



GAS ENGINE HEAT PUMP POLO100

PERFORMANCE DATA

Refrigerant: R134a

Date: 8.11.2018		T out [°C] Brine	-12	-7	-2	3	8	13	18	23	28	
T out [°C] Hot Water	Tc [°C] condensation	Te [°C] Evaporation	-15	-10	-5	0	5	10	15	20	25	
28	30	Cooling capacity [kW]	57.5	73.4	92.3	115.0	141.0	172.0	206.0	245.0		
		Heating output [kW]	102.0	121.9	144.1	168.5	194.8	223.8	253.5	285.3		
		Fuel consumption [kW]	49.4	53.9	57.5	59.4	59.7	57.5	52.8	44.7		
		Heat factor [-]	2.06	2.26	2.51	2.83	3.26	3.89	4.80	6.38		
33	35	Cooling capacity [kW]	53.3	68.4	86.4	108.0	133.0	162.0	195.0	233.0	276.0	
		Heating output [kW]	100.6	120.7	142.7	167.3	193.8	222.5	253.0	286.0	320.8	
		Fuel consumption [kW]	52.5	58.1	62.5	65.8	67.5	67.2	64.4	58.9	49.7	
		Heat factor [-]	1.92	2.08	2.28	2.54	2.87	3.31	3.93	4.86	6.45	
38	40	Cooling capacity [kW]	49.0	63.3	80.4	101.0	125.0	153.0	185.0	221.0	262.0	
		Heating output [kW]	99.0	118.8	140.9	165.8	192.8	222.0	253.0	286.0	321.0	
		Fuel consumption [kW]	55.6	61.7	67.2	71.9	75.3	76.7	75.6	72.2	65.6	
		Heat factor [-]	1.78	1.93	2.10	2.30	2.56	2.90	3.35	3.96	4.90	
43	45	Cooling capacity [kW]	44.7	58.2	74.3	93.4	116.0	143.0	173.5	209.0	248.0	
		Heating output [kW]	97.2	117.0	138.8	163.1	189.9	219.8	251.1	285.3	320.5	
		Fuel consumption [kW]	58.3	65.3	71.7	77.5	82.0	85.3	86.3	84.7	80.6	
		Heat factor [-]	1.67	1.79	1.94	2.11	2.31	2.58	2.91	3.37	3.98	
48	50	Cooling capacity [kW]	40.4	53.0	68.1	86.1	107.6	133.6	162.9	195.7	234.0	
		Heating output [kW]	95.2	114.5	136.4	160.6	187.3	217.4	249.3	282.5	319.0	
		Fuel consumption [kW]	60.8	68.3	75.8	82.7	88.6	93.1	96.0	96.4	94.4	
		Heat factor [-]	1.56	1.68	1.80	1.94	2.12	2.33	2.60	2.93	3.38	
53	55	Cooling capacity [kW]	36.0	47.7	61.9	78.9	98.9	123.1	151.2	182.8	220.3	
		Heating output [kW]	93.0	112.0	133.4	157.7	184.2	213.6	245.8	279.5	317.3	
		Fuel consumption [kW]	63.3	71.4	79.4	87.6	94.7	100.6	105.2	107.4	107.8	
		Heat factor [-]	1.47	1.57	1.68	1.80	1.94	2.12	2.34	2.60	2.94	
58	60	Cooling capacity [kW]	31.6	42.5	55.7	71.5	90.4	112.7	139.5	169.9	206.3	
		Heating output [kW]	88.0	106.3	127.1	150.4	180.3	209.4	241.4	276.0	314.1	
		Fuel consumption [kW]	65.6	74.2	83.0	91.8	99.9	107.4	113.3	117.9	119.8	
		Heat factor [-]	1.34	1.43	1.53	1.64	1.80	1.95	2.13	2.34	2.62	
63	65	Cooling capacity [kW]		36.7	49.5	64.1	81.7	102.8	127.7	157.0	191.0	
		Heating output [kW]		102.5	123.4	146.1	176.0	205.0	236.7	271.3	309.1	
		Fuel consumption [kW]		76.5	85.9	95.4	104.8	113.6	121.1	127.0	131.2	
		Heat factor [-]		1.34	1.44	1.53	1.68	1.80	1.95	2.14	2.36	
68	70	Cooling capacity [kW]		32.1	43.2	56.7	73.0	92.7	116.3			
		Heating output [kW]		99.6	119.1	141.6	171.2	199.7	231.4			
		Fuel consumption [kW]		78.5	88.2	98.6	109.1	118.8	127.9			
		Heat factor [-]		1.27	1.35	1.44	1.57	1.68	1.81			
73	75	Cooling capacity [kW]			37.0	49.3	64.3	82.6				
		Heating output [kW]			114.9	136.7	165.7	194.0				
		Fuel consumption [kW]			90.5	101.6	112.6	123.7				
		Heat factor [-]			1.27	1.35	1.47	1.57				
78	80	Cooling capacity [kW]				42.1	55.8	72.7				
		Heating output [kW]				131.1	159.8	187.5				
		Fuel consumption [kW]				103.5	115.6	127.6				
		Heat factor [-]				1.27	1.38	1.47				

Notes:

Spread ca. 5-8 K. T out of hot water is the mixed output of condenser heat and engine waste heat,

The engine waste heat (ca. 1/3 of the heat output) can be supplied separately up to 90/70°C.

The data are for information only. For project specific performance calculation contact TEDOM.

Heat factor = Heat output / Fuel consumption(LHV). Power consumption 1,7 kW.

For hot water temperatures up to 55°C refrigerant R407c may be more suitable alternative. See performance data for R407c.

