

## Air Balance Tests

### Designing ductwork air flow without knowing the actual external static pressure drop is like shooting in the dark and working blind.

When an existing furnace is replaced, the new blower must be able to supply enough cfm to meet the static pressure drop of the existing ductwork. Calculating the cfm from supply and return grille areas does not account for deficiencies in the ductwork such as extra bends, dirt and leaks. The calculators assume a specific static pressure drop through the system. Often the supply and return air areas are not equal so one has to decide which to use, usually the lower flow to be safe. This may result in a selection of an undersized heating/cooling system and require adding supplemental heating at extra expense. This might be avoided by a simple addition of a return grille.

A proper static pressure test with the existing blower using a dual port manometer and a thermometer can be done in half an hour with equipment that costs under \$500. An allowance should be made if the occupants find uneven temperatures and apparent inadequate air flow. If the existing blower is working properly with an oversized furnace, it is probably running on low speed all the time. This cfm should be compared to the calculated cfm using grille sizes.

Further investigation can be done by measuring air flow at each grille using an anemometer. The blower speed can be calculated by measuring the current draw of the motor and comparing it to manufacturer's data.

Jade Environmental Services offers air balance tests, [See the video](#). Here is what we do.

- Connect the monometer to supply and return ducting
- Turn furnace on high
- Measure supply temperature
- Measure return temperature
- Read the pressure drop
- Look up the BTU/hr from manufacturer's data
- Calculate the CFM

### How we can help

Once you know the air flow and a customer says they have room over the garage that is too hot or too cold, here is how we can help you.

We can measure the air flow from each supply and return grille and calculate the CFM for both supply and return. If the problem room is low in flow, we can investigate why. It is either too many bends in the run from the furnace or, too much heat loss or heat gain due to poor insulation. Both these can require a lot of work and cost to remedy.

Another solution can be to add a mini-split heat pump to service that room. It can be a very small unit because it is only making up the difference between what the central system provides. Some units run on 120VAC. If locating the outdoor unit is difficult, an alternative to a mini-split is a through-the-wall unit. One product on the

market is a unit that has two ducts in the wall instead of a large opening. It runs on 240 VAC so requires a new cable feed which can often be run on the outside of the house.

## APPENDIX

An example below shows what was done for a house where blower had failed so air flow measurements could not be done. The furnace data can then be used as a guide along with duct calculations and other data.

<b>Furnace</b>	Goodman GMV950704
AFUE	95%
Input	70,000 BTU/hr
Output	65,500 BTU/hr
Install Date	2009
Max Static Pressure	0.5 "WC
Air Flows	1600 CFM high
Blower	ECM ½ HP, 7.5 amps max.

	G	M	V	C	95	070	4	C	X	A	A	
	1	2	3	4	5,6	7,8,9	10	11	12	13	14	
<b>Brand</b>	G Goodman® Brand											<b>Revisions</b>
												Major and minor revisions
<b>Airflow Direction</b>												<b>NOx</b>
C Downflow/Horizontal												N Natural Gas
D Dedicated Downflow												X Low NOx
H High Airflow												
K Dedicated Upflow												
M Upflow/Horizontal												<b>Cabinet Width</b>
												A 14"
												B 17½"
												C 21"
												D 24½"
<b>Description/Motor</b>												<b>Maximum CFM @ 0.5" ESP</b>
V Two-Stage/Variable-speed												3 1200
H Two-Stage/Multi-speed												5 2000
S Single-Stage/Multi-speed												
E Two-Stage/High-Efficiency												
<b>SystemType</b>												
C ComfortNet™ Communicating System												4 1600
<b>AFUE</b>												<b>MBTU/h</b>
95 95%												045: 45,000
8 80%												115: 115,000
070: 70,000												140: 140,000
9 90%+												090: 90,000

## SPECIFICATIONS

	GMVC95 0453BX	GMVC95 0704CX	GMVC95 0905CX	GMVC95 0905DX	GMVC95 1155DX	GCV95 0714CX	GCV95 0915DX	GCV95 1155DX
<b>HEATING CAPACITY</b>								
High Fire Input <sup>1</sup>	46,000	69,000	92,000	92,000	115,000	69,000	92,000	115,000
High Fire Output <sup>1</sup>	45,000	67,000	90,000	90,000	109,000	65,000	87,000	109,000
Low Fire Input <sup>1</sup>	32,000	48,000	64,000	64,000	80,000	48,000	64,000	80,000
Low Fire Output <sup>1</sup>	30,800	46,400	61,700	61,700	77,400	45,000	60,100	77,400
AFUE <sup>2</sup>	95	95	95	95	95	95	95	93
Tons AC @ 0.5" ESP	1.5 - 3.0	1.5 - 4.0	2.0 - 5.0	2.0 - 5.0	2.0 - 5.0	1.5 - 4.0	2.0 - 5.0	2.0 - 5.0
Temperature Rise Range (°F)	30 - 60	30 - 60	30 - 60	30 - 60	30 - 60	25-55	25-55	40-70
<b>CIRCULATOR BLOWER</b>								
Size (D x W)	10" x 8"	10" x 10"	11" x 10"	11" x 10"	11" x 10"	10" x 10"	11" x 10"	11" x 10"
Horsepower @ 1050 RPM	½	¾	1	1	1	¾	1	1
Speed	Variable					Variable		
Vent Diameter <sup>3</sup>	2"	2"	3"	3"	3"	2"	3"	3"
No. of Burners	2	3	4	4	5	3	4	5
Disposable Filter (in <sup>2</sup> )	288	384	480	480	486	384	480	486
<b>ELECTRICAL DATA</b>								
Min. Circuit Ampacity (amps) <sup>4</sup>	11.3	14.1	14.4	14.4	14.4	11.2	15.0	14.4
Max. Overcurrent Protection <sup>5</sup>	15 amps	15 amps	15 amps	15 amps	15 amps	15 amps	15 amps	15 amps
<b>SHIP WEIGHT (LBS)</b>	121	145	160	160	170	139	165	160

## HEATING SPEEDS

GMVC950453BX (RISE RANGE: 30 - 60°F)				
TAP	ADJUST	LOW-STAGE CFM *	HIGH-STAGE CFM *	RISE (°F)
A	Minus(-)	495	713	57
	Normal	550	792	41
	Plus (+)	605	871	46
B	Minus(-)	540	778	52
	Normal	600	864	47
	Plus (+)	660	950	43
C	Minus(-)	585	842	48
	Normal	650	936	43
	Plus (+)	715	1,030	39
D	Minus(-)	630	907	45
	Normal	700	1,008	40
	Plus (+)	770	1,109	36

GMVC950704CX (RISE RANGE: 30 - 60°F)				
TAP	ADJUST	LOW-STAGE CFM *	HIGH-STAGE CFM *	RISE (°F)
A	Minus(-)	756	1,089	56
	Normal	840	1,210	50
	Plus (+)	924	1,331	46
B	Minus(-)	828	1,192	51
	Normal	920	1,325	46
	Plus (+)	1,012	1,457	42
C	Minus(-)	900	1,296	47
	Normal	1,000	1,440	42
	Plus (+)	1,100	1,584	38
D	Minus(-)	972	1,400	43
	Normal	1,080	1,555	39
	Plus (+)	1,188	1,711	35

## COOLING SPEEDS

GMVC950453BX					
HIGH STAGE			LOW STAGE		
TAP	ADJUST	CFM*	TAP	ADJUST	CFM*
A	Minus(-)	540	A	Minus(-)	351
	Normal	600		Normal	390
	Plus (+)	660		Plus (+)	429
B	Minus(-)	720	B	Minus(-)	468
	Normal	800		Normal	520
	Plus (+)	880		Plus (+)	572
C	Minus(-)	900	C	Minus(-)	585
	Normal	1000		Normal	650
	Plus (+)	1100		Plus (+)	715
D	Minus(-)	1080	D	Minus(-)	702
	Normal	1200		Normal	780
	Plus (+)	1320		Plus (+)	858

GMVC950704CX					
HIGH STAGE			LOW STAGE		
TAP	ADJUST	CFM*	TAP	ADJUST	CFM*
A	Minus(-)	540	A	Minus(-)	351
	Normal	600		Normal	390
	Plus (+)	660		Plus (+)	429
B	Minus(-)	720	B	Minus(-)	468
	Normal	800		Normal	520
	Plus (+)	880		Plus (+)	572
C	Minus(-)	990	C	Minus(-)	644
	Normal	1100		Normal	715
	Plus (+)	1210		Plus (+)	787
D	Minus(-)	1286	D	Minus(-)	836
	Normal	1429		Normal	929
	Plus (+)	1572		Plus (+)	1022

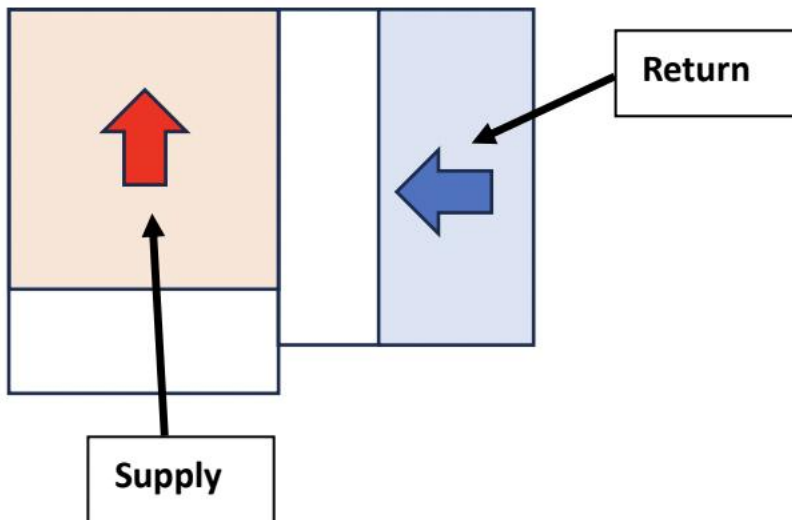
\* @ .1" - .8" w.c. ESP

**NOTES:**

- All furnaces ship as high speed for cooling. Installer must adjust blower speed as needed.
- For most jobs, about 400 CFM per ton when cooling is desirable.
- Do not operate above .5" w.c. ESP in heating mode. Operating CFM between .5" and .8" w.c. is tabulated for cooling purposes only.

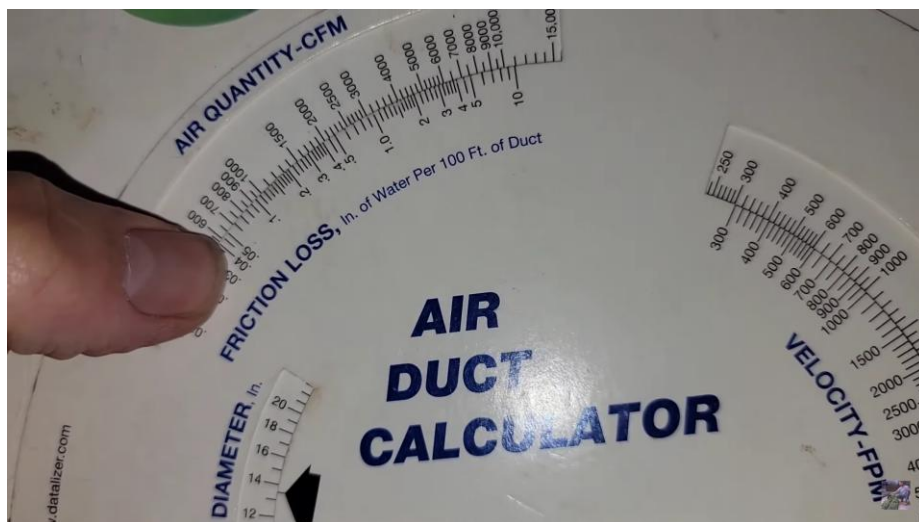
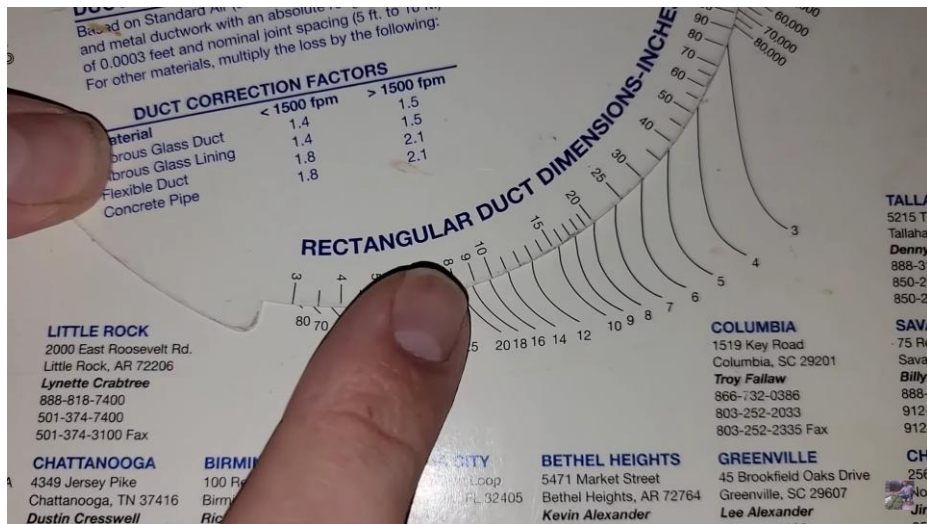


## Top View



## Calculating Air Flow

Use the Ductulator or other conversion devices.



Filter Grille H x W x 2 = CFM  
 Non-Filter Grille H x W x 3 = CFM



**Metal**

**Flex**

Round Duct Size	Supply Air CFM	Return Air CFM	Round Duct Size	Supply Air CFM	Return Air CFM
4	33		4	20	
5	58	45	5	42	32
6	93	72	6	68	52
7	145	111	7	105	81
8	210	155	8	150	115
9	275	210	9	200	151
10	365	280	10	265	205
12	600	450	12	430	330
14	900	700	14	650	500
16	1300	980	16	950	730
18	1750	1350	18	1275	975
20	2300	1800	20	1750	1300

CFM numbers above are based on a friction rate of .08 supply and .05 return

Outdoor Air Temperature ° C					
Indoor Air Temperature ° C					
Indoor Humidity, %					
Filter Type and Size					
<b>Air Grilles - Supply</b>					
Room	Size, in.	CFM@.08"	Number	Total	
Basement	6"	93	1	93	
Main	6"	93	4	372	
Second	6"	93	4	372	
			Total	837	
<b>Return</b>		CFM@.05"			
Main 14" x 8"	12"	450	2	560	
Second 14" x 8"	12"	450	3	840	
			Total	1300	

BTU/hr = CFM x Temp. Rise (° F) x 1.08



	Supply	Return
Temperature Rise ° F	60	
Calculated Air Flow CFM	837	1300
Calculated BTU/hr	54,273	84,200

## Energy Audit Calculation

The energy audit provided the design heating load based on a blower door test. The heat requirement at -20°C was 27,000 BTU/hr. With added insulation and air sealing, the demand could be reduced to 24,000 or 2 tons. Assuming a temperature rise of 60°F at a static pressure of 0.5", gives a cfm of 420 cfm. If a heat pump is used, the temperature rise is less (29°F) and the required cfm would be about 760 cfm.

## Measuring Static Pressure

Measurements using a dual port manometer, anemometer and thermometer can confirm the actual static pressure and heat output.

CFM = value in manufacturer's manual at speed used and S.P. measured  
For this furnace, the cfm values are for static pressures in the range of 0.1" to 0.8" It gives 1555 cfm at high output. The main label gives 1600 cfm at 0.5".

Specs for a similar furnace show cfm at high and low speeds of 1371 and 781 cfm at 0.5".

Another way to get a better idea of cfm is to measure the blower electrical consumption and compare it to the rated power draw. The blower here uses 3/4 hp at 1050 cfm. This is a current at 120 VAC of  $750 \times 0.75 \text{ W} / 120 = 4.7$  amps. If the measured current draw is 3 amps, the flow can be calculated as proportional to the power. In this case,  $3 / 4.7 \times 1050 = 670$  cfm.

$$\text{BTU/hr} = \text{CFM} \times \text{Temp. Rise (°F)} \times 1.08$$

System performance compared to manufacturer values

	Measured values	Manufacturer values
CFM	x	840 to 1080
BTU/hr	$X \times \Delta T \times 1.08 = Y$	67,500 maximum
Static pressure	Z	0.30

## Heat Pump Requirements

The design rule of thumb of 400 cfm per ton = 2 tons x 400 = 800 cfm at -20°C  
This is close to the 760 cfm calculated by the audit assuming the static pressure drops are correct.

$$\Delta T = \text{BTU/h} / (\text{cfm} \times 1.08)$$

2 Ton Moovair

	Temp	(CFM) 0.5" WC	BTU/hr Rated	Delta T
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High	-20°C	759	22,000	27F(14°C)
Med	-8°C	694	20,237	27F
Low	8°C	629	18,342	27F

In reality, a 2.5 ton unit would work.

Concerns have been raised about air flow noise if too much air is pushed through the ductwork at a high static pressure.

In this case, the system is oversized and has not been of concern for noise. It probably has not run on high blower speed, though.

### **Conclusion**

So what do we do in this situation?

#### **Option 1**

Put in a 2 ton with a 5 kW backup heater but no wiring and see what happens. If it gets too cold on a regular basis, use the baseboard heater or connect the heat kit.

#### **Option 2**

Put in a 2.5 ton with no backup heater. Set the blower to a lower speed if there is too much noise or investigate airflow issues

Regardless of which is selected, a static pressure test should be done. This is a requirement under the College of Trades training for becoming a licensed HVAC technician. I have documents that show how this can be done at low cost and minimal time. I can rent my equipment or do the tests for anyone interested.

## Find a Contractor

- **Pamar Mechanical Ltd.**

- Toronto, ON, M9Z 5B2
- [416-253-1436](tel:416-253-1436)

- 

- Residential

Directions

**0.00 Km**

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- **GTA Heating and Air**

- Toronto, ON, M5B 1M4
- [416-666-3070](tel:416-666-3070)

- 

- Residential

Directions

**0.31 Km**

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- **Tell Us Heating**

- Toronto, ON, M6J 2T6
- [416-894-0024](tel:416-894-0024)

- 

- Residential

Directions

**2.68 Km**

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- **Jeff Air**

- Toronto, ON, M4V 3E3
- [416-414-5768](tel:416-414-5768)

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- Residential

Directions

**3.16 Km**

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- **Apple Heating + Air Conditioning (1994) Ltd.**

- Toronto, ON, M6J 3P4
- [416-291-1655](tel:416-291-1655)

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- Residential

Directions

**3.47 Km**

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- **Hoerner Heating & Plumbing Services**

- Toronto, ON, M4K 2R1
- [416-463-2573](tel:416-463-2573)

○

- Residential

Directions

**3.58 Km**

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- **Dumas Management and Consulting Inc.**

- Toronto, ON, M4V 1J8
- [416-418-8360](tel:416-418-8360)

○

- Residential

Directions

**3.72 Km**

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- **Royal Plumbing Services Ltd**

- Toronto, ON, M6K 2A9
- [416-537-0038](tel:416-537-0038)

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- Residential

Directions

**3.92 Km**

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- **Abcon Air Systems**

- Toronto, ON, M4V 2E6
- [416-801-6625](tel:416-801-6625)

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- Residential

Directions

**4.10 Km**

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- **Addison Heating and Cooling Ltd**

- Toronto, ON, M4J 3A6
- [416-678-2913](tel:416-678-2913)

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- Residential

Directions

**4.44 Km**

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- **Azores Heating and Air**

- Toronto, ON, M6H 3S4
- [416-887-6479](tel:416-887-6479)

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- Residential

Directions  
**4.46 Km**

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- **Sun Star Mechanic Inc.**

- Toronto, ON, M6H 1C6
- [647-286-5533](tel:647-286-5533)

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- Residential

Directions  
**4.63 Km**

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- **5004701 Ontario Inc.**

- Toronto, ON, M6K 2Z9
- [647-204-0903](tel:647-204-0903)

- 

- Residential

Directions  
**4.73 Km**

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- **Akselson Property Management**

- Toronto, ON, M5P 2Z1
- [416-653-0276](tel:416-653-0276)

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- Residential

Directions  
**4.84 Km**

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- **Dupont Heating**

- Toronto, ON, M6H 4C8
- [416-532-2859](tel:416-532-2859)

- 

- Residential

Directions  
**4.92 Km**

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- **High Park Mechanical Inc.**

- Toronto, ON, M6K 3B6
- [416-535-8193](tel:416-535-8193)

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- Residential

Directions  
**5.00 Km**

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- **Aire One Central (Toronto)**

- Toronto, ON, M6H 2A4
- [416-537-3800](tel:416-537-3800)

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- Residential

Directions

**5.01 Km**

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- **Sean Rodrigues**

- Toronto, ON, M6R 1H7
- [416-875-8918](tel:416-875-8918)

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- Residential

Directions

**5.09 Km**

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- **Strutt Mechanical Ltd**

- Toronto, ON, M6R 1E6
- [416-828-1653](tel:416-828-1653)

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- Residential

Directions

**5.12 Km**

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- **Soft Air System Inc.**

- Toronto, ON, M4S 1G7
- [416-566-2099](tel:416-566-2099)

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- Residential

Directions

**5.14 Km**

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- **Polar Dynamics Inc.**

- Toronto, ON, M6H 2E9
- [416-556-2088](tel:416-556-2088)

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- Residential

Directions

**5.14 Km**

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- **Green Choice Heating & Cooling**

- Toronto, ON, M4L 2X1
- [647-262-6788](tel:647-262-6788)

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- Residential

Directions  
**5.19 Km**

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- **NB Services Inc**

- Toronto, ON, M4S 1E1
- [416-827-7634](tel:416-827-7634)
- - Residential

Directions  
**5.20 Km**

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- **Canadian City Service**

- East York, ON, M4J 2P6
- [416-467-1838](tel:416-467-1838)
- - Residential

Directions  
**5.25 Km**

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- **Airstream Heating & Cooling**

- Toronto, ON, M4J 2J7
- [416-731-5461](tel:416-731-5461)
- - Residential

Directions  
**5.39 Km**

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- **Urban Heat Pump**

- Toronto, ON, M6C 1S7
- [647-656-7695](tel:647-656-7695)
- - Residential

Directions  
**5.57 Km**

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- **T-Stat Heating And Air**

- Toronto, ON, M6R 1P6
- [647-839-9806](tel:647-839-9806)
- - Residential

Directions  
**5.66 Km**

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- **Pilot Mechanical**

- Toronto, ON, M4G 1M6
- [416-423-2466](tel:416-423-2466)

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- Residential

Directions

**5.77 Km**

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- **Mavy Air Heating & Air Conditioning**

- Toronto, ON, M4J 4E9
- [416-648-4074](tel:416-648-4074)

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- Residential

Directions

**5.79 Km**

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- **Toronto Lithuanian Senior Citizens Inc**

- Toronto, ON, M6P 4C3
- [416-762-1777](tel:416-762-1777)

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- Residential

Directions

**6.05 Km**

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- **Valley Co.**

- Toronto, ON, M6P 1B8
- [416-877-4035](tel:416-877-4035)

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- Residential

Directions

**6.09 Km**

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- **Applied Energy**

- Toronto, ON, M5N 1C5
- [905-621-7842](tel:905-621-7842)

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- Residential

Directions

**6.13 Km**

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- **Belyea Bros. Limited**

- Toronto, ON, M4H 1H2
- [416-425-1200](tel:416-425-1200)

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- Residential



Directions  
**6.47 Km**

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- **MT General Contractor**

- Toronto, ON, M6E 2X4
- [647-296-0654](tel:647-296-0654)
- - Residential

Directions  
**6.56 Km**

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- **Hemus HVAC Systems**

- Toronto, ON, M4C 3V3
- [416-818-6946](tel:416-818-6946)
- - Residential

Directions  
**6.81 Km**

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- **Revel Mechanical Heating And Cooling Inc.**

- Toronto, ON, M4R 1J2
- [647-501-3365](tel:647-501-3365)
- - Residential

Directions  
**6.85 Km**

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- **M & M Heating & Cooling**

- Toronto, ON, M6P 2S4
- [416-616-8106](tel:416-616-8106)
- - Residential

Directions  
**6.86 Km**

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- **Interior Climate Solutions Ltd.**

- Toronto, ON, M4R 1H6
- [416-435-0895](tel:416-435-0895)
- - Residential

Directions  
**6.87 Km**

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- **Accuserv Heating and Air Conditioning Inc.**

- East York, ON, M4C 4C6
- [416-269-2228](tel:416-269-2228)

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- Residential

Directions

**6.91 Km**

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- **Riverdale Plumbing**

- Toronto, ON, M4G 2G8
- [416-466-9504](tel:416-466-9504)

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- Residential

Directions

**7.06 Km**

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- **Lelo Mechanical Promotions Inc.**

- Toronto, ON, M6E 2H6
- [416-562-6344](tel:416-562-6344)

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- Residential

Directions

**7.18 Km**

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- **Boba Construction**

- Toronto, ON, M6S 3J3
- [416-825-4093](tel:416-825-4093)

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- Residential

Directions

**7.32 Km**

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- **City Home Comfort Inc.**

- Toronto, ON, M4E 2Y9
- [416-556-8368](tel:416-556-8368)

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- Residential

Directions

**7.59 Km**

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- **Springbok Heating & Air Limited**

- Toronto, ON, M6M 1K8
- [416-712-4848](tel:416-712-4848)

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- Residential

Directions  
**7.60 Km**

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- **SAR Gas Services Inc.**

- Toronto, ON, M6B 3R3
- [416-781-8244](tel:416-781-8244)
- - Residential

Directions  
**7.73 Km**

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- **Visic Brothers**

- Toronto, ON, M6S 2S4
- [416-763-2130](tel:416-763-2130)
- - Residential

Directions  
**8.32 Km**

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- **Dan-Air Heating and Airconditioning**

- Etobicoke, ON, M8V 0G1
- [416-878-2910](tel:416-878-2910)
- - Residential

Directions  
**8.39 Km**

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- **World of Comfort Ltd**

- Toronto, ON, M6N 1L7
- [416-598-4115](tel:416-598-4115)
- - Residential

Directions  
**8.58 Km**

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- **Riteflow Heating And Air Solutions**

- East York, ON, M4B 3J1
- [647-299-1593](tel:647-299-1593)
- - Residential

Directions  
**8.61 Km**

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- **Y J Heating & Cooling**

- North York, ON, M6B 2X6
- [647-674-8014](tel:647-674-8014)

○

- Residential

Directions

**8.71 Km**

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- **Lloyd HVAC Services Inc**

- Toronto, ON, M1L 1B1
- [416-660-8382](tel:416-660-8382)

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- Residential

Directions

**8.80 Km**

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- **Elsev Air Corporation**

- North York, ON, M6B 2M5
- [416-999-9515](tel:416-999-9515)

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- Residential

Directions

**8.89 Km**

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- **Ment Air Ltd.**

- Etobicoke, ON, M8Y 4E4
- [647-895-5744](tel:647-895-5744)

○

- Residential

Directions

**8.96 Km**

---

- **NRG Mechanical LTD**

- Toronto, ON, M6S 2J6
- [416-712-2610](tel:416-712-2610)

○

- Residential

Directions

**8.98 Km**

---

- **Ounkis HEating & Air Conditioning**

- Toronto, ON, M5M 2E6
- [416-487-4204](tel:416-487-4204)

○

- Residential

Directions  
**9.17 Km**

---

- **Controlled Comfort Air Inc**

- Toronto, ON, M6N 3S4
- [416-531-9191](tel:416-531-9191)

- 

- Residential

Directions  
**9.24 Km**

---

- **Air Treatment ClimateCare**

- Toronto, ON, M6M 2R1
- [416-235-0373](tel:416-235-0373)

- 

- Residential

Directions  
**9.27 Km**

---

- **Five Lions Heating & Cooling Inc.**

- Toronto, ON, M1L 3G1
- [416-797-0898](tel:416-797-0898)

- 

- Residential

Directions  
**9.47 Km**

---

- **Mac Mech. Inc.**

- Toronto, ON, M6S 2T4
- [416-760-8658](tel:416-760-8658)

- 

- Residential

Directions  
**9.55 Km**

---

- **Triumph Mechanical Inc**

- York, ON, M6N 2E5
- [647-606-9774](tel:647-606-9774)

- 

- Residential

Directions  
**9.58 Km**

---

- **VVA Mechanical**

- York, ON, M6N 2E8
- [647-886-5016](tel:647-886-5016)

- 

- Residential

Directions

**9.71 Km**

---

- **Biss Inc.**

- Toronto, ON, M6N 1W3
- [416-760-8658](tel:416-760-8658)

- 

- Residential

Directions

**9.74 Km**

---

- **Best Choice Heating And Cooling**

- North York, ON, M6A 1P5
- [647-888-2065](tel:647-888-2065)

- 

- Residential

Directions

**9.75 Km**

---

- **Fabell HVAC/R**

- Toronto, ON, M8V 3V7
- [647-230-2859](tel:647-230-2859)

- 

- Residential

Directions

**9.78 Km**

---

- **Phoenix Heating & Air Ltd.**

- Toronto, ON, M6A 0C4
- [647-274-8160](tel:647-274-8160)

- 

- Residential

Directions

**9.78 Km**

---

- **Cool Heat Comfort**

- Toronto, ON, M8Y 2T7
- [647-719-9648](tel:647-719-9648)

- 

- Residential

Directions  
**10.24 Km**

---

- **Trillium Inc.**

- Toronto, ON, M5M 4N3
- [416-540-5670](tel:416-540-5670)

- 

- Residential

Directions  
**10.28 Km**

---

- **Free Air Mech. Inc.**

- Toronto, ON, M1L 4R6
- [647-438-9876](tel:647-438-9876)

- 

- Residential

Directions  
**10.42 Km**

---

- **Wespol Heating and Air Conditioning**

- Etobicoke, ON, M8Z 1G3
- [416-258-1651](tel:416-258-1651)

- 

- Residential

Directions  
**10.59 Km**

---

- **Carey Heating And Air Conditioning**

- Scarborough, ON, M1L 4H6
- [416-269-2292](tel:416-269-2292)

- 

- Residential

Directions  
**10.65 Km**

---

- **Estrada Heating & Air Conditioning**

- North York, ON, M3K 1C8
- [647-833-7304](tel:647-833-7304)

- 

- Residential

Directions  
**10.68 Km**

---

- **Sep Air HVAC Services**



- Toronto, ON, M8V 0C8
- [416-838-7638](tel:416-838-7638)

○

- Residential

Directions

**10.88 Km**

---

- **Alkebulan Hvac Services Inc**

- Toronto, ON, M6M 0A3
- [647-382-1741](tel:647-382-1741)

○

- Residential

Directions

**10.89 Km**

---

- **Joe Rebelo**

- Toronto, ON, M6L 2X8
- [647-764-3114](tel:647-764-3114)

○

- Residential

Directions

**11.19 Km**

---

- **Atomech.ca Ltd**

- Toronto, ON, M9A 2Y6
- [416-271-5599](tel:416-271-5599)

○

- Residential

Directions

**11.22 Km**

---

- **Atomic Heating & Cooling**

- Etobicoke, ON, M9A 2Y6
- [416-252-3399](tel:416-252-3399)

○

- Residential

Directions

**11.22 Km**

---

- **AtomiCare Heating And Cooling**

- Toronto, ON, M9A 2Y6
- [647-964-8579](tel:647-964-8579)

○

- Residential

Directions  
**11.22 Km**

---

- **CH4 Heating**

- Toronto, ON, M3A 2J7
- [416-890-4446](tel:416-890-4446)
- - Residential

Directions  
**11.22 Km**

---

- **The Boiler Shoppe**

- Toronto, ON, M9P 1A5
- [647-290-4605](tel:647-290-4605)
- - Residential

Directions  
**11.23 Km**

---

- **Exacaire Mech. Systems Ltd.**

- Toronto, ON, M8V 2E8
- [416-896-9736](tel:416-896-9736)
- - Residential

Directions  
**11.28 Km**

---

- **Sipco Heating, Air Conditioning Ltd.,**

- Toronto, ON, M8Z 2X2
- [416-232-2262](tel:416-232-2262)
- - Residential

Directions  
**11.57 Km**

---

- **Heating and Cooling**

- Etobicoke, ON, M9A 3J3
- [416-990-2251](tel:416-990-2251)
- - Residential

Directions  
**11.62 Km**

---

- **Pronto Heating & A/C Ltd.**

- Etobicoke, ON, M8Z 6A3
- [416-255-4779](tel:416-255-4779)

○

- Residential

Directions

**11.68 Km**

---

- **Premier Climate Services Inc.**

- Toronto, ON, M6L 2E4
- [647-212-0842](tel:647-212-0842)

○

- Residential

Directions

**11.73 Km**

---

- **Copperhead Mechanical Ltd.**

- Toronto, ON, M9N 3B3
- [416-421-2111](tel:416-421-2111)

○

- Residential

Directions

**11.88 Km**

---

- **BLTN Mechanical Inc.**

- Etobicoke, ON, M9P 2T4
- [647-286-2875](tel:647-286-2875)

○

- Residential

Directions

**11.90 Km**

---

- **Culzac Heating & Air Conditioning**

- Toronto, ON, M3M 1J2
- [416-805-5941](tel:416-805-5941)

○

- Residential

Directions

**11.90 Km**

---

- **Sunlife Heating And Air Conditioning Company**

- North York, ON, M2L 2V1
- [416-315-8688](tel:416-315-8688)

○

- Residential

Directions  
**11.96 Km**

---

- **Bullet Proof Heating & Cooling Ltd.**

- Etobicoke, ON, M8V 3H5
- [888-959-9121](tel:888-959-9121)

- 

- Residential

Directions  
**11.99 Km**

---

- **Walltek Mechanical Inc.**

- Toronto, ON, M8Z 5G6
- [416-231-0000](tel:416-231-0000)

- 

- Residential

Directions  
**12.04 Km**

---

- **Burban Air Systems Ltd.**

- Scarborough, ON, M1L 4J9
- [416-757-3271](tel:416-757-3271)

- 

- Residential

Directions  
**12.07 Km**

---

- **Cowen Mechanical Services**

- Scarborough, ON, M1N 1M1
- [416-618-1937](tel:416-618-1937)

- 

- Residential

Directions  
**12.11 Km**

---

- **1 Click Heating & Cooling Inc**

- Toronto, ON, M2N 5W9
- [416-880-7620](tel:416-880-7620)

- 

- Residential

Directions  
**12.25 Km**

---

- **Seasonal Air Comfort**

- Toronto, ON, M3H 2S5
- [416-400-7975](tel:416-400-7975)

○

- Residential

Directions

**12.27 Km**

---

- **Consumers Choice Heating and Cooling Inc.**

- Scarborough, ON, M1R 3C3
- [416-722-8740](tel:416-722-8740)

○

- Residential

Directions

**12.28 Km**

---

- **Toronto Heating And Hydronics Inc.**

- Toronto, ON, M1R 3C3
- [416-459-3079](tel:416-459-3079)

○

- Residential

Directions

**12.28 Km**

---

- **Connect Home Comfort**

- Toronto, ON, M3M 1Z1
- [416-235-0404](tel:416-235-0404)

○

- Residential

Directions

**12.32 Km**

---

- **ARX Mechanical**

- Scarborough, ON, M1K 2W8
- [647-673-6343](tel:647-673-6343)

○

- Residential

Directions

**12.33 Km**

---

- **Armanch Inc.**

- North York, ON, M2K 3C1
- [647-676-7664](tel:647-676-7664)

○

- Residential

Directions  
**12.42 Km**

---

- **Aptech Mechanical Care Inc**

- Toronto, ON, M2N 6S3
- [647-878-2378](tel:647-878-2378)

- 

- Residential

Directions  
**12.57 Km**

---

- **Songs HVAC Heating & Cooling**

- North York, ON, M2N 6G9
- [647-964-2030](tel:647-964-2030)

- 

- Residential

Directions  
**12.59 Km**

---

- **JWY Heating and Cooling**

- Toronto, ON, M9P 1A1
- [416-893-1789](tel:416-893-1789)

- 

- Residential

Directions  
**12.69 Km**

---

- **Neighbourhood Heating & A/C**

- Scarborough, ON, M1K 3J1
- [416-834-9020](tel:416-834-9020)

- 

- Residential

Directions  
**12.79 Km**

---

- **Walter Heating and Air Conditioning**

- Toronto, ON, M9A 3W4
- [416-628-5378](tel:416-628-5378)

- 

- Residential

Directions  
**12.94 Km**

---

- **AZ Mechanical**

- Toronto, ON, M3A 2G3
- [647-834-6727](tel:647-834-6727)

○

- Residential

Directions

**13.00 Km**

---

- **Direct Air Systems**

- Toronto, ON, M3M 1Y6
- [416-243-9774](tel:416-243-9774)

○

- Residential

Directions

**13.01 Km**

---

- **Arrow Heating & Cooling Inc.**

- Toronto, ON, M9N 2P6
- [416-789-4568](tel:416-789-4568)

○

- Residential

Directions

**13.09 Km**

---

- **ARROW HEATING & COOLING INC.**

- TORONTO, ON, M9N 2P6
- [416-789-4568](tel:416-789-4568)

○

- Residential

Directions

**13.09 Km**

---

- **AFG Heating and Cooling Services Inc.**

- Toronto, ON, M3H 4J5
- [416-897-5701](tel:416-897-5701)

○

- Residential

Directions

**13.10 Km**

---

- **McKinnon Heating & Cooling**

- Toronto, ON, M3J 3G5
- [416-694-1187](tel:416-694-1187)

○

- Residential



Directions  
**13.14 Km**

---

- **Aire Max Comfort Inc.,**

- Toronto, ON, M2J 1A9
- [416-890-2571](tel:416-890-2571)

- 

- Residential

Directions  
**13.19 Km**

---

- **Rush Heating & Air Conditioning**

- Weston, ON, M9N 2P7
- [416-249-2256](tel:416-249-2256)

- 

- Residential

Directions  
**13.23 Km**

---

- **A & T HVAC Services**

- Toronto, ON, M9B 5G6
- [416-809-6174](tel:416-809-6174)

- 

- Residential

Directions  
**13.28 Km**

---

- **Climate**

- Toronto, ON, M1R 3C7
- [416-759-2289](tel:416-759-2289)

- 

- Residential

Directions  
**13.29 Km**

---

- **Crescent Mechanical Inc.**

- Toronto, ON, M8W 4C6
- [416-561-8360](tel:416-561-8360)

- 

- Residential

Directions  
**13.33 Km**

---

- **Ultimate Mechanical Solutions Inc**

- North York, ON, M2R 1C4
- [416-848-7040](tel:416-848-7040)

○

- Residential

Directions

**13.35 Km**

---

- **Cozy Comfort Plus Inc.**

- North York, ON, M3K 2A3
- [416-780-9760](tel:416-780-9760)

○

- Residential

Directions

**13.41 Km**

---

- **Dellwood Heating & Air Cond**

- North York, ON, M2K 2W4
- [416-445-5625](tel:416-445-5625)

○

- Residential

Directions

**13.51 Km**

---

- **Premier Htg. & A/C**

- Toronto, ON, M9R 2T3
- [416-618-3410](tel:416-618-3410)

○

- Residential

Directions

**13.53 Km**

---

- **Lotus Heating And Air Conditioning**

- North York, ON, M3L 1T8
- [647-718-1869](tel:647-718-1869)

○

- Residential

Directions

**13.60 Km**

---

- **I M Comfort Ltd**

- Etobicoke, ON, M8Z 2L8
- [416-939-9372](tel:416-939-9372)

○

- Residential

Directions  
**13.68 Km**

---

- **Land Mechanical Services Inc.**

- Etobicoke, ON, M8Z 2L8
- [416-521-7316](tel:416-521-7316)

- 

- Residential

Directions  
**13.68 Km**

---

- **Air Solar System Inc.**

- North York, ON, M2N 7A2
- [647-896-3025](tel:647-896-3025)

- 

- Residential

Directions  
**13.77 Km**

---

- **Toronto Home Comfort**

- Scarborough, ON, M1P 2R2
- [416-755-8624](tel:416-755-8624)

- 

- Residential

Directions  
**13.78 Km**

---

- **Energy Audit Team**

- Etobicoke, ON, M9B 0A9
- [416-229-9300](tel:416-229-9300)

- 

- Residential

Directions  
**13.82 Km**

---

- **Home Trade Standards Ltd**

- North York, ON, M3J 2R8
- [647-909-3943](tel:647-909-3943)

- 

- Residential

Directions  
**13.89 Km**

---

- **Just Right Air Systems**

- Scarborough, ON, M1R 5G2
- [416-908-5145](tel:416-908-5145)

○

- Residential

Directions

**13.91 Km**

---

- **Abado Heating Air Conditioning & Plumbing**

- North York, ON, M2J 2C8
- [416-880-3680](tel:416-880-3680)

○

- Residential

Directions

**14.02 Km**

---

- **House Depot Co.**

- Toronto, ON, M2N 2C7
- [416-822-9030](tel:416-822-9030)

○

- Residential

Directions

**14.03 Km**

---

- **Allied Waves Inc.**

- North York, ON, M2K 1Y7
- [416-388-5360](tel:416-388-5360)

○

- Residential

Directions

**14.08 Km**

---

- **SBN Mechanical Inc.**

- Scarborough, ON, M1T 1M1
- [416-497-5555](tel:416-497-5555)

○

- Residential

Directions

**14.13 Km**

---

- **James Kim's Heating & A/C Co.**

- North York, ON, M2R 1M2
- [416-256-7700](tel:416-256-7700)

○

- Residential

Directions  
**14.18 Km**

---

- **Eagle Air-Force**

- Toronto, ON, M9R 1H1
- [647-853-0110](tel:647-853-0110)
- - Residential

Directions  
**14.27 Km**

---

- **Direct Ventilation Inc.**

- Toronto, ON, M9R 3H5
- [416-879-1666](tel:416-879-1666)
- - Residential

Directions  
**14.28 Km**

---

- **F. S. Heating**

- Toronto, ON, M3L 2L4
- [647-809-8338](tel:647-809-8338)
- - Residential

Directions  
**14.38 Km**

---

- **Efficient Air Care Inc.**

- Toronto, ON, M9M 2R6
- [647-877-2427](tel:647-877-2427)
- - Residential

Directions  
**14.41 Km**

---

- **YILU Mechanical Service Inc.,**

- Scarborough, ON, M1P 4Z3
- [416-666-2638](tel:416-666-2638)
- - Residential

Directions  
**14.44 Km**

---

- **Innovative Trailer Design Industries**

- Etobicoke, ON, M9C 4V8
- [416-620-7755](tel:416-620-7755)

○

- Residential

Directions

**14.55 Km**

---

- **Ronin Plumbing**

- Toronto, ON, M2J 1K4
- [416-671-4391](tel:416-671-4391)

○

- Residential

Directions

**14.57 Km**

---

- **Royal Heating & Air Conditioning**

- Toronto, ON, M8W 3X4
- [416-220-8254](tel:416-220-8254)

○

- Residential

Directions

**14.60 Km**

---

- **H & C Heating and Cooling**

- Etobicoke, ON, M9R 3N4
- [416-520-4892](tel:416-520-4892)

○

- Residential

Directions

**14.67 Km**

---

- **Convertible Air Inc.**

- Etobicoke, ON, M8W 4V2
- [416-503-8188](tel:416-503-8188)

○

- Residential

Directions

**14.71 Km**

---

- **Cantech Mechanical Services**

- Toronto, ON, M3N 2L7
- [416-875-1813](tel:416-875-1813)

○

- Residential

Directions  
**14.74 Km**

---

- **T.M. Contracting, Heating and Cooling**

- Etobicoke, ON, M9C 1G1
- [647-622-2636](tel:647-622-2636)

- 

- Residential

Directions  
**14.77 Km**

---

- **Rocmar HVAC Inc.**

- Etobicoke, ON, M8W 1T8
- [416-456-5751](tel:416-456-5751)

- 

- Residential

Directions  
**14.81 Km**

---

- **Thermex Heating And Air Conditioning Inc.**

- North York, ON, M2R 2J3
- [416-500-1047](tel:416-500-1047)

- 

- Residential

Directions  
**14.85 Km**

---

- **M.I. Heating & Cooling**

- Etobicoke, ON, M8W 1T6
- [416-768-8924](tel:416-768-8924)

- 

- Residential

Directions  
**14.96 Km**

---

- **Orion Heating**

- Toronto, ON, M9C 3B5
- [416-822-5132](tel:416-822-5132)

- 

- Residential

Directions  
**15.09 Km**

---

- **Tempasure Inc.**



- Toronto, ON, M3J 0H3

- [416-806-6111](tel:416-806-6111)

- 

- Residential

Directions

**15.22 Km**

---

- **JPS Mechanical**

- North York, ON, M2J 4C4

- [416-564-0893](tel:416-564-0893)

- 

- Residential

Directions

**15.22 Km**

- **Polar Dynamics Inc.**

Toronto, ON, M6H 2E9

5.14 Km

[416-556-2088](tel:416-556-2088)