

Product: Compressors for Refrigeration and Air Conditioning



Overview: Specify that the compressor should be suitable for remanufacture. Some manufacturers have opted to produce hermetically sealed scroll compressors which are extremely difficult, sometimes impossible, to remanufacture effectively.

Valves, taps and other simple components are amenable to be remanufactured to original equipment (OE) standards and this option should be taken where ever practical. Any remanufactured component should come with a guarantee equal to that of a new component; ensure that support and parts will be available for the predicted life of the unit.

Consideration should be given to whether the unit will need modification to be compliant with new regulations regarding the use of HFCs (hydro fluoro carbons). The remanufacturer should state any change in energy efficiency in comparison with a new unit, and any loss of efficiency should be traded off against capital saving over the expected lifetime.

Environmental Impacts	Cost Effectiveness	Market Availability	Competitive Market	Resource Savings	Potential for Increased Procurement to Affect the Market
1) Energy and resource usage during production. 2) Energy usage during operation (major). 3) End of life disposal, particularly of refrigerant gases such as HFCs which are themselves potent greenhouse gases.	Used or remanufactured office furniture usually costs between 30%-50% of new price (Oakdene Hollins, 2006).	Remanufacture of compressors is, for the most part, carried out for the existing owner and the supply of remanufactured units to new customers is rare.	The market for air conditioning is growing in the UK, with a number of companies offering remanufacture to compressors for the HVAC (heating, ventilation, and air conditioning) industry.	Compressor units in particular are large pieces of equipment, and as such have a high embodied energy. By remanufacturing these units, around 80% of the embodied energy is retained (estimated by industrial sources). This reduces the need for virgin materials extraction. It is important however to ensure that any remanufactured unit will operate with an efficiency comparable to a new unit, or the net effect may be negative over the lifetime of the compressor.	There is a move by manufacturers to use hermetically sealed compressors that limit the possibility of remanufacture. By specifying that compressors must be remanufacturable, the Government could persuade manufacturers to make their designs more suited to remanufacture.