

## Energy Savings Sheet: Refrigeration Plant

2EA have produced this sheet to identify areas of potential energy savings. It consists of notes and checkpoints that can be used by managers to help reduce overall energy consumption.

### Notes

- Is cooling really needed?
- Evaporators remove the heat from the cooled space; condensers then reject the heat from the plant to the surroundings. For every 1°C fall in evaporator, or 1°C rise in condenser temperature, running costs increase by 2 to 4%.
- Factor-in efficiency considerations to procurement of plant and maintenance services.
- Good housekeeping and maintenance helps ensure efficient and reliable operation.
- Refrigerant leaks reduce efficiency. Refrigerants also have a significant environmental impact in themselves; it is illegal to knowingly vent them.

### Checkpoints

#### Are controls set for a lower temperature than necessary?

- ✓ Too cold will waste energy: 5°C too low will add 10-20% to the electricity consumption.

#### Are condensers cleaned regularly?

- ✓ Blocked condensers increase the condensing temperature and cooling capacity drops.

#### Are the medium (air or water) surrounding condensers as cool as possible?

- ✓ Shade condensers from sunlight if necessary and ensure warm air/water is not re-circulated.
- ✓ Remove obstructions to airflows.
- ✓ Check that defrosting is working properly so that evaporators do not become iced up and so less efficient.

#### Have you checked the plant regularly for refrigerant leaks in the past six months?

#### Are doors closed as much as possible on cooled rooms and appliances?

- ✓ Keep the doors closed as much as possible. Appliances storing non-perishable goods, such as soft drinks, should be turned off when not needed.

#### Are the door seals in good condition?

#### Are cold refrigerant pipes between evaporator and compressor well refrigerated?

- ✓ They will pick up heat from their surroundings, and so should be well insulated and not run through hot areas



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