Overview of new or improved large-scale heat pumps (TRL < 9) according to IEA HPT Annex 58 Figure 43

Manufacturer	Max. flow temperature	Heat output (0.1 MW – 1 MW – 10 MW – 100 MW)	Refrigerant	TRL
Enerin	250 °C		R704	6
Piller (MVR)	212 °C		R718	8–9
Turboden	200 °C		various	7–9
Heaten	200 °C		HFOs	7–9
ToCircle	188 °C		R717/R718	6–7
spHeat	165 °C		HFOs	6–8
SRM	165 °C		R718	5
Simens Energy	160 °C		various	7–8
Enertime	160 °C		HFOs	4–8
Weel & Sandvig	160 °C		R718	4–9
Rank	160 °C		various	7
MAN	150 °C		R744	7–8
Ohmia Industy	150 °C		R717/R718	7–8
ecop	150 °C		Noble gas	6–7
Mayekawa	145 °C		R601	5
GEA	130 °C		R744	8
Johnson Controls	120 °C		R717 + R600	7–8
Fenagy	120 °C		R744	5–6
Mayekawa	120 °C		R600	7

Screw compressor · Piston compressor · Turbo compressor · Scroll compressor · Other technology

Fraunhofer IEG based on IEA (2023b)