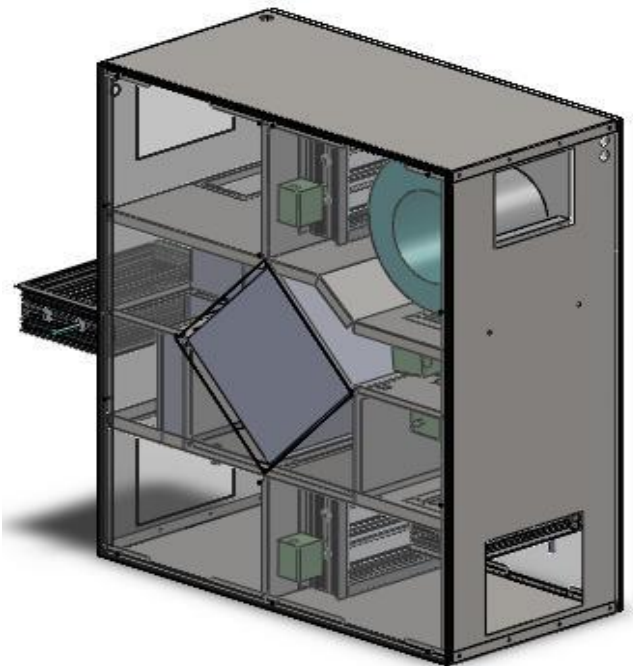


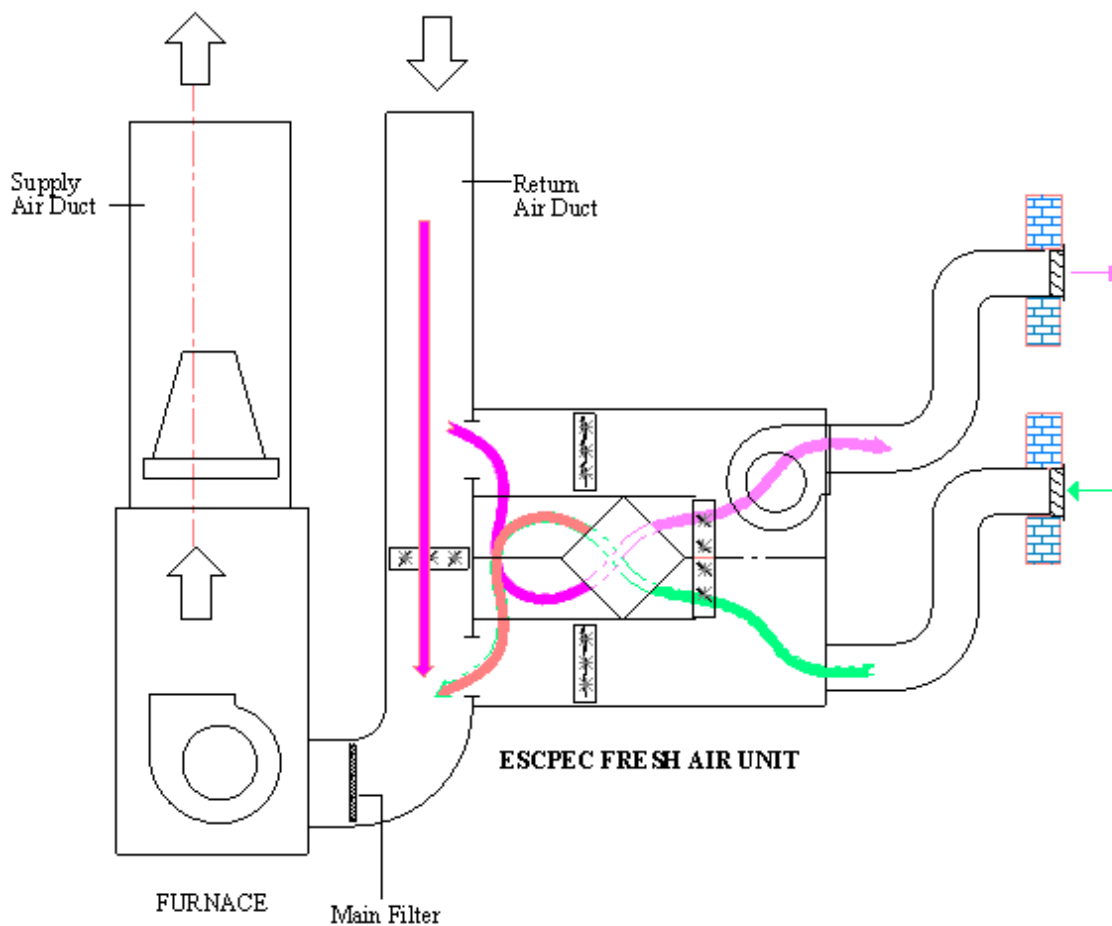
## Escpec Inc.

### Home Fresh Air System – ERV/HRV and Economiser

Escpec Fresh Air System is dedicated to bring outside air into your home and exhaust home stale air out, remove odd smell, keep your house fresh. It works with your existing furnace heating and AC cooling and center duct system. It uses the high efficiency, AHRI certified, ERV/HRV energy exchange core so that the exhaust home air will warm or cool incoming outside air to save energy. It supplies powerful air exchange rate from 100 to 300 CFM, the rate and time can be easily adjustable by your smart phone no matter where you are once you can access to internet. And a more unique feature it offered is the free cooling during summer season to bring cool outside air into your home when outside temperature is below a set point, say 18C at the night. It will turn off AC, exhaust hot room air, suck in cool fresh air at a rate of 800CFM. Even if the outside temperature is higher than 18C but lower than inside room temperature, it will leave AC on and do the same thing above. When this happens your room air quality is almost as same as outside. And the high air exchange rate can reduce room smell significantly during cooking or you have pet in home. Please see the following features:

- Air exchange rate from 100 to 300 CFM
- Energy Exchange core total efficiency above 70%, we use CORE LIFE, which is the one of the best brand in North America.
- Defrost control for winter season. Automatically detect outdoor air temperature after the core, if below freeze point, then close outdoor/exhaust dampers, open defrost damper to circle air through the core to defrost.
- A stainless steel drain pan under the core for condensate water, an 1/2" clearance hose connect to drain pan, exit from bottom of unit to the foundation.
- Smart phone controlled schedule, easy to change air rate and time zone. There are Sleep/Home/Cook three modes to select for a different time zone.
- Free cooling at summer. And energy saving during AC cooling. Air rate at 800 CFM.
- 1/4 horse power ECM exhaust fan with variable speed to exhaust air from 100CFM to 800CFM.
- Aluminium air foil dampers for return air/fresh air/exhaust air.

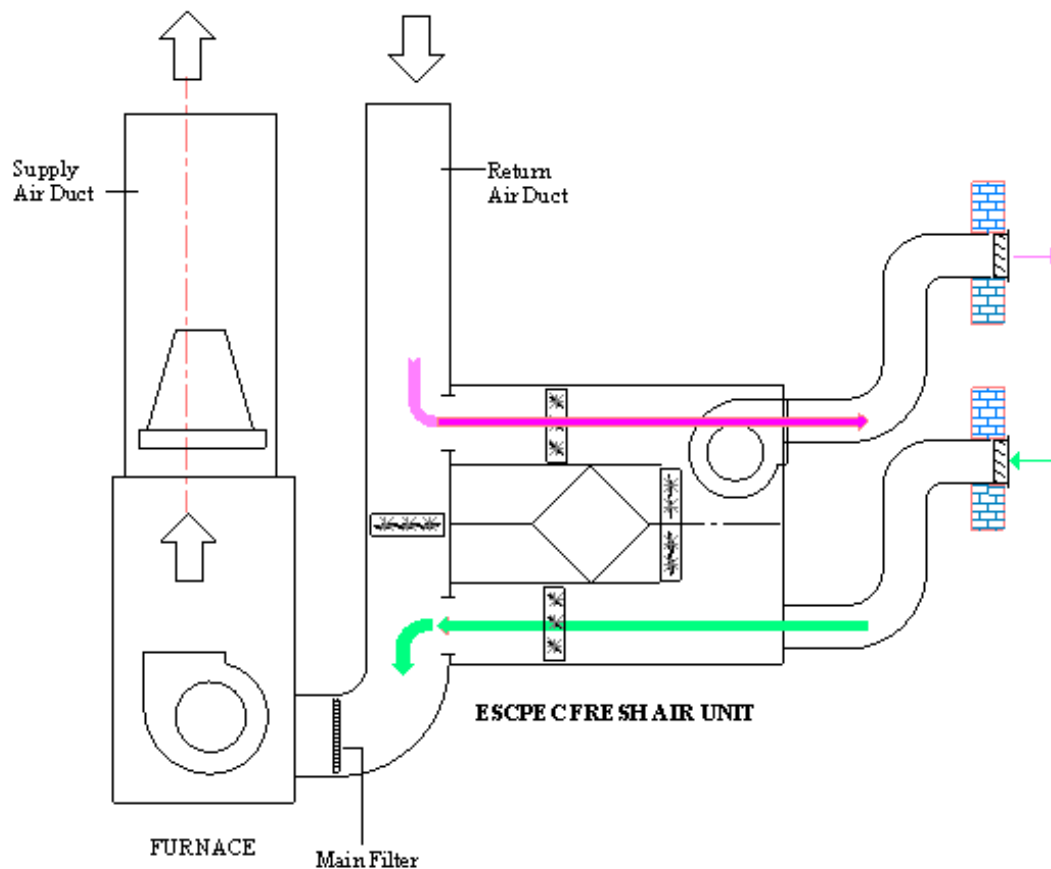




#### Energy Recovery Mode:

Partial return air is drawn into the Fresh Air Unit and through the ERV core to exchange energy, then exits to outside.

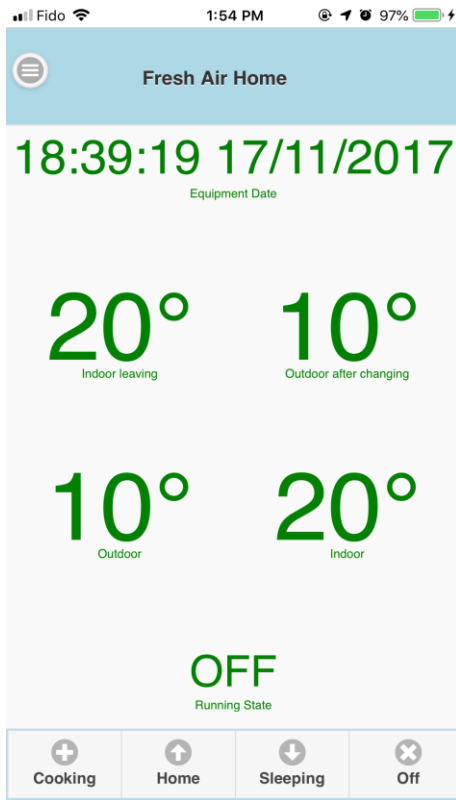
An equal fresh air is sucked into the Fresh Air Unit and through the ERV core, then be heated or cooled by exhaust return air, then enter the return air duct and mixed with other part of return air, through the main filter, distributed to the whole house by main duct system.



### FREE COOLING MODE

#### Free Cooling Mode:

In the summer, when outside temperature drop to below 18C, but room temperature is still high and thermostat is still calling cooling, then the Fresh Air Unit will fully close the return air damper to force all return air to exit to outside, turn the AC off. And the same time a full cool outside air is drawn to inside to cool the house. This mode is called economizer, aims to save electric energy and bring fresh air into house.



#### Smart Phone Control:

- Set up your preferred air exchange rate, Cooking, Home, Sleeping, in different time schedule in 24 hours, the fresh air unit will run accordingly. You can change easily and over write for a short period.
- Temperature readings for fresh air in and exit core, room temperature in core and exit house show the energy exchange effectiveness, to allow you to monitor how the fresh air system working.
- Free cooling mode will be shown when it is on operation, at this time the AC is off. Your house is cooled by outside air 100%.
- Energy saving cooling will show the temperature different between room and outside, at this operation on, your AC will run less time to cool your house down.

Air flow rate			ERV Core Efficiency (Total)
Mode	CFM	CONDITION	
Sleeping	100	Schedule	70%
Home	200	Schedule	60%
Cooking	300	Schedule	50%
Free Cooling	800	Outside Temperature	N/A
Cooling Engery Save	500	Outside Temperature	N/A
Defrost	100	Temperature	N/A

ECM Exhaust Fan Motor	Regal Beloit	1/4 horse power	115v/60hz/1ph
ERV Core	CORE LIFE		
Return Air Damper Actuator	Belimo LF24-SR	Modulating 2 - 10 dc, 24Vac/Dc, Spring return	

