



## ReFit T5

### The Professional T5 conversion

Chalmor's ReFit T5 is a new upgrade system for switch start, quick start and high frequency luminaires. ReFit T5 enables older fluorescent fittings to be converted to the very latest new generation T5 fluorescent technology, offering substantial cost savings and dramatically reducing energy consumption.

ReFit T5 utilises T5 lamps which offer the benefits of an energy efficient light output with a useful operating life of up to 24,000 hours. ReFit T5 also offers instant "On" and re-strike qualities ideal for use with energy saving lighting controls including optionally available dimming control.

Our standard ReFit T5 has a 5 year warranty\* and our special miniature control gear version comes with a 2 year warranty\*. ReFit T5 is available for 2ft, 3ft, 4ft, 5ft, 6ft and 8ft T8/T12 fittings.

#### Why Choose ReFit T5?

The phase out of low efficiency light sources, in line with the EuP directive (Eco-Design Requirements for Energy-Using Products, 2005/32/EC), means that many organisations will find it increasingly difficult to source replacement T8/T12 lamps.

Waste Electrical & Electronic Equipment (WEEE) Directive and Restriction of Hazardous Substances (RoHS) Directive focus is to minimise the environmental impact of a range of products, including lighting. This includes the gradual phase-out of inefficient light sources between now and 2017.

The first lamps to be affected will be less efficient T8 and T12 fluorescent lamps, as well as poorer performing metal halide and high pressure sodium lamps. Any organisation that is using these low efficiency light sources, therefore, ought to be looking to upgrade their lighting in the near future. Not only will this provide significant financial and energy savings, it will also avoid being 'caught out' when suitable new lamps are no longer available.

\* Warranty from date of manufacture



ReFit T5 is designed to minimise the investment, but maximise the achievable energy savings. The ReFit T5 conversion has the fundamental components to convert existing T8/T12 fittings to latest technology T5 lamps.

Chalmor's ReFit T5 conversion includes a T5 high frequency ballast to replace existing ballast, new T5 'push on' lamp holders to replace existing lamp holders, new cable to replace internal wiring and T5 lamp clips to secure T5 lamps.

### FEATURES

- Fast, cost effective upgrade from T8/T12 to T5
- Up to 60% energy savings
- Reduces carbon emissions
- Avoids problems associated with old and brittle lamp holders
- Eliminates problems with deteriorated wiring in existing fittings
- No need for EMC filters
- Emergency and dimming options also available
- Extended lamp life reduces maintenance costs
- 24,000 hour lamp life, 3 times the lamp life of T8
- Typical Payback <1 year for 24/7 operation
- Increased light output facilitates reduction of total lamp numbers/ installed electrical load
- Standardised lamp sizes ease maintenance and stocking requirements
- Maintained light output, lamps stay brighter longer
- High Frequency Ballast ensures flicker free operation
- Pre-heated Lamp start ensuring no flickering when switched on
- Connect directly to mains
- Uniform installation regardless of fitting type



## NORMAL CONTROL GEAR

### SAFETY AND PERFORMANCE

As you would expect from a company with over 25 years experience in the lighting and controls market, the Chalmor ReFit T5 offers the following benefits:

- Integrated lamp detection
- Operation of T5 lamps of the same length
- Average life = 50,000 hours at > 90% reliability (max ta. with failure rate ≤ 0.2% per 1,000 hours)
- Ambient temperature range (-25°C to 55°C)
- Safety shutdown at end of life
- Automatic start after replacement of defective lamps
- Suitable for emergency lighting systems
- Constant luminous flux irrespective of fluctuations in mains voltage
- Suitable for luminaires of protection class 1 and protection class 2
- Temperature protection as per EN 61347-2-3 C5e
- Insulation Displacement Connection (IDC) terminal for rapid wiring

### TECHNICAL SPECIFICATION

AC voltage range..... 198-254V  
 DC voltage range ..... 176-280V (Lamp start ≥ 198 V DC)  
 Overvoltage protection .. 320V AC, 1 h  
 Defined warm start..... ≤ 0.5 s  
 Operating frequency ..... ≥ 40kHz  
 Type of protection..... IP20  
 Warranty..... 5 years from date of manufacture

## MINI CONTROL GEAR

### SAFETY AND PERFORMANCE

- Average life = 50,000 hours (at max ta. with a failure rate ≤ 0.2% per 1,000 hours)
- Ambient temperature range (-15°C to 50°C)
- Safety shutdown at end of life
- Automatic start after replacement of defective lamps
- Suitable for emergency lighting systems
- Suitable for luminaires of protection class 1 and protection class 2
- Temperature protection as per EN 61347-2-3 C5e

### TECHNICAL SPECIFICATION

AC voltage range..... 198-254V  
 Defined warm start..... ≤ 2 s  
 Operating frequency ..... 0 to 50/60kHz  
 Lamp switching cycles ... > 25,000  
 Type of protection..... IP20  
 EEI..... A2  
 Warranty..... 2 years from date of manufacture

Specifications may change without prior notice

## CERTIFICATION

March 2010 saw the first stage of new Commission of the European Communities regulations with regards to ecodesign requirements (2005/32/EC) for fluorescent lamps, and for ballasts and luminaires able to operate such lamps, and repealing Directive 2000/55/EC.

By using the latest control gear and lamps, ReFit T5 not only complies with future European legislation, but also conforms to EN 60598-1 and relevant Parts 2. Tri-phosphor and amalgam fluorescent lamps comply with EN61195 (safety) and EN60081 (performance) and with nominal initial (100h) lumen values included in this criteria.

## ORDER CODES

Understanding order codes:

Product..... **REFIT/T5/KIT**  
 Lamp ..... **/T5**  
 Existing Fitting Length..... **/6'**  
 Single or Twin Format..... **/2**  
 Gear Wattage(s)..... **/21**  
 Multi Wattage..... **MW**  
 Miniature Control Gear..... **MINI**

2ft	5ft (continued)
REFIT/T5/KIT/2'/1/14/MINI	REFIT/T5/KIT/5'/2/35
REFIT/T5/KIT/2'/3/14	REFIT/T5/KIT/5'/2/49
REFIT/T5/KIT/2'/4/14	REFIT/T5/KIT/5'/2/80
3ft	REFIT/T5/KIT/5'/2/MW-80
REFIT/T5/KIT/3'/1/21	6ft
REFIT/T5/KIT/3'/1/39	REFIT/T5/KIT/6'/1/2X21
REFIT/T5/KIT/3'/2/21	REFIT/T5/KIT/6'/1/35
REFIT/T5/KIT/3'/2/39	REFIT/T5/KIT/6'/1/49
4ft	REFIT/T5/KIT/6'/1/80
REFIT/T5/KIT/4'/1/28/MINI	REFIT/T5/KIT/6'/1/MW
REFIT/T5/KIT/4'/1/28	REFIT/T5/KIT/6'/2/2X21
REFIT/T5/KIT/4'/1/54	REFIT/T5/KIT/6'/2/35
REFIT/T5/KIT/4'/1/MW	REFIT/T5/KIT/6'/2/49
REFIT/T5/KIT/4'/2/28	REFIT/T5/KIT/6'/2/80
REFIT/T5/KIT/4'/2/54	REFIT/T5/KIT/6'/2/MW-80
REFIT/T5/KIT/4'/2/MW	8ft
5ft	REFIT/T5/KIT/8'/1/2X28
REFIT/T5/KIT/5'/1/35	REFIT/T5/KIT/8'/2/2X28
REFIT/T5/KIT/5'/1/49	
REFIT/T5/KIT/5'/1/80	
REFIT/T5/KIT/5'/1/MW	

ReFit T5 may be ordered directly from Chalmor:

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# Chalmor

Experts in Energy Saving Lighting and Heating