Extract from the reference list of FRIOTHERM heat pumps with numbers of operating hours

Installation	Type d'UNITOP	N° of HPs	Year of delivery	City / Country	Evap. regime	Cooling capacity	Source froide	Cond. regime	Heating capacity	Approx. number of operating hours
Värtan Ropsten	**50FFE**	6	1984 (4) 1986 (2)	Stockholm / SE	2.5/0.5	6 x 20'000 kW 6 x13'500kW*	Sea water	57/80°C	6 x 30'000 kW 6 x 20'000 kW*	**180'000**
Sandvika 1	**28/28CPY**	2	1988	Sandvika / NO	10/6°C	2 x 4'750 kW	Sewage water	57/78°C	2 x 7'000 kW	**230'000**
Kista Akalla	**33/28CY-8129U**	2	1998	Stockholm / SE	14/4°C	2 x 6'000 kW	District cooling	58/81°C	2 x 9'125 kW	**120'000**
Lysaker	**28/22BY-8107U**	1	1998	Lysaker / NO	5/2°C	1 x 3'000 kW	Sea water ind.	50/75°C	1 x 4'500 kW	**150'000**
Nimrod	**33/28CPY-10149U**	4	2000-01	Stockholm / SE	8.5/6°C	4 x 9'000 kW	Sea water ind.	68/78°C	4 x 9'000 kW	**100'000**
Fornebue	**28/22CY-8117U**	1	2000	Fornebue /NO	5/2°C	1 x 3'600 kW	Sea water ind.	50/75°C	1 x 5'400kW	**120'000**
Fornebue 05	**33/28CPY-10149U**	1	2005	Fornebue /NO	5/2°C	1 x 5'600 kW	Sea water ind.	50/75°C	1 x 8'300 kW	**100'000**
Sandvika 2	**33/28CPY-816118U**	1	2008	Sandvika/NO	8.7 / 4 °C	5'200 kW	Sewage water	54 / 78 °C	8'000kW	**100'000**
Skoyen 05	**50FY-101711U**	1	2006	Oslo / NO	10/5.8°C	11'840 kW	Sewage water	75 / 90°C	18'400 kW	**110'000**
Skoyen 07	**34FY-81411U**	1	2008	Oslo / NO	10/6.3°C	6'000 kW	Sewage water	60 / 75°C	9'200 kW	**100'000**
Katri Vala	**50FY-81912U**	5	2005	Helsinki / FI	10 / 4°C	5 x 12'000kW	Effluent ind.	58 / 88°C	5 x 18'110 kW	**100'000**
Turku I	**50FY-81912U**	1	2009	Turku / FI	9 / 2.8°C	11'900 kW	Effluent	45 / 85 °C	18'000 kW	**90'000**

**** cooling/heating capacity of UNITOP 50FFE after retrofit from R22 to R134. The customer plans to operate the Värtann Ropsten heat pumps until 2050.***