

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					2415.9	2311.7	1582.3	1529.1	1478.0	1479.4	979.1	MBTUH	Cooling Capacity	
Condenser Water Flow	GPM					483.2	462.3	316.5	305.8	295.6	295.9	195.8	GPM	Evaporator Water Flow	
Evaporator Load	MBTUH					2,004.8	1,849.0	1243.4	1153.4	1061.4	1840.8	1220.0	MBTUH	Condenser Load	
Evaporator Water Flow	GPM					401.0	369.8	248.7	230.7	212.3	368.2	244.0	GPM	Condenser Water Flow	
Power Input	kW					120.4	135.6	99.3	110.1	122.1	105.9	70.6	kW	Power Input	
COP	-					5.88	5.00	4.67	4.07	3.55	13.97	13.87	-	EER	
Source Water Leaving Temp	°F					80	80	80	80	80	100	100	°F	Source Water Leaving Temp	

Source Water Entering Temp = 80°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 Leaving Temp	°F					100	110	120	130	140	150	45	45	°F	Building Water Leaving Temp
Heating Capacity	MBTUH					2518.0	2415.9	2311.7	1582.3	1529.1	1478.0	1579.0	1035.9	MBTUH	Cooling Capacity
Condenser Water Flow	GPM					503.6	483.2	462.3	316.5	305.8	295.6	315.8	207.2	GPM	Evaporator Water Flow
Evaporator Load	MBTUH					2,151.4	2,004.8	1,849.0	1243.4	1153.4	1061.4	1,900.2	1,253.4	MBTUH	Condenser Load
Evaporator Water Flow	GPM					430.3	401.0	369.8	248.7	230.7	212.3	380.0	250.7	GPM	Condenser Water Flow
Power Input	kW					107.4	120.4	135.6	99.3	110.1	122.1	94.1	63.7	kW	Power Input
COP	-					6.87	5.88	5.00	4.67	4.07	3.55	16.78	16.26	-	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 Leaving Temp	°F					90	100	110	120	130	140	150	45	45	°F	Building Water Leaving Temp
Heating Capacity	MBTUH					2520.9	2329.8	2239.3	2147.1	1454.1	1408.0	1364.3	1672.4	1085.5	MBTUH	Cooling Capacity
Condenser Water Flow	GPM					504.2	466.0	447.9	429.4	290.8	281.6	272.9	334.5	217.1	GPM	Evaporator Water Flow
Evaporator Load	MBTUH					2092.6	1965.2	1829.6	1685.3	1118.1	1035.5	951.1	1958.7	1283.6	MBTUH	Condenser Load
Evaporator Water Flow	GPM					418.5	393.0	365.9	337.1	223.6	207.1	190.2	391.7	256.7	GPM	Condenser Water Flow
Power Input	kW					125.5	106.8	120.1	135.3	98.5	109.2	121.1	83.9	58.1	kW	Power Input
COP	-					5.88	6.39	5.47	4.65	4.33	3.78	3.30	19.94	18.70	-	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 Leaving Temp	°F					80	90	100	110	120	130	140	150			°F	Building Water Leaving Temp
Heating Capacity	MBTUH					2127.5	2060.4	1991.9	1922.4	1852.2	1226.8	1193.8	1163.5			MBTUH	Cooling Capacity
Condenser Water Flow	GPM					425.5	412.1	398.4	384.5	370.4	245.4	238.8	232.7			GPM	Evaporator Water Flow
Evaporator Load	MBTUH					1839.5	1738.0	1629.7	1514.4	1391.7	896.2	827.2	756.9			MBTUH	Condenser Load
Evaporator Water Flow	GPM					367.9	347.6	325.9	302.9	278.3	179.2	165.4	151.4			GPM	Condenser Water Flow
Power Input	kW					84.4	94.5	106.1	119.5	134.9	96.9	107.4	119.1			kW	Power Input
COP	-					7.39	6.39	5.50	4.71	4.02	3.71	3.26	2.86			-	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	1851.6	1802.2	1751.7	1700.7	1649.5	1598.6	1034.9	1013.3	994.7			MBTUH	Cooling Capacity	
Condenser Water Flow	GPM	370.3	360.4	350.3	340.1	329.9	319.7	207.0	202.7	198.9			GPM	Evaporator Water Flow	
Evaporator Load	MBTUH	1597.6	1517.3	1431.4	1340.0	1242.7	1139.3	709.3	652.3	594.2			MBTUH	Condenser Load	
Evaporator Water Flow	GPM	319.5	303.5	286.3	268.0	248.5	227.9	141.9	130.5	118.8			GPM	Condenser Water Flow	
Power Input	kW	74.4	83.5	93.8	105.7	119.2	134.6	95.4	105.8	117.3			kW	Power Input	
COP	-	7.29	6.33	5.47	4.71	4.05	3.48	3.18	2.81	2.48			-	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	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	1559.6	1523.4	1487.0	1450.8	1415.4	1381.1	873.8	862.0			MBTUH	Cooling Capacity		
Condenser Water Flow	GPM	311.9	304.7	297.4	290.2	283.1	276.2	174.8	172.4			GPM	Evaporator Water Flow		
Evaporator Load	MBTUH	1308.2	1240.3	1168.0	1091.3	1009.8	923.5	552.9	506.1			MBTUH	Condenser Load		
Evaporator Water Flow	GPM	261.6	248.1	233.6	218.3	202.0	184.7	110.6	101.2			GPM	Condenser Water Flow		
Power Input	kW	73.7	83.0	93.5	105.4	118.8	134.1	94.0	104.3			kW	Power Input		
COP	-	6.20	5.38	4.66	4.03	3.49	3.02	2.72	2.42			-	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

### XS 120 Data Sheet



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