Project Case Study

Leavesden Park, Watford

MS carried out a chiller replacement project in September 2022 as part of an ongoing energy reduction plan. Following several discussions with the client, they requested energy saving suggestions to reduce their building's EPC energy rating to a C.

The Account Manager gave a detailed report on where significant savings could be made. He brought the chiller to their attention, it was no longer running efficiently and had come to the end of it's lifecycle. This installation was the second of 2 chillers to be updated. The client needed minimum disruption to the building's day to day operation during installation, due to the tenants' nature of business.

	ESEER	
Load	% Time	Load kW
100%	3%	458
75%	33%	343.5
50%	41%	229
25%	23%	114.5

Average Load 247.32 kW

		Old	New
ESEER	kW/kWe	4.03	5.3
Average PI	kWe	61.4	46.7
Annual Hours Operation	Hours	8760	8760
Energy Used	kWh	537,599	408,778
Electricity Rate	£/kWh	£0.1733	£0.1733
Cost	£	£93,165.87	£70,841.22
Notional Annual Saving	£		**£22,324.65**

MS made recommendations for the Carrier chiller based on the potential energy savings it could provide. The potential savings of the newly installed chiller are based on the notional ESEER load profile and on the chiller being operational 24/7.

The energy savings could be realised based on 8760 hours of operation (24/7).

The old chiller had an ESEER of 4.03 when brand new, and the new chiller's ESEER is 5.3.

Benefits

- Upgrade the building's EPC rating to a C.
- By further adjusting the set point on the chiller, we can ensure it is working to maximum efficiency.

The Notional Annual Saving is £22,324.65