

Source Water Entering Temp = 90°F	HEATING MODE										COOLING MODE				
	Units	R-410A					R-134a					R-410A	R-134a	Units	
Building Water Entering Temp	°F					100	110	120	130	140	55	55	°F	Building Water Entering Temp	
Building Water Leaving Temp	°F					110	120	130	140	150	45	45	°F	Building Water Leaving Temp	
Heating Capacity	MBTUH					4857.7	5569.9	3199.6	3089.4	2984.2	2948.8	1998.4	MBTUH	Cooling Capacity	
Condenser Water Flow	GPM					971.5	1,114.0	639.9	617.9	596.8	589.8	399.7	GPM	Evaporator Water Flow	
Evaporator Load	MBTUH					4,015.6	4,633.3	2538.2	2355.2	2168.6	3692.6	2492.0	MBTUH	Condenser Load	
Evaporator Water Flow	GPM					803.1	926.7	507.6	471.0	433.7	738.5	498.4	GPM	Condenser Water Flow	
Power Input	kW					246.7	274.4	193.8	215.1	239.0	217.9	144.6	kW	Power Input	
COP	-					5.77	5.95	4.84	4.21	3.66	13.53	13.82	-	EER	
Source Water Leaving Temp	°F					80	80	80	80	80	100	100	°F	Source Water Leaving Temp	

Source Water Entering Temp = 90°F	HEATING MODE										COOLING MODE				
	Units	R-410A					R-134a					R-410A	R-134a	Units	
Building Water Entering Temp	°F					90	100	110	120	130	140	55	55	°F	Building Water Entering Temp
Building Water Leaving Temp	°F					100	110	120	130	140	150	45	45	°F	Building Water Leaving Temp
Heating Capacity	MBTUH					5073.9	4857.7	4633.3	3199.6	3089.4	2984.2	3149.0	2111.9	MBTUH	Cooling Capacity
Condenser Water Flow	GPM					1,014.8	971.5	926.7	639.9	617.9	596.8	629.8	422.4	GPM	Evaporator Water Flow
Evaporator Load	MBTUH					4,312.9	4,015.6	3,696.8	2538.2	2355.2	2168.6	3,819.1	2,561.1	MBTUH	Condenser Load
Evaporator Water Flow	GPM					862.6	803.1	739.4	507.6	471.0	433.7	763.8	512.2	GPM	Condenser Water Flow
Power Input	kW					223.0	246.7	274.4	193.8	215.1	239.0	196.4	131.6	kW	Power Input
COP	-					6.67	5.77	4.95	4.84	4.21	3.66	16.04	16.04	-	EER
Source Water Leaving Temp	°F					70	70	70	70	70	70	90	90	°F	Source Water Leaving Temp

Source Water Entering Temp = 70°F	HEATING MODE										COOLING MODE					
	Units	R-410A					R-134a					R-410A	R-134a	Units		
Building Water Entering Temp	°F					80	90	100	110	120	130	140	55	55	°F	Building Water Entering Temp
Building Water Leaving Temp	°F					90	100	110	120	130	140	150	45	45	°F	Building Water Leaving Temp
Heating Capacity	MBTUH					4874.0	4689.3	4496.3	4296.4	2943.1	2847.8	2757.7	3332.6	2210.8	MBTUH	Cooling Capacity
Condenser Water Flow	GPM					974.8	937.9	899.3	859.3	588.6	569.6	551.5	666.5	442.2	GPM	Evaporator Water Flow
Evaporator Load	MBTUH					4189.0	3934.0	3658.6	3363.2	2285.7	2117.8	1946.5	3939.2	2624.6	MBTUH	Condenser Load
Evaporator Water Flow	GPM					837.8	786.8	731.7	672.6	457.1	423.6	389.3	787.8	524.9	GPM	Condenser Water Flow
Power Input	kW					200.7	221.3	245.4	273.4	192.6	213.9	237.7	177.8	121.2	kW	Power Input
COP	-					7.12	6.21	5.37	4.60	4.48	3.90	3.40	18.75	18.24	-	EER
Source Water Leaving Temp	°F					60	60	60	60	60	60	60	80	80	°F	Source Water Leaving Temp

Source Water Entering Temp = 60°F	HEATING MODE										COOLING MODE						
	Units	R-410A					R-134a					R-410A	R-134a	Units			
Building Water Entering Temp	°F					70	80	90	100	110	120	130	140			°F	Building Water Entering Temp
Building Water Leaving Temp	°F					80	90	100	110	120	130	140	150			°F	Building Water Leaving Temp
Heating Capacity	MBTUH					4281.7	4144.6	3999.9	3849.4	3694.6	2488.3	2419.9	2357.1			MBTUH	Cooling Capacity
Condenser Water Flow	GPM					856.3	828.9	800.0	769.9	738.9	497.7	484.0	471.4			GPM	Evaporator Water Flow
Evaporator Load	MBTUH					3669.8	3470.5	3253.1	3018.2	2766.5	1839.0	1698.7	1555.8			MBTUH	Condenser Load
Evaporator Water Flow	GPM					734.0	694.1	650.6	603.6	553.3	367.8	339.7	311.2			GPM	Condenser Water Flow
Power Input	kW					179.3	197.5	218.8	243.5	271.9	190.2	211.3	234.8			kW	Power Input
COP	-					7.00	6.15	5.36	4.63	3.98	3.83	3.36	2.94			-	EER
Source Water Leaving Temp	°F					50	50	50	50	50	50	50	50			°F	Source Water Leaving Temp

Source Water Entering Temp = 50°F	HEATING MODE										COOLING MODE					
	Units	R-410A					R-134a					R-410A	R-134a	Units		
Building Water Entering Temp	°F	60	70	80	90	100	110	120	130	140					°F	Building Water Entering Temp
Building Water Leaving Temp	°F	70	80	90	100	110	120	130	140	150					°F	Building Water Leaving Temp
Heating Capacity	MBTUH	3719.4	3622.3	3517.9	3408.3	3295.3	3180.4	2103.1	2058.1	2018.8					MBTUH	Cooling Capacity
Condenser Water Flow	GPM	743.9	724.5	703.6	681.7	659.1	636.1	420.6	411.6	403.8					GPM	Evaporator Water Flow
Evaporator Load	MBTUH	3172.7	3019.9	2851.0	2667.0	2468.4	2256.0	1463.0	1347.2	1229.3					MBTUH	Condenser Load
Evaporator Water Flow	GPM	634.5	604.0	570.2	533.4	493.7	451.2	292.6	269.4	245.9					GPM	Condenser Water Flow
Power Input	kW	160.2	176.5	195.4	217.2	242.3	270.9	187.5	208.3	231.3					kW	Power Input
COP	-	6.80	6.01	5.28	4.60	3.99	3.44	3.29	2.90	2.56					-	EER
Source Water Leaving Temp	°F	40	40	40	40	40	40	40	40	40					°F	Source Water Leaving Temp

Source Water Entering Temp = 40°F	HEATING MODE										COOLING MODE					
	Units	R-410A					R-134a					R-410A	R-134a	Units		
Building Water Entering Temp	°F	60	70	80	90	100	110	120	130						°F	Building Water Entering Temp
Building Water Leaving Temp	°F	70	80	90	100	110	120	130	140						°F	Building Water Leaving Temp
Heating Capacity	MBTUH	3130.5	3059.0	2982.5	2903.2	2822.8	2743.1	1777.9	1752.4						MBTUH	Cooling Capacity
Condenser Water Flow	GPM	626.1	611.8	596.5	580.6	564.6	548.6	355.6	350.5						GPM	Evaporator Water Flow
Evaporator Load	MBTUH	2592.1	2462.9	2320.5	2165.8	1999.4	1822.1	1148.7	1054.1						MBTUH	Condenser Load
Evaporator Water Flow	GPM	518.4	492.6	464.1	433.2	399.9	364.4	229.7	210.8						GPM	Condenser Water Flow
Power Input	kW	157.8	174.6	194.0	216.1	241.3	269.9	184.3	204.6						kW	Power Input
COP	-	5.81	5.13	4.51	3.94	3.43	2.98	2.83	2.51						-	EER
Source Water Leaving Temp	°F	30	30	30	30	30	30	30	30						°F	Source Water Leaving Temp

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ENVIRONMENTALLY ENGINEERED EQUIPMENT, INC.

# Water-to-Water Heat Pumps ES 240 Data Sheet

