

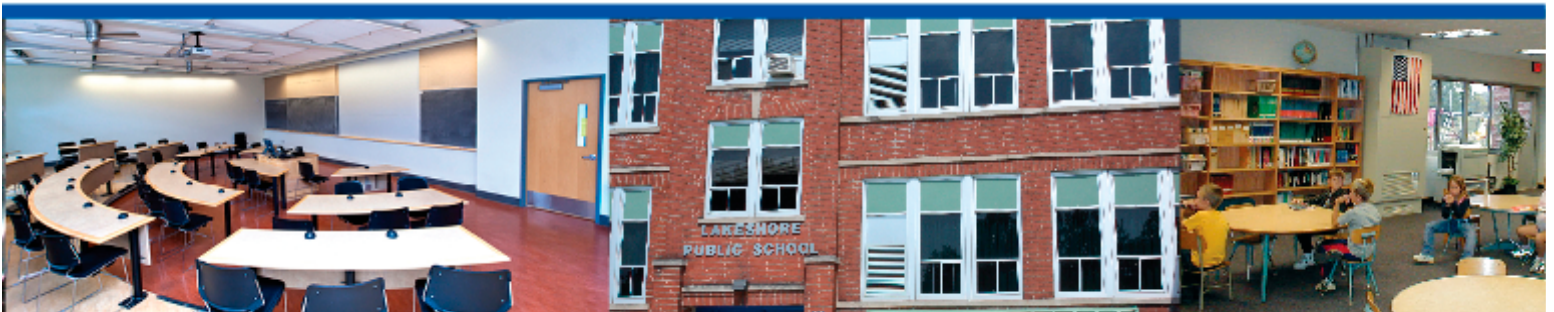
Change'Air Product Catalog Version 1.10

Classic Series

For a complete catalog
contact your local representative.



Engineered Excellence for Greener Classrooms



NOTE: Change'Air reserves the right to make changes to Unit specifications without prior notice. The performance of each Unit may vary based on site conditions and installation.

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Classic Series

CONSOLE STYLE CLASSROOM AIR HANDLER WITH ERW

6.1 Features

The Change'Air Classic Series energy recovery console unit is the ultimate in efficiency. Available in our "H" size cabinet, it has a supply air capacity up to 900 Cfm and includes an enthalpy recovery wheel with 450 Cfm of intake and powered relief air.

This series comes standard with;

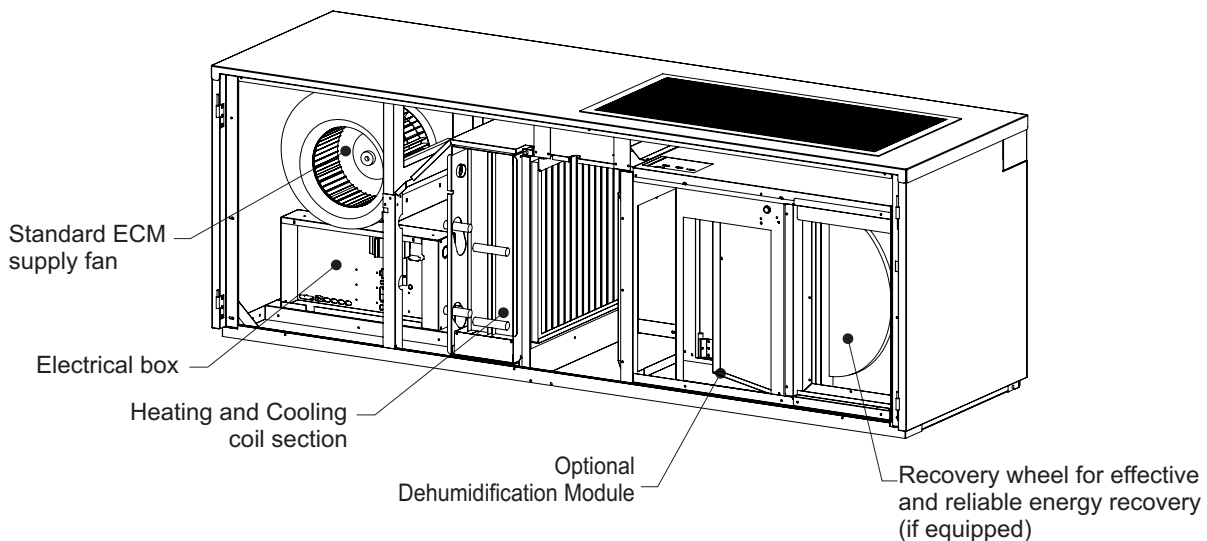
- Desiccant energy recovery wheel
- Economizer damper assemblies for "free cooling"
- Motor fan assembly for relief air
- ECM motor fan assembly for supply air

These units achieve maximum efficiency by using desiccant wheel technology. This Change'Air energy recovery air handler will transform existing classrooms and traditional "unit ventilators" into modern, efficient and easily maintained equipment.

An onboard microprocessor controls the sequence of operations for the recovery and ensures proper operation even below the wheel freezing threshold.

For a long term investment in equipment that will minimize your energy consumption consider Change'Air energy recovery equipment.

The Classic Series is also available with an optional dehumidification cooling coil in place of the recovery wheel. This dehumidification coil is a second chilled water or evaporator coil dedicated to incoming outside air designed for use in humid climates. This option does not include an economizer damper and includes an intake fan with capacities up to 450 Cfm.



6.0 Classic Series

6.2 Classic Series Cabinet Size Selection

“H” Cabinet

Basic Features, Design Options and Capacities.

- The horizontal cabinet (85”L x 25-5/8”W x 30”H)
- Supply air up to 900 CFM
- Economizer Dampers standard equipment
- Heating capacity (Hot water up to 60 MBtuh, two stage Electric up to 12KW)
- Cooling capacity (Cooling by chilled water coil or split system evaporator up to 36 Mbtuh)
- The standard unit has a built in energy recovery wheel with power relief fan.
- Optional air handler design with dual cooling coil (dehumidification design). This design offers a second cooling coil and intake fan dedicated to the outside air.

Cabinet Construction

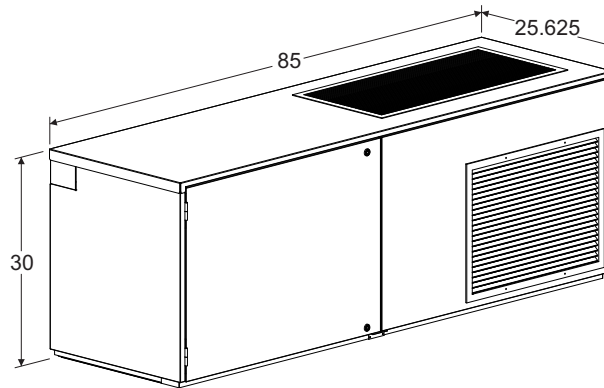
Each cabinet is manufactured using 18-gauge steel sides and a 14-gauge steel top with a powder coat baked enamel-textured finish. The internal frame supports all the internal metal pans and components so that the external panels do not carry any of the weight. The external cabinet panels are attached so that there are no visible screws, rivets or fasteners.

Insulation and Acoustics

The cabinet front incorporates two fully insulated full size access doors with two tamper proof cam locks. The cabinet panels are thermally and acoustically insulated with 1”(2.54 cm) thick flexible acoustic insulation. This insulation is covered in the air stream with a black coated mat. The flexible, thermal and acoustical liner includes the specification compliance ASTM C1071, HN-1545B, NFPA 90A and NFPA 90B.

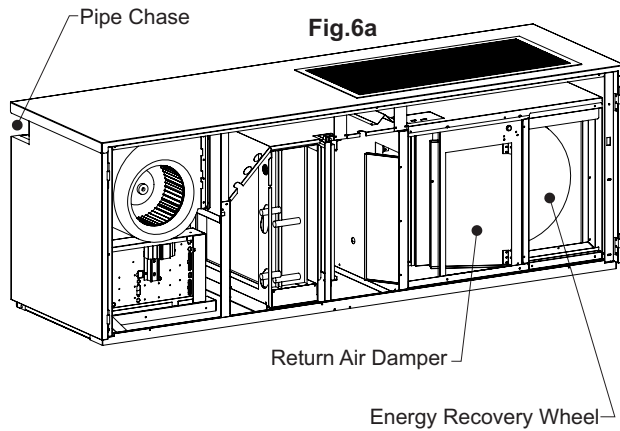
Enamel Finishes

Each cabinet has the highest quality, powder coat baked enamel finish in one of Change'Air's three standard colors: antique white, white and gray.



6.3 Classic Series Console unit

The Classic Series is designed for energy recovery of the units outside air component. The energy recovery wheel maintains the humidity level below dew point so there is no frost build up. It recovers both heat, cool and humidity while producing up to 70% recovery efficiency.

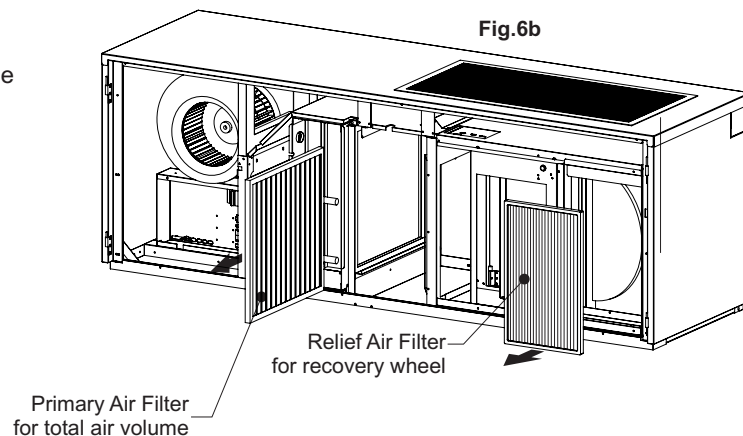


6.4 Air Filtration

Each unit is equipped with a standard 1" pleated filter for filtration of the total air volume through the unit. An optional 2" filter is available. Primary filters are all standard nominal sizes.

Each unit is equipped with an additional standard 1/4" washable filter for filtration of the relief air being drawn out through the recovery wheel.

The optional dehumidification design offers a 2" prefilter for the fresh air cooling coil.



6.0 Classic Series

6.5.1 Physical Data Table - Dehumidification

CONSOLE UNIT "H" CABINET			COMPATIBILITY TABLE		
OPTIONS		VALUE OR CAPACITY	DESIGNATION	DESIGNATION	DESIGNATION
HEATING	RE-HEAT ELECTRIC (E)	10KW	Standard Capacity (SC)		
		12KW	High Capacity (HC)		
	PRE-HEAT ELECTRIC (E)	2KW	Low Capacity (LC)		
	HOT WATER COIL (H)	20" X 17.75", 1 row 60 Mbtuh		Standard Capacity (SC)	
20" X 17.75", 2 row 80 Mbtuh			High Capacity (HC)		
STEAM COIL (S)	20" X 17.75", 1 row 60 Mbtuh			Standard Capacity (SC)	
COOLING	SPLIT SYSTEM (EVAPORATOR COIL/ Remote Heat Pump) (RA/RHP)	20" X 17.75", 3 row 36 Mbtuh	Standard Capacity (SC)		
	CHILLED WATER COIL (CW)	20" X 17.75", 4 row 36 Mbtuh	Standard Capacity (SC)		
OUTDOOR AIR COOLING (OAC)	CHILLED WATER COIL (CW)	12" X 12", 4 row 42 Mbtuh	Standard Capacity (SC)		
SUPPLY FAN	ECM	900 cfm 900 cfm	Low Capacity LC-S - 1/3 hp (1 fan body) Standard Capacity SC-S - 1/2 hp (1 fan body)		
INTAKE FAN	ERM	450 cfm	Intake Fan (1) XLC - 1/3 hp		
SUPPLY VOLTAGES		115/1/60 "A"		YES	
		208/3/60 "B"		YES	
		208-230/1/60 "C"		YES	
		277/1/60 "D"		YES	
		460/3/60 "E"		YES	
DESIGN		Dehumidification	YES	YES	YES
PRIMARY FILTERS		(1) 1" Disposable		20" x 20"	
		(1) 2" Disposable		20" x 20"	
		(1) Permanent Washable		20" x 20"	
OUTSIDE AIR FILTER		(1) 2" Disposable		16" x 20"	
WEIGHT		All Models	465 lbs	485 lbs	485 lbs

All weights are calculated on the maximum available options.

NOTE: Change'Air reserves the right to make changes to air handler specifications without prior notice. The performance of each air handler may vary based on site conditions and installation.

6.5.2 Physical Data Table - Energy Recovery Wheel (ERW)

CONSOLE UNIT "H" CABINET			COMPATIBILITY TABLE		
OPTIONS		VALUE OR CAPACITY	DESIGNATION	DESIGNATION	DESIGNATION
HEATING	RE-HEAT ELECTRIC (E)	10KW	Standard Capacity (SC)		
		12KW	High Capacity (HC)		
	HOT WATER COIL (H)	20" X 17.75", 1 row 60 Mbtuh 20" X 17.75", 2 row 80 Mbtuh		Standard Capacity (SC) High Capacity (HC)	
	STEAM COIL (S)	20" X 17.75", 1 row 60 Mbtuh			Standard Capacity (SC)
COOLING	SPLIT SYSTEM (EVAPORATOR COIL/ Remote Heat Pump) (RA/RHP)	20" X 17.75", 3 row 36 Mbtuh	Standard Capacity (SC)		
	CHILLED WATER COIL (CW)	20" X 17.75", 4 row 36 Mbtuh	Standard Capacity (SC)		
SUPPLY FAN	ECM	900 cfm	Low Capacity LC-S - 1/3 hp (1 fan body)		
		900 cfm	Standard Capacity SC-S - ½ hp (1 fan body)		
RELIEF FAN	ERM	450 cfm	ERW Fan (1) XLC - 1/3 hp		
SUPPLY VOLTAGES		115/1/60 "A"		YES	
		208/3/60 "B"		YES	
		208-230/1/60 "C"		YES	
		277/1/60 "D"		YES	
		460/3/60 "E"		YES	
DESIGN		Energy Recovery	YES	YES	YES
PRIMARY FILTERS		(1) 1" Disposable	20" x 20"		
		(1) 2" Disposable	20" x 20"		
		(1) Permanent Washable	20" x 20"		
ERW FILTERS		(1) 1" Disposable	12" x 20"		
		(1) Permanent Washable	12" x 20"		
WEIGHT		All Models	465 lbs	485 lbs	485 lbs

All weights are calculated on the maximum available options.

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6.0 Classic Series

6.6 Heating Options

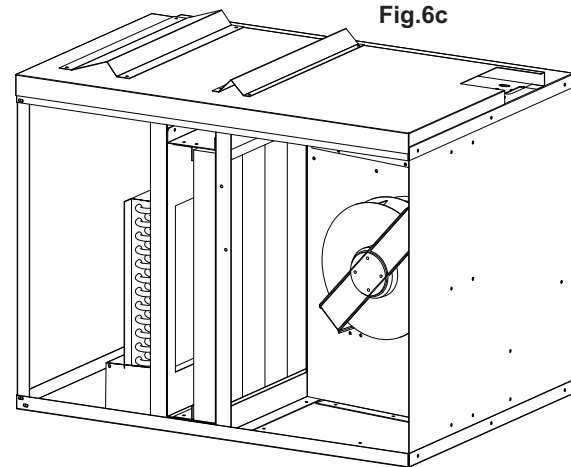
The Classic Series Console Unit can be equipped with any one of the following heat options.

HOT WATER HEAT SOURCE:

The hot water heat source is constructed in an air over water configuration and provides heat by way of a hydronic coil. Built to dependable, design conscious standards, these units are an efficient complement to your existing hot water heating system. Our hydronic heating coils are comprised of corrugated aluminum fins individually bonded to bright copper tubing to prevent electrolytic action. They are then brazed onto headers and are pressure tested to meet industry standards. All our coils have a bleeder to facilitate start-up.

ELECTRIC HEAT SOURCE:

The electric heat source consists of two-stage electric resistance elements offered in several voltage/phase and kilowatt configurations.



Optional Dehumidification Module

6.7 Cooling Option

The Classic Series Console Unit can be ordered with a factory installed cooling coil.

SPLIT SYSTEM EVAPORATOR:

The split system evaporator package is designed with an evaporator (RA) coil and thermal expansion (TX) valve, in the evaporator coil section. A drain pan and condensate hoses complete the package. The coil is constructed of copper tubes with corrugated aluminum fins permanently bonded to the tubes to prevent electrolytic action.

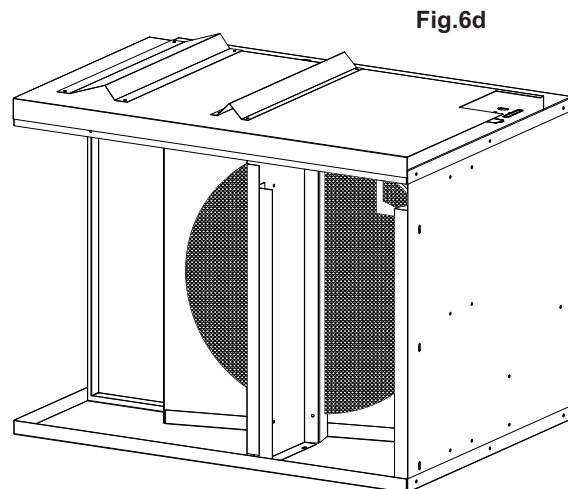
CHILLED WATER:

The chilled water package is assembled with a chilled water coil consisting of a copper tubing, corrugated aluminum fins bonded to the tubes to prevent electrolytic action.

6.8 Dual Heating/Cooling Option

REMOTE HEAT PUMP COIL:

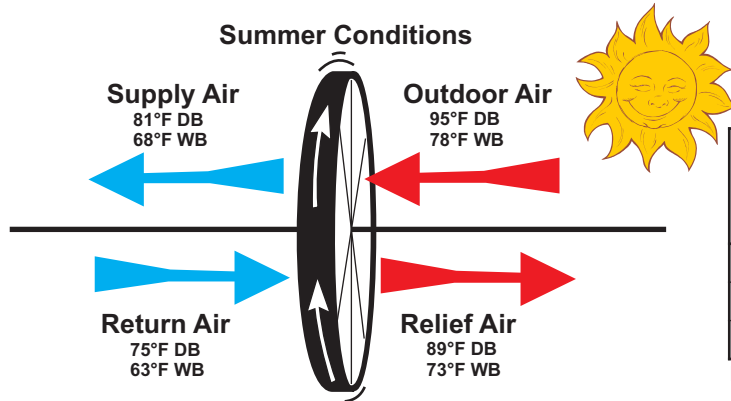
A split system heat pump coil designed to accept R410A can be included in the unit. It comes equipped with dual thermal expansion valves to accommodate both the evaporator and condenser functions. The line set and remote compressorized condensing unit with reversing valves are not included.



Energy Recovery Wheel Module

6.9 Energy Recovery Wheel (ERW)

Energy recovery wheels (ERW) rotate through both the fresh incoming air stream and the relief air stream. As the wheel rotates, it transfers a portion of the sensible and latent energy from one air stream to the other. As a result the incoming air stream is pre-conditioned reducing the thermal gradient across the conditioning equipment thereby reducing energy consumption.

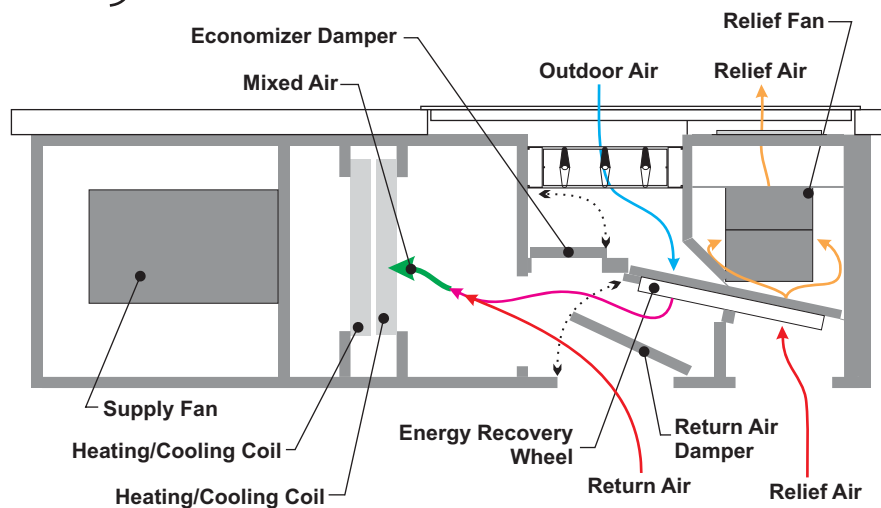
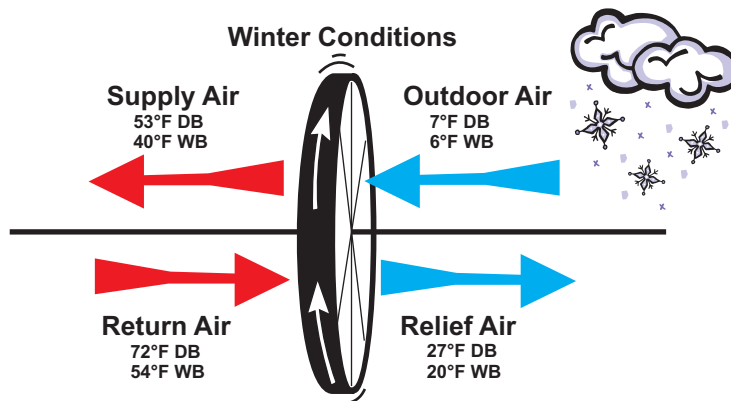


SCFM	Effectiveness (%)				ΔP (in.w.c)
	S	L	T Clg	T Htg	
350	76.4	67.2	71.2	73.2	0.38
400	74.2	63.7	68.3	70.5	0.44
450	71.9	60.3	65.3	67.8	0.51

Rated in accordance with ARI Standards 1060

Manufactures Recommended Cleaning

Wash the segments or small wheels with a non-acid based (evaporator) coil cleaner or alkaline detergent solution. Non-acid based coil cleaner such as KMP Acti-Clean AK-1 concentrate in a 5% solution has been demonstrated to provide excellent results. Do not use acid based cleaners, aromatic solvents, temperatures in excess of 170 °F or steam; damage to the wheel may result. Soak in the cleaning solution until grease and tar deposits are loosened. An overnight soak may be required to adequately loosen heavy deposits of tar and oil based contaminants.



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