Net Efficiency	96 (%)	Average Electricity Use	238 W	191 W
Space Heating @ PLF 0.15	Net Efficiency	95 (%)	Standby Power (P(circ))	109 W	
			Standby Power (P(cont))	8 W	
			* Measured when blower running		
<u>Concurrent Space &amp; DHW Test Results</u>			Daily Electricity use for water heating	(E <sub>24h-SUT</sub> ) 0.38 kWh	
Water Draws at 49 ±3°C with & without concurrent call for heat					
Flow (l/min)	Time to reach temperature (minutes)	Time within ±3°C tolerance (minutes)		Annual electricity use for water heating (AE <sub>DHW</sub> ) 140 kWh	
		with	without heating call	with	without heating call
3	0.5	0.5	Indefinite	Indefinite	
11	0.2	0.2	Indefinite	Indefinite	
15	0.2	0.2	Not Achievable		
Description of Major Combo Components					
Fancoil:	Airmax Technologies; Model Maxair 50e; Serial #0000794, Hydronic Furnace Also apply to Airmax Technologies Model(s) Maxair 50e EP2 and 50e EP3				
Heat Generator:	Flowmax Technologies; Model Flowmax90; Serial #EG3413275668, Tankless Water Heater				
Storage Tank:	Giant Factories Inc.; Model 142ETE 9G7M; Serial #A8559028				
Blower/Motor:	1/2 H.P. High Efficiency EC Motor				
Other:	Thermostatic Mixing Valve: Honeywell AM101-US-1 Storage Tank Controller: Johnson Controls A419GBF-1 (52°C Set Point, 1°C Differential) External pump used for storage tank DHW recirculation: Grundfos UPS 15-58RU Outdoor Reset Control				
<u>Test Agency Comments:</u>			Filter Rating	not installed	MERV
Water heater temperature set to 154°F (68°C) for all tests			Segregated DHW System	x Yes	No
Space heating configured as 'single stage' operation			Water Circulation	Yes	x No
ESP set to 1.2" w.c. with circulating blower set operating at 'cooling speed'			DHW Priority	x Yes	No
Circulating blower set to 'high speed' unless otherwise specified					
Circulating blower in 'continuous' mode for sapce heat tests					
All controls set to factory default unless otherwise specified					
Tankless water heater - thermal standby test not applicable					
Conversions:				Reference Report:	
249 Pascals = 1" of Water      1 kW = 3413 Btu/h				15-06-M0082 Rv1	

Figure 11 – Combo Performance Specification Summary