

PACKAGED WATER SOURCE HEAT PUMP

The Closetline[®] Hot Gas Reheat series from The Whalen Company utilizes a compact cabinet, making this heat pump system the perfect solution for commercial retrofit or new construction applications.

The Closetline[®] series far exceeds the ASHRAE 90.1 minimum efficiency and utilizes R-410A refrigerant to reduce operating costs without compromising the environment. Closetline[®] water source heat pumps are popular in a variety of building applications where quiet operation in a compact footprint is a key requirement.

Hot Gas Reheat is used for humidity control and for occupant comfort. When zone cooling loads are low and the space humidity is high, conventional systems often overcool the occupied space in an attempt to remove excess humidity. By redirecting exhaust heat from the compressor to the reheat coil, the system can operate to remove unwanted moisture. The integrated reheat coil is used to add sensible heat to the air stream to maintain the temperature setpoint and occupant comfort. The Hot Gas Reheat System is more efficient because it eliminates the need for a separate unit to dehumidify the air, thereby reducing overall energy usage.



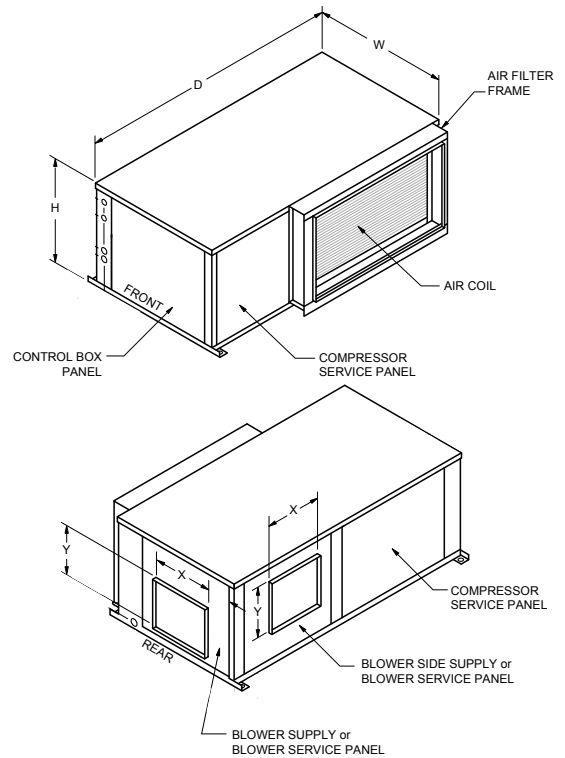
Closetline[®] CAS Reheat Performance

Size (Tons)	EWT (°F)	GPM	Entering Air - 80°F / 67°F					Entering Air - 78°F / 65°F					Entering Air - 75°F / 63°F				
			TC (Btu/hr)	SC (Btu/hr)	kW	HR (Btu/hr)	Liquid Temp Rise (°F)	TC (Btu/hr)	SC (Btu/hr)	kW	HR (Btu/hr)	Liquid Temp Rise (°F)	TC (Btu/hr)	SC (Btu/hr)	kW	HR (Btu/hr)	Liquid Temp Rise (°F)
CAS*K006A (0.5)	86	1.00	1.53	0.22	0.39	2.87	5.75	1.29	0.12	0.39	2.64	5.27	1.06	-0.18	0.39	2.39	4.79
		1.25	1.61	0.29	0.39	2.94	4.71	1.36	0.16	0.39	2.69	4.31	1.12	-0.24	0.39	2.44	3.90
		2.00	1.72	0.35	0.39	3.04	3.04	1.46	0.19	0.39	2.77	2.77	1.20	-0.28	0.38	2.50	2.50
CAS*K009A (0.75)	86	1.50	4.04	1.47	0.74	6.56	8.74	3.61	1.39	0.74	6.12	8.16	3.19	0.62	0.74	5.71	7.61
		1.88	4.24	1.55	0.73	6.72	7.17	3.78	1.47	0.73	6.26	6.68	3.35	0.66	0.73	5.83	6.22
		2.50	4.46	1.74	0.72	6.92	5.54	3.98	1.65	0.72	6.44	5.15	3.53	0.74	0.72	5.99	4.79
CAS*K012A (1.0)	86	2.00	6.08	2.60	1.03	9.59	9.59	5.55	2.50	1.03	9.05	9.05	5.02	1.49	1.02	8.52	8.52
		2.50	6.26	2.87	1.02	9.73	7.79	5.71	2.76	1.01	9.17	7.34	5.17	1.64	1.01	8.63	6.90
		3.00	6.60	2.91	1.01	10.04	6.69	6.01	2.79	1.01	9.45	6.30	5.44	1.67	1.01	8.87	5.92
CAS*K015A (1.25)	86	2.50	5.01	1.82	0.87	7.97	6.38	4.33	1.50	0.87	7.29	5.83	3.69	0.34	0.87	6.66	5.33
		3.13	5.21	2.03	0.86	8.14	5.21	4.51	1.67	0.86	7.44	4.76	3.85	0.38	0.86	6.78	4.34
		3.75	5.22	2.15	0.85	8.13	4.34	4.51	1.77	0.85	7.42	3.96	3.85	0.41	0.85	6.76	3.61
CAS*K018A (1.5)	86	3.00	6.59	2.25	1.22	10.74	7.16	5.85	2.12	1.22	10.00	6.67	5.14	0.80	1.21	9.28	6.18
		3.75	6.85	2.47	1.20	10.96	5.84	6.09	2.33	1.20	10.19	5.43	5.34	0.88	1.20	9.44	5.03
		4.50	7.11	2.49	1.20	11.20	4.98	6.32	2.35	1.20	10.40	4.62	5.54	0.88	1.20	9.62	4.28
CAS*K024A (2.0)	86	4.00	10.24	4.21	1.45	15.19	7.60	9.36	3.68	1.44	14.29	7.15	8.50	1.64	1.44	13.41	6.70
		5.00	10.83	4.54	1.43	15.73	6.29	9.91	3.97	1.43	14.78	5.91	9.00	1.77	1.42	13.84	5.54
		6.00	10.93	4.86	1.42	15.79	5.26	10.00	4.24	1.42	14.83	4.94	9.08	1.89	1.41	13.88	4.63
CAS*K030A (2.5)	86	5.00	7.80	2.73	1.91	14.32	5.73	6.95	2.24	1.88	13.36	5.34	6.02	0.16	1.83	12.28	4.91
		6.25	8.13	3.15	1.89	14.58	4.66	7.24	2.59	1.86	13.58	4.35	6.27	0.18	1.81	12.46	3.99
		7.50	9.44	3.37	1.88	15.87	4.23	8.41	2.77	1.85	14.73	3.93	7.28	0.20	1.81	13.46	3.59
CAS*K036A (3.0)	86	6.00	10.82	3.49	2.07	17.88	5.96	9.35	3.17	2.05	16.36	5.45	7.98	0.42	2.04	14.95	4.98
		7.50	11.32	3.72	2.05	18.30	4.88	9.79	3.38	2.03	16.72	4.46	8.35	0.45	2.02	15.25	4.07
		9.00	12.03	3.85	2.04	18.98	4.22	10.40	3.50	2.02	17.31	3.85	8.87	0.46	2.01	15.74	3.50
CAS*K042A (3.5)	86	7.00	15.52	5.07	2.93	25.53	7.29	13.81	4.75	2.91	23.73	6.78	12.14	1.64	2.88	21.98	6.28
		8.75	16.26	5.57	2.87	26.06	5.96	14.46	5.22	2.85	24.18	5.53	12.72	1.80	2.82	22.35	5.11
		10.50	16.52	5.76	2.87	26.30	5.01	14.70	5.40	2.84	24.39	4.65	12.92	1.87	2.82	22.54	4.29
CAS*K048A (4.0)	86	8.00	13.48	1.20	3.30	24.75	6.19	10.96	0.80	3.38	22.51	5.63	8.56	-2.17	3.45	20.34	5.08
		10.00	13.77	1.28	3.28	24.95	4.99	11.20	0.86	3.36	22.66	4.53	8.74	-2.32	3.43	20.44	4.09
		12.00	13.88	1.37	3.27	25.03	4.17	11.29	0.92	3.35	22.71	3.79	8.81	-2.48	3.42	20.47	3.41
CAS*K060A (5.0)	86	10.00	23.17	8.06	4.51	38.56	7.71	20.90	7.88	4.66	36.80	7.36	18.42	2.10	4.77	34.68	6.94
		12.50	23.80	7.78	4.49	39.14	6.26	21.47	7.60	4.65	37.32	5.97	18.92	2.02	4.75	35.13	5.62
		15.00	25.90	7.54	4.47	41.15	5.49	23.36	7.37	4.62	39.12	5.22	20.58	1.96	4.72	36.70	4.89

Closetline® Hot Gas Reheat

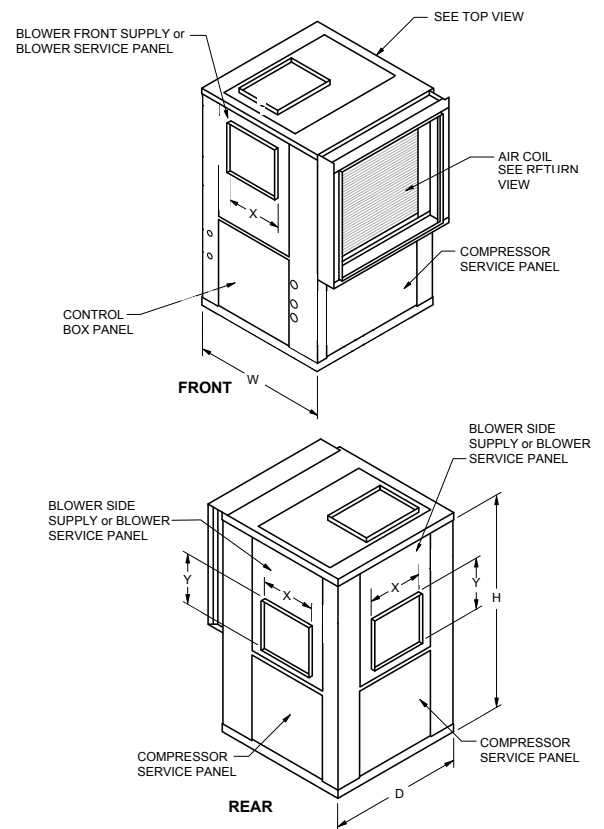
Closetline® CAS Horizontal Dimensions

Horizontal Right Return	Overall Cabinet			Blower Discharge Supply	
	W	H	D	X	Y
Unit Sizes	Width	Height	Depth	Supply Width	Supply Height
CASH006	20.00	11.50	34.00	10.75	6.73
CASH009	20.00	11.50	34.00	10.75	6.73
CASH012	20.00	11.50	34.00	10.75	6.73
CASH015	22.00	17.00	43.00	12.00	8.48
CASH018	22.00	17.00	43.00	12.00	8.48
CASH024	22.00	17.00	45.00	13.38	9.10
CASH030	22.00	17.00	45.00	12.20	9.98
CASH036	22.00	19.00	55.00	13.30	10.35
CASH042	22.00	22.00	55.00	12.00	12.23
CASH048	25.00	22.00	55.00	12.00	12.23
CASH060	25.00	22.00	55.00	14.75	12.23



Closetline® CAS Vertical Dimensions

Vertical Right Return	Overall Cabinet			Blower Discharge Supply	
	W	D	H	X	Y
Unit Sizes	Width	Depth	Height	Supply Width	Supply Height
CASV006	19.00	19.00	24.00	10.75	6.73
CASV009	19.00	19.00	24.00	10.75	6.73
CASV012	19.00	19.00	24.00	10.75	6.73
CASV015	22.00	22.00	36.00	12.00	8.48
CASV018	22.00	22.00	36.00	12.00	8.48
CASV024	22.00	22.00	40.00	10.25	12.23
CASV030	25.00	26.00	40.00	11.00	11.10
CASV036	25.00	26.00	45.00	11.38	12.35
CASV042	25.00	26.00	45.00	12.00	12.23
CASV048	25.00	32.00	45.00	12.00	12.23
CASV060	25.00	32.00	45.00	12.50	14.41



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