

Desiccant Rotors International . . . DRI, an ISO certified company is a global provider of components, products and systems for energy recovery, IAQ, fresh air treatment, evaporative cooling, humidification, RH control and green buildings.

DRI has a fully integrated rotor manufacturing facility with an in-house capability of coating, synthesizing, winding, metal working and surface finishing and a world class test facility for performance evaluation of Enthalpy Wheels.

Applications vis-à-vis Types of VOCs

Industry	Application Areas	VOCs Treated
Coating (Tapes)	Coating process	Ketones (MIBK, MEK, Cyclohexanone, etc.)
Chemicals (Bio-Gas Plants)	Oil refinery, Reactors	Alcohols, Aromatic compounds
Automobile	Paint booth	Alcohols, Xylene, Esters, Toluene
Printing	Film, Can, Packaging Dryer	Alcohols, Toluene, Xylene, Esters
Electronics	Semiconductor cleaning units	Ketones, Alcohols
Plastics	Polyethylene (PE) material processing (extrusion)	Styrene, Esters

VOC Removal Efficiency of EcoVoc™ for typical VOCs

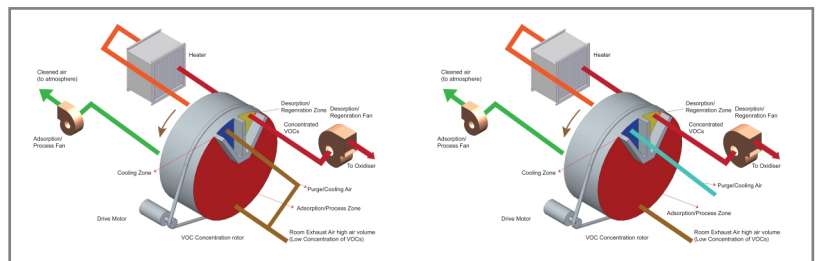
	VOC	EcoV1	EcoV2	EcoV3
Alcohols	Butanol			
	Ethanol			
	Methanol			
	IPA			
Aromatic compounds	Xylene			
	Tri methyl benzene			
	Toluene			
	Styrene			
Esters	Butyl acetate			
	PGMEA			
	Ethyl acetate			
Ketones	MEK			
	MIBK			
	Acetone			
	Cyclohexanone			
Others	NMP			
	DCM			
	Naphtha			

VOC removal efficiency - ■ >95% Very Good ■ <85% Good ■ <65% Average ■ <50% Poor

How does the DRI EcoVoc™ concentrator work?

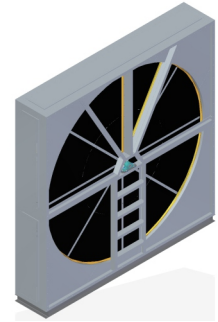
In the process, the product adsorb the VOCs onto a continuously rotating Zeolite rotor. The rotor is segregated into 3 parts - adsorption zone, cooling zone and desorption zone. The VOC laden air passes through the adsorption sector of the rotor where the VOC's are removed from the process stream and adsorbed onto the Zeolite rotor. The process exhaust exits the adsorbent section without most of the VOC and is exhausted to the atmosphere.

- **Adsorption / process zone:** The exhaust air from the process room having low concentration VOC and high volumes, is passed through rotating Zeolite rotor. The zeolite rotor adsorbs the VOCs and other pollutants in adsorption/process zone.
- **Cooling zone:** As we know, the desiccant performs better when cooler. The rotor is cooled down in the cooling zone in order to maintain the adsorption capacity and in the process heat is recover to save regeneration energy.
- **Desorption/Regeneration zone:** The rotor is regenerated on a continuous basis as it moves from adsorption to desorption zone. The VOCs are desorbed by hot air (180-200 Deg C) and in the process the leaving air is concentrated with VOCs. The concentration ratio can as high as 30 times. Generally the concentration ratio is around 10-25 times.



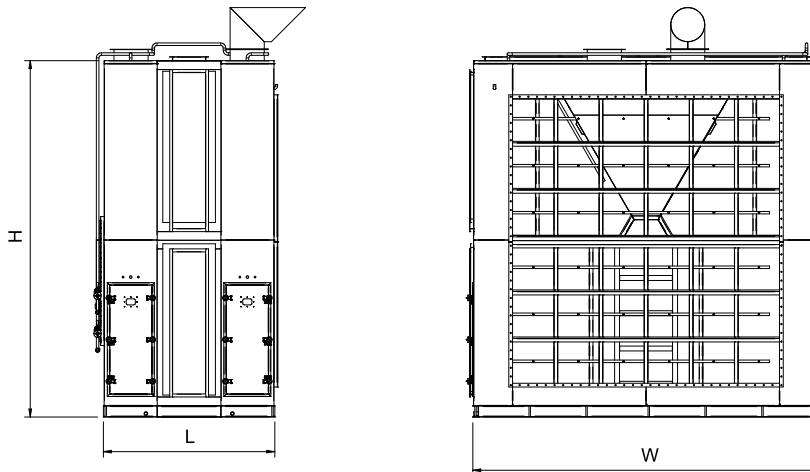
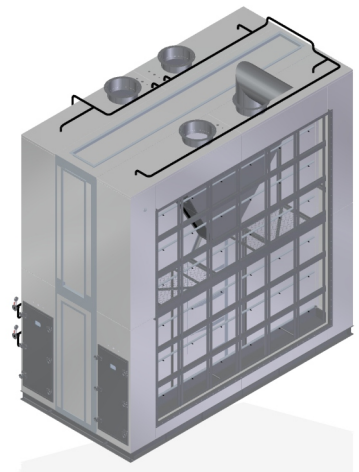
EcoVoc™ Cassette

EcoV Series Model No.	Process Air Flow		Dimensions (in mm)			Estimated Weight (in kg)
	CMH	CFM	Length (L)	Depth (D)	Height (H)	
1220	7400	4355	840	1550	1650	850
1525	11500	6768	840	1850	1950	1050
1740	15100	8886	840	2050	2150	1250
1940	18750	11034	840	2250	2350	1365
2190	24000	14124	840	2500	2600	2100
2450	30000	17655	840	2800	2925	2520
2650	35000	20598	840	3000	3125	2950
2950	43500	25600	840	3300	3325	3465
3250	52500	30896	840	3600	3850	3780
3550	62800	36958	840	3900	4150	4520
3850	74000	43549	840	4200	4450	5350
4200	88000	51788	840	4550	4800	6000



EcoVoc™ Cassette with Pre & Post Boxes

EcoV Series Model No.	Process Air Flow		Dimensions (in mm)			Estimated Weight (in kg)
	CMH	CFM	Length (L)	Depth (D)	Height (H)	
1220	7400	4355	2100	1550	1650	1200
1525	11500	6768	2100	1850	1950	1500
1740	15100	8886	2100	2050	2150	1600
1940	18750	11034	2100	2250	2350	2100
2190	24000	14124	2100	2500	2600	2600
2450	30000	17655	2100	2800	2925	3400
2650	35000	20598	2100	3000	3125	3700
2950	43500	25600	2100	3300	3325	4300
3250	52500	30896	2100	3600	3850	5300
3550	62800	36958	2100	3900	4150	5900
3850	74000	43549	2100	4200	4450	7100
4200	88000	51788	2100	4550	4800	7800



All data subject to change without notice