

STATUTORY INSTRUMENTS.

S.I. No. 501 of 2010.

TAXES CONSOLIDATION ACT 1997 (ACCELERATED CAPITAL ALLOWANCES FOR ENERGY EFFICIENT EQUIPMENT) (AMENDMENT) (NO. 3) ORDER 2010

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- I, EAMON RYAN, Minister for Communications, Energy and Natural Resources, in exercise of the powers conferred on me by section 285A (inserted by section 46 of the Finance Act 2008 (No. 3 of 2008)) of the Taxes Consolidation Act 1997 (No. 39 of 1997), with the approval of, and after consultation with, the Minister for Finance, hereby order as follows:
- 1. (1) This Order may be cited as the Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) (Amendment) (No. 3) Order 2010.
- (2) The collective citation, "the Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) Orders 2008, 2009 and 2010", includes this Order.
- 2. In this Order "Principal Order" means the Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) Order 2008 (S.I. No. 399 of 2008).
- 3. Schedule 1 of the Principal Order is amended by substituting the following for Part 1 of that Schedule:

"Part 1

Category: Motors and Drives

Technology: AC Induction Motors

An AC Induction Motor is an asynchronous electric motor that meets high efficiency standards. High efficiency AC induction motors are typically designed and constructed in such a manner as to reduce load losses (copper losses, rotor and stray load losses) and standing losses which are independent of the load (iron core and windage & friction losses). They can be considered either as standalone motors or as part of other equipment.

Eligibility criteria

In order to be included on the ACA Specified List, an AC induction motor must meet all of the requirements set out below.

Notice of the making of this Statutory Instrument was published in "Iris Oifigiúil" of 22nd October, 2010.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

No.	Condition
1.	Be a totally enclosed 3-phase induction motor with a power rating of greater than or equal to 1.1 kW.
2.	Meet the efficiency requirements listed on Table 1. according to IEC 60034-2-1 "Rotating Electrical machines — Standard methods for determining losses and efficiency of rotating electrical machinery from tests", or scientific equivalent.
3.	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
4.	Appropriate operating and maintenance manuals must be available to the end- user in order to optimise the achievement of any potential energy efficiency gains.

Table 1 — Minimum Efficiency Criteria for Motors:

Power (kW)	2 Pole Efficiency % at Full load (50Hz)	4 Pole Efficiency % at Full load (50Hz)	6 Pole Efficiency % at Full load (50Hz)
1.1	82.7	84.1	81.0
1.5	84.2	85.3	82.5
2.2	85.9	86.7	84.3
3 4	87.1	87.7	85.6
4	88.1	88.6	86.8
5.5	98.2	89.6	88.0
7.5	90.1	90.4	89.1
11	91.2	91.4	90.3
15	91.9	92.1	91.2
18.5	92.4	92.6	91.7
22	92.7	93.0	92.2
30	93.3	93.6	92.9
37	93.7	93.9	93.3
45	94.0	94.2	93.7
55	94.3	94.6	94.1
75	94.7	95.0	94.6
90	95.0	95.2	94.9
110	95.2	95.4	95.1
132	95.4	95.6	95.4
160	95.6	95.8	95.6
200	95.8	96.0	95.8
375	95.8	96.0	95.8
>=400	96.0	96.0	96.0

Notes:

- 1. Minimum efficiencies for 2-, 4- and 6-pole motors in the range 1.1kW to 375kW correspond to those for the IE3 premium efficiency class defined by the IEC 60034-30 standard.
- 2. For motors with more than 6 poles, the minimum efficiency criteria for 6-pole motors above shall apply.
- 3. Motors must be tested in accordance with IEC 60034-2-1 or scientific equivalent, where additional load losses are determined using low uncertainty methods.

- 4. Where a particular motor size is not listed, the required minimum efficiency level for the next size up must be met.

 Testing for motors rated 400 kW and above must be certified by a body qualified and approved to test to IEC 60034-2-1 standard or equivalent. Detailed test results must be submitted and these results must be to the reasonable satisfaction of the Sustainable Energy Authority of Ireland".
- 4. Schedule 1 of the Principal Order is amended by substituting the following for Part 3 of that Schedule:

"Part 3

Category: Lighting

Technology: Lighting Units

Lighting units are products that are specifically designed to provide efficient interior or exterior illumination.

Lighting units are considered to include:

High efficiency luminaires:

High efficiency Luminaires consist of a light fitting, one or more lamps and associated electronic control gear*.

Light emitting diode (LED) luminaires

LED Luminaires are solid state lighting devices consisting of a light fitting, one or more LED light sources, optical system and associated LED driver.

Light emitting diode (LED) lamps:

LED Lamps are solid state lighting devices consisting of a lamp with LED's, integrated LED driver and lamp base suitable for existing light fittings.

*For High intensity discharge lamps (e.g. High-pressure sodium or metal halide) of individual lamp wattage greater than or equal to 200W suitable electronic control gear is not available and is therefore not a requirement.

Eligibility Criteria

In order to be included on the ACA Specified List, Lighting units must meet the relevant requirement set out below.

General eligibility criteria

(applicable to all Lighting units)

No.	Condition
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).
2.	Must have a minimum power factor of 0.7 at all levels of product light output

High Efficiency Luminaires — **Specific eligibility criteria** (to be met in addition to the general eligibility criteria)

No.	Condition
3.	The photometric data of the Luminaires must have been measured and tested in accordance with EN 13032-1&2 "Light and lighting — Measurement and presentation of photometric data of lamps and Luminaires"
4.	Must meet the minimum efficacy criteria required for high efficiency luminaires as outlined in Table 1
5.	All lamps and control gear must be ENEC marked or comply with the relevant performance standards.

LED lamps and luminaires — Specific eligibility criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
6.	The photometric data of the Luminaire or lamp must have been measured and tested in accordance with: EN 13032-1&2 "Light and lighting — Measurement and presentation of photometric data of lamps and Luminaires" or IES LM-79-08 "Electrical and photometric measurements of Solid-State lighting products".
7.	Must have a light output (in lumens) not less than 90% of initial¹ light output after 6,000 hours of continuous operation and which is tested according to: IEC/PAS 62612 "Self ballasted LED-Lamps for general lighting services — performance requirements" or IES LM-80-08 "Measuring Lumen maintenance of LED light sources".
8.	Luminaires must meet the minimum efficacy criteria required for LED luminaires as outlined in Table 1. Lamps must meet the minimum efficacy criteria in table 2.
9.	A minimum lumen output of 150 lumens for the whole lamp or luminaire.
10.	A colour rendering index not less than Ra70.
11.	A rated Correlated Colour Temperature between 2500 and 6500K

¹Initial lumens measured after 100 hours operation.

Table 1 — Luminaires: Minimum efficacies table for high-efficiency and LED Luminaires

Luminare type	Minimum efficacy (1 1/cW)
High-pressure sodium ≥200W per lamp	80
High-pressure sodium <200W per lamp	65
Metal halide	65
Linear Fluorescent*	55
Compact Fluorescent* ≥ 300mm**	55
Compact Fluorescent* < 300mm**	45
Induction	45
LED	45

^{*}Linear and Compact Fluorescent luminaires must have High frequency control gear incorporated into the fitting

Il/cW = Luminaire Lumens per circuit Watts

= Total Lumen Output x Light Output Ratio Circuit Power Drawn

Where:

- Total lumen output (Lumens)= the total light output of all the lamps in the fitting (measured in Lumens),
- Light Output Ratio (LOR) = ULOR and DLOR values may be combined where the fitting is designed to provide direct *and* indirect lighting, otherwise only the LOR in the intended lighting direction may be used.
- Circuit Power Drawn (Watts) = the electrical power drawn by the whole luminaire from main circuit connection point to lamp, including losses in the control gear (ballast)²

Table 2 — Lamps: Minimum efficacies table for LED lamps

LED Lamp type	Minimum efficacy l/cW
Omni directional*	45
Directional*	45

^{*}As defined under Energy Star.

^{**300}mm in longest dimension

² Some fluorescent lamps are labelled and branded with the wattage (power) consumed when operated on standard 50Hz (i.e. not high-frequency) control gear. When operated on high-frequency control gear the watts consumed are less.

I/cW = Lumens per circuit Watts

= total lumen output circuit power drawn

Where:

- Total lumen output (Lumens)= the total light output of the lamp
- Circuit Power Drawn (Watts) = the electrical power drawn by the whole lamp, including losses in the LED driver".
- 5. Schedule 1 of the Principal Order is amended by substituting the following for Part 4 of that Schedule:

"Part 4

Category: Lighting

Technology: Lighting Controls

Systems used to control lighting with the aim of optimising energy usage. These systems use timers, daylight sensing, occupancy sensing and/or traffic flow sensing to control switching and/or dimming of lighting within different zones.

Lighting controls are considered to include:

Time controllers

Automatically switch off lighting, or dim it down, at predetermined times

Daylight controllers and sensors

Monitor daylight availability, and automatically switch off lighting or dim it down to the level needed to sufficiently illuminate the area.

Occupancy controllers and sensors

Monitor occupancy or movement of personnel, and automatically switch off, or dim down, lighting when the area is unoccupied.

Traffic flow controllers and sensors

Monitor traffic flow density, and automatically switch off, or dim down, lighting when a predetermined low average traffic flow is reached.

Eligibility Criteria

In order to be included on the ACA Specified List, Lighting Control equipment must meet all of the relevant requirements set out below.

General eligibility criteria

(applicable to all lighting control equipment)

No.	Condition
1.	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
2.	 Where automatic dimming controls are used, they must work by reducing the power consumption of the lamps. And, Where LED lighting or fluorescent lighting is being dimmed, the controls must be capable of reducing the power consumption of the controlled lamps by at least 50%. Where fluorescent lighting is being dimmed, it must incorporate high frequency control gear with dimmable ballasts. Where other forms of lighting than fluorescent are being dimmed, they must incorporate either mains frequency or high frequency control gear with dimmable ballasts.

Time controllers — specific eligibility criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
3.	The product must automatically switch the lighting off, or dim it down, at predetermined times, or after a predefined interval.

Daylight controllers — specific eligibility criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
4.	The product must monitor the availability of daylight and automatically switch the lighting off when sufficient daylight is available to illuminate the area irrespective of switching cycle mode. Controls that incorporate dimming must dim down the lighting to the level needed to sufficiently illuminate the area by a combination of daylight and electric light.

Occupancy controllers — specific eligibility criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
	The product must automatically switch off the lighting, or dim it down, after the area has become unoccupied.

Traffic flow controllers — specific eligibility criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
4.	The product must automatically switch the lighting off, or dim it down, when a predetermined low average traffic flow is reached.

Notes

1. Modules which can be added to a lighting control system/product but do not control or monitor lighting are not eligible for ACA support as lighting controls.

- 2. Products may incorporate the facility for local users to manually switch on and off lighting in a local area and thus to override the relevant lighting controls at any particular instance. However products that allow local users to locally override the ability of lighting controls to automatically switch off or dim down the lighting, are not eligible".
- 6. Schedule 1 of the Principal Order is amended by substituting the following for Part 23 of that Schedule:

"Part 23

Category: Process and Heating, Ventilation and Air-conditioning (HVAC) Control Systems

Technology: Heat Exchangers

Heat Exchangers are equipment that is specifically designed to enable the efficient transfer of energy from one liquid or gas stream to another, in both heating and cooling applications.

Heat Exchanger equipment is considered to include the following:

Run-around Coil heat exchangers

A Run-around Coil heat exchanger transfers energy from an exhaust air stream to a supply air stream via an energy transfer medium circuit (usually water) connecting the two energy streams.

Liquid-to-liquid Plate heat exchangers

Liquid-to-liquid plate heat exchangers comprise of a series of formed plates through which liquid streams are channeled in alternate flows. Energy is transferred between an exhaust and supply liquid stream via the exchangers and an energy transfer circuit.

Air-to-air Plate heat exchangers

Air-to-air plate heat exchangers comprise of a series of formed plates through which air streams are channeled in alternate flows. Energy is transferred between an exhaust and supply airstream via the exchangers and an energy transfer circuit.

Thermal Wheel heat exchangers

Thermal wheel heat exchangers are installed where the exhaust air stream is directly adjacent to the supply air stream. The wheel rotates slowly on an axis perpendicular to air flow. The rotation of the wheel transfers energy between the two streams.

Eligibility Criteria

In order to be included on the ACA Specified List, the <u>specific</u> heat exchanger equipment must satisfy all of the relevant requirements set out below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

General Heat Exchanger Eligibility Criteria

(Applicable to all heat exchanger equipment)

No.	Condition
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).
2.	 All required performance values must be tested according to: EN305 "Heat exchangers. Definitions of performance of heat exchangers and the general test procedure for establishing performance of all heat exchangers" EN 306 "Heat exchangers. Methods of measuring the parameters necessary for establishing the performance" EN 308 "Heat exchangers — Test procedures for establishing the performance of air to air and flue gases heat recovery devices" As specified for each individual condition, or scientific equivalent.

Run-around heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition	
3.	A heat transfer efficiency greater than or equal to 50% during maximum capacity operation tested in compliance with EN305/EN306.	
4.	A maximum air side pressure drop across an individual heat exchanger coil of 100 Pa. tested in compliance with EN305/EN306.	
5.	A maximum water side pressure drop across an individual heat exchanger coil of 25 kPa tested in compliance with EN305/EN306.	

Liquid-to-liquid Plate Heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

6.	A ratio of internal heat exchanging surface area to maximum operating volume greater than 200. (m²/m³ >200). tested in compliance with EN305/EN306.
7.	A heat transfer efficiency greater than or equal to 85% during maximum capacity operation. tested in compliance with EN305/EN306.

Air-to-air Plate Heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
8.	A heat transfer efficiency greater than or equal to 50% during maximum capacity operation. tested in compliance with EN308.
9.	A maximum pressure drop across the heat exchanger of 250 Pa tested in compliance with EN308.

Thermal Wheel heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
10.	A heat transfer efficiency greater than or equal to 70% during maximum capacity operation tested in compliance with EN308.
11.	A maximum pressure drop across the heat exchanger component of 200 Pa. tested in compliance with EN308.

"

7. Schedule 1 of the Principal Order is amended by inserting the following:

"Part 30

Category: Refrigeration and Cooling

Technology: Compressors and Condensing Units

Compressors and Condensing Units are defined as equipment designed to compress refrigerant vapour, and in the case of Condensing Units to also condense that vapour into a liquid, achieving very high operational efficiencies.

Compressors and Condensing Units equipment is considered to include the following:

Compressors

Refrigeration compressors are products specifically designed to raise the pressure, temperature and energy level of a refrigerant vapour by mechanical means, as part of a vapour-compression, economised vapour-compression or transcritical CO₂ refrigeration cycle.

Economiser packages consist of a refrigeration compressor, an expansion device, and an economiser that is capable of increasing refrigerant sub-cooling and refrigeration cycle efficiency.

Condensing Units

Air-Cooled Condensing Units products are specifically designed to provide cooling to other equipment and systems that incorporate evaporators (and associated expansion valve control systems). Air-cooled condensing units are factory-assembled units that consist of one or more compressors, an air-cooled condenser and interconnecting pipework. They may include liquid receivers, filter driers, oil separators, shut-off valves and related controls, and a weatherproof housing.

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Refrigeration and Cooling equipment must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking

<u>process</u>. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

General Eligibility Criteria

(applicable to all Refrigeration and Condensing Units)

	No.	Condition	
All equipment and/or components must be CE-marked as required by the specific EU directive(s)		All equipment and/or components must be CE-marked as required by the specific EU directive(s)	
	2	Be designed to operate with one or more clearly identified standard refrigerants	
	3	Compressors must be hermetic or semi-hermetic type. Products that depend on an external motor for compressor operation (i.e. 'open'-type compressors) are not eligible	

Compressors — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
4	Be either a refrigeration compressor or an economiser package
5	Incorporate a positive displacement type, hermetic or semi-hermetic compressor (with integral electric motor)
6	Have a displacement greater than 9 cubic metres per hour, except for products using R744 which must have a displacement greater than 5 cubic metres per hour
7	Products must have a coefficient of performance (COP) that is greater than the values shown in Table 1 (below) at the specified rating points. COP must be calculated according to IS EN 12900:2005 'Refrigerant compressors — Rating conditions, tolerances and presentation of manufacturer's performance data'.
8	Low-temperature transcritical/subcritical R744 products must include an appropriately matched gas intercooler that is capable of reducing the intermediate gas temperature to the level required for second-stage compression

Condensing Units — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
9	Be a factory-assembled unit that incorporates at least the following components: a) Air-cooled refrigerant condenser b) One or more electrically driven refrigeration compressors c) A control system that controls the product's compressors and cooling fan(s)
10	Fall into one or more of the following three temperature categories: • High-temperature units • Medium-temperature units • Low-temperature units
11	Products must have a coefficient of performance (COP) that is greater than the values shown in Table 2 (below) at the specified rating points

Table 1: Minimum performance thresholds for refrigeration compressors at the Republic of Ireland (RoI) rating points

Category	Evaporating temperature (dew point)	Condensing temperature (dew point)	Compressor suction gas temperature	Liquid sub- cooling	COP threshold
High- temperature with HFC³ or HC⁴ refrigerant	+5°C	35°C	20°C	0K	> 5.20
Medium- temperature with HFC or HC refrigerant	-10°C	30°C	20°C	0K	> 3.36
Low- temperature with HFC or HC refrigerant	-35°C	25°C	20°C	0K	> 1.94
Medium- temperature transcritical/ subcritical with R744 refrigerant	-10°C	15°C	0°C	0K	> 4.20
Low- temperature transcritical/ subcritical with R744 refrigerant	-35°C	15°C	-25°C	0K	> 1.80
Low- temperature subcritical with R744	-35°C	-5°C	-25°C	0K	> 3.20

Note: For economiser packages, zero subcooling refers to the liquid condition at the condenser exit.

Table 2: Performance thresholds for air-cooled condensing units at the RoI rating points

Temperature category	Evaporating temperature (dew point)	Ambient (condenser air- on) temperature	Compressor suction gas temperature	COP threshold
High- temperature units	+5°C	20°C	20°C	≥3.9
Medium- temperature units	-10°C	20°C	20°C	≥2.8
Low- temperature units	-35°C	20°C	20°C	≥1.6

 $^{^3} Hy drofluor ocarbon \\$

⁴Hydrocarbon

Where:

COP = refrigerating capacity/power absorbed, including the compressor and the condenser fans (and any other power use associated with the air-cooled condensing unit)

The refrigerating capacity and power absorbed are as defined in IS EN 13215:2000 — 'Condensing units for refrigeration — Rating conditions, tolerances and presentation of manufacturer's performance data', and the power absorbed must be measured at full load, without condenser pressure control, and must include the fan power.

Part 31

Category: Refrigeration and Cooling Systems

Technology: Refrigerated Display Cabinet equipment

Refrigerated Display Cabinet equipment is defined as equipment that is designed to store and display chilled and/or frozen foodstuffs.

Refrigerated Display Cabinet equipment is considered to include the following:

Refrigerated Display Cabinets

Refrigerated display cabinets are used to maintain foodstuffs and drinks at chilled and frozen temperatures. There are many different designs of refrigerated display cabinets, but all enable the customer to view the foodstuff stored in the cabinet, either through an opening in the cabinet, or through a transparent door or lid. The two types of cabinets included are:

- 'Plug-in' refrigerated display cabinets with integral refrigeration systems (i.e. incorporating a compressor and condensing unit)
- 'Remote' refrigerated display cabinets that are designed to work with a nonintegral refrigeration system (i.e. where the compressor and condenser, or all or parts of the refrigeration system, are located at a different location from the cabinet)

Covers for Refrigerated Display Cabinets

Covers for Refrigerated Display Cabinets are rigid barriers that can be used to reduce the infiltration of ambient air and heat flow into refrigerated display cabinets, thereby reducing the energy consumption of the cabinet. The five types of covers included are:

- 1. **Strip curtains** that consist of transparent, flexible strips hung adjacent to each other, and fastened at both ends to neighbouring strips, in a manner that allows temporary openings to be made in the curtain for the purpose of removing items from the cabinet.
- 2. **Night blinds** that consist of a flexible fabric mounted on a roller mechanism that enables the blind to be deployed across the display window of the cabinet

when the retail outlet is closed. The blind may also incorporate a motorised control system.

- 3. **Transparent chest freezer covers** (or 'bubble lids') that consist of a rigid transparent material that fits across the display window of the cabinet, and incorporates access holes that enable items to be removed from the cabinet without removing the cover.
- 4. **Transparent sliding doors** that consist of doors with a heat-reflective coating, mounted in a mechanism (designed to be installed in the window of the cabinet) that enables the doors to be opened when items need to be removed from the cabinet.
- 5. **Transparent hinged doors** that consist of doors with a heat-reflective coating, mounted in a mechanism (designed to be installed in the window of the cabinet) that enables the doors to be opened when items need to be removed from the cabinet.

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Refrigerated Display Cabinet equipment must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

General Eligibility Criteria

(applicable to all Refrigerated Display Cabinet equipment)

No.	o. Condition	
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).	

Refrigerated Display Cabinets — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition	
2	Be designed to display chilled and/or frozen foodstuffs, while maintaining them within prescribed temperature limits	
3	Conform to one of the temperature classifications in <i>Table 1</i> (see below) when tested to IS EN ISO 23953-2:2005 in climate class III (25°C, 60% RH)	
4	Have an Energy Efficiency Index (EEI) that is less than, or equal to, the threshold shown in <i>Table 2</i> (see below) for the relevant temperature class and type of cabinet	
5	Be classified in accordance with the precise 5-digit classification system set out in Annex A of IS EN ISO 23953-1:2005	

${\bf Covers\ for\ Refrigerated\ Display\ Cabinets-Specific\ Eligibility\ Criteria}$

(to be met in addition to the general eligibility criteria)

No.	Condition
6	Products must: • Provide a rigid barrier that can be used to reduce the infiltration of ambient air and heat flow through the open display window of a refrigerated display cabine • Be designed to fit one or more specific types or models of refrigerated display cabinet in a manner that ensures that, when fitted, there is no air gap around the edges of the product's rigid barriers

Table 1: Classification according to temperature

Class	Highest temperature θ _{ah} of warmest M-package equal to or lower than:		Lowest temperature θ_{al} of warmest M-package equal to or lower than:
L1	-15°C	-	-18°C
L3	-12°C	-	-15°C
M0*	+4°C	-1°C	-
M1	+5°C	-1°C	-
M2	+7°C	-1°C	-
H1	+10°C	+1°C	-
H2	+10°C	-1°C	-

^{*}Note: All classes are as described in IS EN ISO 23953-2:2005, except M0, which is based on recommendations by the British Refrigeration Association.

Table 2: Performance thresholds for refrigerated display cabinets

Classification according to temperature		
	Integral type	Remote type
L1	21.00	23.50
L3	n/a	21.00
M0	12.50	11.75
M1	12.20	11.45
M2	11.60	10.85
H1	n/a	8.00
H2	10.20	9.20

Where the Energy Efficiency Index (EEI) is defined as the ratio of the product's Total Energy Consumption (TEC) to Total Display Area (TDA), i.e. EEI = TEC/TDA, and:

- TEC is calculated according to IS EN ISO 23953-2:2005 section 5.3.6.3.4
- TDA is calculated according to IS EN ISO 23953-2:2005 Annex A

Category: Refrigeration and Cooling

Technology: Condensers

Condensers are defined as equipment that is designed to cool and condense highpressure refrigerant vapour by means of a heat exchanger.

Condenser equipment is considered to include the following:

Evaporative Condensers

Evaporative Condensers are specifically designed to cool and condense highpressure refrigerant vapour by means of a heat exchanger that has a continuously wetted external surface across which air is blown by a fan.

Air-Cooled Condensers

Air-cooled Condensers are specifically designed to cool and condense highpressure refrigerant vapour by means of a heat exchanger across which air is blown by a fan.

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Condenser equipment must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

General Eligibility Criteria

(applicable to all Condenser equipment)

]	No.	Condition
	1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
	2	Products must incorporate: • A heat exchanger that is designed to cool and condense refrigerant vapour • A fan that blows air over the heat exchanger

Evaporative Condensers — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
3	Products must incorporate a mechanism that continually wets the external surface of the heat exchanger, and that includes a water pump and a water storage tank
4	Equipment must be manufactured so as to comply fully with all applicable requirements of the 'National Guidelines for the Control of Legionellosis in Ireland 2009' (or later edition)

Air-Cooled Condensers — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
5	Meet the performance criteria measured by the Energy Efficiency Ratio (EER) of the unit at 100% (full) load capacity, as indicated in Table 1

Table 1: Minimum Energy Efficiency Ratio (EER) performance values

Туре	EER
Air-Cooled Condenser	≥110

Where: EER = Net heat rejection capacity kW (@ Δ T 15K) Absorbed electrical power kW

Part 33

Category: Refrigeration and Cooling Systems

Technology: Refrigeration System Controls

Refrigeration System Controls are defined as equipment that controls and optimises the temperatures and pressures in a refrigeration system, and automatically adjusts the refrigeration system's operation to minimise its energy consumption, while maintaining within predefined temperature limits the spaces, processes or equipment being refrigerated, and reflecting changes in load, weather conditions and operating requirements.

Refrigeration System Controls equipment is considered to include the following:

System Management Package

This consists of one or more control units or modules designed to optimise an entire refrigeration system, including the operation of refrigeration compressor(s), evaporator(s) and condenser(s).

'Add-on' Controllers

These are designed to be used in conjunction with a specific system management unit or package, and enable the operation of additional refrigeration compressors, evaporators and condensers to be optimised

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Refrigeration System Controls equipment must meet all the relevant requirements listed below.

General Eligibility Criteria

(applicable to all Refrigeration System Controls equipment)

No.	Condition
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).
2.	Must comply with the relevant requirements, as set out in Tables 1 to 3 below, for products that directly control by means of an analogue or digital signal connection: a) Evaporators (see Table 1) b) Condensers (see Table 2) c) Compressors (see Table 3)
3.	Products must incorporate a microprocessor-based controller that is pre- programmed to automatically control the rate of flow of refrigerant through, and/or operating temperature of, at least one of the following types of refrigeration equipment: a) Evaporators b) Condensers c) Compressors

System Management Package — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
4.	Must automatically adjust the system operating set points in a manner that minimises the refrigeration system's energy consumption under different operating loads, weather conditions and surrounding air temperatures
5.	Is pre-programmed to undertake one or more of the following: i. Monitor temperatures and/or pressures around the refrigeration system, and automatically initiate defrost cycles, or inhibit (or delay) scheduled defrost cycles, within individual parts of the refrigeration system, as required, to optimise the overall performance of the refrigeration system ii. Monitor refrigeration system energy input (kWh) and generate a visual or audible alarm when system power consumption exceeds a pre-defined limit, or when system efficiency degradation is preventing automatic adjustment iii. Automatically, in accordance with a pre-defined weekly time schedule, turn off, or turn down, ancillary power loads around the refrigeration system (such as lighting in display cabinets, trim heaters or fans), or activate night blinds, in order to reduce system energy consumption
6.	Must provide facilities that enable system managers to define the default set points, and alarm limits, for each item of refrigeration equipment controlled.

'Add-on' Controller — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
7.	Must automatically accept instructions from the system manager to change its operating set points or alarm limits, or to initiate or inhibit a defrost cycle.
8.	Must automatically transmit data on operating temperatures, pressures, or flow rates to the system manager at intervals not exceeding 10 minutes.

Table 1: Control of evaporators

All products that directly control evaporators must:

No.	Requirement
a.	Be designed to directly measure evaporator pressure or temperature by means of a sensor, and automatically adjust the flow of refrigerant through the evaporator to maintain the refrigerated space within pre-defined operating limits.
b.	Automatically terminate its defrost cycle when: • The temperature of the evaporator or refrigerated space exceeds a preset value. • A maximum defrost time consistent with sensor failure has been exceeded.
c.	Provide facilities that enable system managers to define separate temperature set points and alarm limits for each evaporator being controlled.
d.	Provide facilities that enable system managers to take the equipment out of service for cleaning or maintenance.
e.	Generate an alarm signal when the temperature of the refrigerated space is in danger of straying outside, or has strayed outside, its pre-defined safe operating limits.

Table 2: Control of condensers

All products that directly control condensers must:

No.	Requirement
a.	Be designed to directly measure condenser pressure or temperature by means of a sensor, and automatically adjust the airflow across the condenser(s) in a manner that maintains condensation at the rate required to maintain the thermal balance of the refrigeration system under different operating loads and weather conditions.
b.	Allow the compressor discharge (head) pressure to 'float' with ambient temperature down to the minimum safe level for the particular refrigeration system for maximum system efficiency.
c.	Provide facilities that enable system managers to define separate temperature set points and alarm limits for each condenser being controlled.
d.	Generate an alarm signal when the condensing pressure or temperature is in danger of straying outside, or has strayed outside, the predefined limits for safety or efficiency.

Table 3: Control of compressors

All products that directly control compressors must:

No.	Requirement
a.	Be able to control the operation of at least two refrigeration compressors.
b.	Incorporate automatic control algorithms that monitor rate of change in system suction pressure or refrigerant temperature to prevent compressors from unnecessarily being controlled to load or unload in response to small fluctuations in cooling demand.

Where:

- Automatic control may be implemented either directly by means of an analogue or digital signal connection, or indirectly by means of another control device or network.
- A mechanism is defined as "any sequence of pre-defined actions that performs a given function, where an action can be defined in hardware and/or software".
- An algorithm is defined as "a mechanism that is defined in software".

- The product's control strategy is the combination of automatic control functions, mechanisms and facilities specified for the particular equipment controlled. In this context, products may be pre-programmed in one of the following ways:
 - a) One or more fixed control strategies that are designed to control a specific set of equipment that can be selected during commissioning
 - b) One or more flexible control strategies that can be configured to control different equipment, as part of a clearly defined commissioning procedure

Category: Electro-Mechanical Systems

Technology: Injection Blow Moulding Machines

An Injection Blow Moulding Machine (IBMM) is a machine for the injection blow moulding of thermoplastics that:

- Melts and plasticizes the thermoplastic raw material
- Closes the mould and clamps closed the pre-form mould
- Injects the plasticized raw material into the pre-form mould and holds it under pressure until it has solidified
- Opens the pre-form mould and rotates or otherwise moves the pre-form to the blowing station
- Closes the blowing station mould over the pre-form
- Injects high-pressure compressed air into the hot pre-form to expand the preform to the final shape
- Ejects the completed product

IBMMs have traditionally been powered by hydraulic systems using a hydraulic pump and hydraulic motors. The newer generation of IBMMs use electrical servo-motors to provide variable power to the machine; these are called 'all-electric machines'.

Eligibility Criteria Overview

To be included on the ACA Specified List, an Injection Blow Moulding Machine (IBMM) must meet all the relevant requirements listed below.

No.	Condition
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
2	The IBMM drive system is to be primarily servo-motor-controlled. Limited hydraulic motors are allowed for hybrid systems but hydraulic motor energy use is to be less than 40% of total IBMM energy use.

No.	Condition
3	The average power consumption of the IBMM shall be less than: $kW = 0.3 \text{ x}$ (Production Rate) + 22 where the 'Production Rate' is measured in kg/hour of machine throughput.
4	Appropriate operating & maintenance manuals must be available to the end- user in order to maximise the achievement of any potential energy-efficiency gains.

Notes:

- 1. Some manufacturers will use a 'hybrid' technology combining both electric and hydraulic operation for specific applications. This allows processors to benefit from the advantages of both electric and hydraulic operations. In these cases, the hydraulic element of the power consumption (kW) shall be less than 40% of the total power consumption of the IBMM.
- 2. In some existing tooling, hydraulic control of mould movements is needed and is currently powered from the IBMM's hydraulic system. In these cases, a hydraulic power pack may be required to allow existing tooling to be used on all-electric machines. The power consumption use of any such hydraulic power pack is not included in the power consumption assessment of the machine.
- 3. Where the process is injection stretch blow moulding (ISBM), the same conditions for ACA eligibility shall apply.

Part 35

Category: Electro-Mechanical Systems

Technology: Injection Moulding Machines

An Injection Moulding Machine (IMM) is a machine for the injection moulding of thermoplastics that:

- Melts and plasticizes the thermoplastic raw material
- Closes the mould and clamps the mould closed
- Injects the plasticized raw material into the mould and holds it under pressure until it has solidified
- Opens the mould and ejects the completed product

IMMs have traditionally been powered by hydraulic systems using a hydraulic pump and hydraulic motors. The newer generation of IMMs uses electrical servo-motors to provide variable power to the machine; these are called 'all-electric machines'.

Eligibility Criteria Overview

To be included on the ACA Specified List, an Injection Moulding Machine (IMM) must meet all the relevant requirements listed below.

No.	Condition
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
2	The IMM drive system is to be primarily servo-motor-controlled. Limited hydraulic motors are allowed for hybrid systems but hydraulic motor energy use is to be less than 40% of total IMM energy use.
3	The average power consumption of the IMM shall be less than: $kW = 0.6 \text{ x}$ (Production Rate) + 4 where the 'Production Rate' is measured in kg/hour of machine throughput (product + any sprues and runners).
4	Appropriate operating and maintenance manuals must be available to the end- user in order to maximise the achievement of any potential energy-efficiency gains.

Notes:

- 1. Some manufacturers use a 'hybrid' technology combining both electric and hydraulic operation for specific applications. This allows processors to benefit from the advantages of both electric and hydraulic operations. In these cases, the hydraulic element of the power consumption (kW) shall be less than 40% of the total power consumption of the IMM.
- 2. In some existing tooling, hydraulic control of mould movements is needed and is currently powered from the IMM's hydraulic system. In these cases a hydraulic power pack may be required to allow existing tooling to be used on all-electric machines. The power consumption use of any such hydraulic power pack is not included in the power consumption assessment of the machine.

Part 36

Category: Electro-Mechanical Systems

Technology: Extrusion Blow Moulding Machines

An Extrusion Blow Moulding Machine (EBMM) is a machine for the extrusion blow moulding of thermoplastics that:

- Melts and plasticizes the thermoplastic raw material
- Extrudes a hollow parison from the extrusion head
- Closes the mould around the parison
- Injects high-pressure compressed air into the parison, to expand it to the final shape
- Trims the 'tops and tails' from the product
- Opens the mould
- Removes the completed product from the mould to the packing station
- Recycles the 'tops and tails' back into the process via conveyors, regranulators and blowers

EBMMs have traditionally been powered by extruder motors with hydraulic systems for most of the machine movements. The newer generation of EBMMs uses electrical servo-motors to provide variable power for the machine movements. These are called 'all-electric machines'.

Eligibility Criteria Overview

To be included on the ACA Specified List, an Extrusion Blow Moulding Machine (EBMM) must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

No.	Condition
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
2	The EBMM machine movements are to be primarily servo-motor-controlled. Limited hydraulic motors are allowed for hybrid systems, but hydraulic motor energy use is to be less than 25% of total EBMM energy use.
3	The average power consumption of the entire EBMM shall be less than: $kW = 0.22 \ x$ (Production Rate) + 18 where the 'Production Rate' is measured in kg/hour of total machine throughput (product + any tops and tails).
4	Appropriate operating and maintenance manuals must be available to the enduser in order to maximise the achievement of potential energy efficiency gains.

Notes:

- 1. Some manufacturers will use a 'hybrid' technology combining both electric and hydraulic operation for specific machine movements. This allows processors to benefit from the advantages of both electric and hydraulic operations. In these cases, the hydraulic element of the power consumption (kW) shall be less than 25% of the total power consumption of the EBMM.
- 2. In some existing tooling, hydraulic control of mould movements may be needed, and s currently powered from the EBMM's hydraulic system. In these cases, a hydraulic power pack may be required to allow existing tooling to be used on all-electric machines. The power consumption use of any such hydraulic power pack is not included in the power consumption assessment of the machine.

Part 37

Category: Electro-Mechanical Systems

Technology: Process Energy Management Systems

Process Energy Management Systems (PEMS) are hardware, firmware or software control systems designed to manage the energy consumption of energy-using equipment, with the sole aim of optimising energy efficiency within the process and meeting specified energy-efficiency standards.

Eligibility Criteria Overview

To be included on the ACA Specified List, a PEMS must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

No.	Condition
1	Inputs to the system must include energy use and process/system conditions.
2	The system must provide a user interface that alerts the user when the system is not performing to its specified conditions.
3	The system must control the operation of more than one piece of standalone machinery, and the equipment must be able to operate without the PEMS (i.e. the system is not an integral part of the operating controls of a machine).
4	All controlled variables on the system must have upper and lower control limits and alert the user when these are outside of required bands, along with the energy impact expected.
5	The system shall have at least one key performance indicator that will be a good indicator of the energy efficiency of the operation of the process/equipment, with an ability to set both upper and lower bands of acceptance.
6	The system must allow the user to monitor and archive energy-related data, and have the capacity to generate standard interchange files that will allow other computer systems to use the data collected.
7	The device will have the functionality to cause controlled devices to be set to inactive mode after defined periods of inactivity.
8	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
9	Appropriate installation, operating and maintenance manuals, including an appropriate connections diagram, must be available for the end-user as part of the main contract of sale, along with any software supports required to communicate with external devices in order to maximise the achievement of any potential efficiency improvements when installed.

Part 38

Category: Electro-Mechanical Systems

Technology: Voltage Stabilisation

Voltage Stabilisation is defined as equipment designed to control the delivered output voltages within a specific acceptable range. It also provides for efficient use of electrical energy in electro-mechanical devices when the supply voltage variations fall outside of the specific acceptable range. Typical voltage stabilisation equipment includes voltage optimisers, voltage regulators and voltage stabilisers.

Eligibility Criteria Overview

To be included on the ACA Specified List, Voltage Stabilisation equipment must meet all the relevant requirements listed below.

No.	Condition
1	The device must control the output voltage within a 1% range of set point when the supply voltage falls between the levels of 207V and 243.8V single-phase, or associated 3-phase voltages if a 3-phase unit.
2	Where the unit is three-phase, the unit must be capable of providing an equal three-phase output (balanced) in cases where the input supply voltages are not equal.
3	Insertion losses of the unit must not exceed an overall average of 1% over the ranges of 20%, 40%, 60%, 80% and 95% rated output load. The average shall be calculated as being the weighted average of each of the individual insertion losses in % terms.
	The defined connection profile is that the connected load will be 20% rated load for 10% of the time, 40% rated load for 20% of the time, 60% rated load for 30% of the time, 80% rated load for 30% of the time, and 95% rated load for 10% of the time.
4	The device must have a nominal output power rating of greater than or equal to 10kVA and less than or equal to 2MVA.
5	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
6	Documentation must be supplied with the unit that provides clear indications to the purchaser of expected savings in sample installation situations, outlining (a) the initial supply voltage, (b) the final controlled voltage and (c) the type of equipment connected.
	This will also include situations where savings are minimal or zero for (a) the case where existing supply voltages lead to minimal savings, and also separately for (b) the case where the supply voltages are high but significant amounts of installed equipment do not readily lend themselves to energy savings.
	The documentation shall provide a clear indication to the end-user of the types of equipment that do NOT typically provide savings when connected to these devices.
7	Appropriate installation, operating and maintenance manuals, including a wiring diagram, must be available for the end-user as part of the main contract of sale, along with any specific software or commissioning tools required in order to maximise the achievement of any potential efficiency improvements when installed.

Category: Electro-Mechanical Systems

Technology: Electrical Actuators

An electrical actuator is a device that receives an electrical signal in the form of a controlled voltage, current or digital control signal from a device controller, and causes a mechanical part to move in a linear or rotational manner by a defined amount.

Actuators are considered to include multi-turn, partial turn or linear types which control valves, air dampers or similar devices.

Eligibility Criteria Overview

To be included on the ACA specified list, an electrical actuator must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

No.	Condition
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
2	Actuator shall have a nominal input power rating of greater than or equal to 60W and less than or equal to 6kW.
3	Actuator electrical control signal shall cause the actuator to change state or position as desired, using electrical energy sources solely. Power supplies to provide the drive forces may be DC or single/ 3-phase AC only.
4	The actuator shall remain in its set position when external power is removed from the device and shall not consume energy from its main drive circuitry when in a fixed position and stationary for more than 10 seconds.
5	Appropriate installation, operating and maintenance manuals, including wiring diagram, must be available for the end-user as part of the main contract of sale, along with any specific actuator commissioning tools required in order to optimise potential efficiency improvements when installed.

Part 40

Category: Catering and Hospitality Equipment

Technology: Commercial Combination Ovens

Commercial electric and gas combination ovens are used in commercial kitchens and catering. They are categorised as electric (both full and half-size) and gas convection ovens (full-size only) where cookery within one unit is possible by using a combination of convection heat and steam.

Commercial Combination Ovens are considered to include the following:

Electric-Powered Combi Ovens

Electric-powered combi ovens are defined as half-size (capacity for a min. five pans⁵) and full-size (capacity for a min. 10 pans).

Gas Convection Ovens

Gas convection ovens are defined as full-size only (capacity for a min. ten pans).

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Commercial Combination Oven must meet all the relevant requirements listed below.

⁵Pan size as per Gastronorm

General Eligibility Criteria

(applicable to all Commercial Combination Ovens)

No.	Condition
1	All equipment and/or components must be CE marked as required by the specific EU directive(s).
2	Must comply with the Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) ⁶ and Waste Electrical and Electronic Equipment (WEEE) ⁷ regulations.
3	Must have the option to be supplied with an integrated condenser hood to regulate climate control in the location where it will operate or a heat exchanger to transfer heat from the steam exhaust to the incoming water.

Electric-Powered Combi Ovens — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
4	Must achieve a minimum cooking efficiency of 70% (both half and full-size units).
5	Must not exceed 1.6 kW (for full-size ovens) or 1.0 kW (for half-size ovens) in electrical energy consumption while operating at a stabilised temperature set point (standby rate)

Gas Convection Ovens — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
6	Must achieve a minimum cooking efficiency of 44%
7	Must not exceed 3.8 kWh gas consumption while operating at a stabilised temperature set point (standby rate)

Part 41

Category: Catering & Hospitality Equipment

Technology: Commercial Dishwashers

Commercial Dishwashers are defined as equipment constructed in stainless steel for use in commercial kitchens and to clean and sanitise dishes, plates, utensils, glasses, trays, cups, and bowls.

Commercial Dishwasher equipment is considered to include the following:

⁶S.I. No. 341/2005 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 376/2008 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment)(Amendment) Regulations 2008.

⁷S.I. No. 340/2005 — Waste Management (Waste Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 375/2008 — Waste Management (Waste Electrical and Electronic Equipment) (Amendment) Regulations 2008.

Undercounter Dishwashers

Undercounter dishwashers are loaded and unloaded by opening a drop-down door to the front of the machine and are typically less than 1000mm high. Maximum output per hour is 30 racks.

Stationary Single Tank Door Dishwashers

These include hood-type dishwashers and potwashers. They work by passing the racks through the stationary wash chamber. Maximum output per hour is 45 racks.

Single and Multiple Tank Rack Conveyor Dishwashers

Rack-type dishwashers feed baskets through the machine using a moving rack. Output ranges from 100 to 190 racks per hour.

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Commercial Dishwasher must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

General Eligibility Criteria

(applicable to all Commercial Dishwashers)

No.	Condition
1	All equipment and/or components must be CE marked as required by the specific EU directive(s).
2	Must comply with the Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) ⁸ and Waste Electrical and Electronic Equipment (WEEE) ⁹ regulations.
3	Must have a maximum water consumption as per Table 1 below
4	Must have a maximum idle energy rate as per Table 1 below (measured with door closed, representative of the energy used by the tank heater only)

Single and Multiple Tank Rack Conveyor Dishwasher — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition
5	Must incorporate a heat-recovery system to preheat rinse water to a minimum temperature of 40° C

⁸S.I. No. 341/2005 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 376/2008 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment)(Amendment) Regulations 2008.

⁹S.I. No. 340/2005 — Waste Management (Waste Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 375/2008 — Waste Management (Waste Electrical and Electronic Equipment) (Amendment) Regulations 2008.

Table 1: Minimum Dishwasher Water Consumption and Idle Energy Rates

Dishwasher Type	Water Consumption (litres pre rack)	Idle Energy Rate (kW per hour)
Under-counter	€3	€0.9
Stationary Single Tank Door	€3	€1
Single and Multiple Tank Rack Conveyor	€2.9	€2.6

Part 42

Category: Catering & Hospitality Equipment

Technology: Commercial Water Boilers

Commercial Water Boilers are defined as electrically powered equipment that delivers hot water (>90C) for use in the catering, restaurant and vending sectors. These units are automatically fed from, and thus continuously coupled to, the main potable water supply.

Eligibility Criteria Overview

To be included on the ACA Specified List, a Commercial Water Boiler must meet all the relevant requirements listed below.

No.	Condition			
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).			
2	Must have a storage capacity of greater than or equal to 5 litres and less than or equal to 25 litres			
3	Efficiency during a normal operating period must be >95%			
4	Standby energy loss <100W Standby energy loss is calculated as the energy consumption of a filled water heater, after steady-state conditions have been reached when connected to electrical supply, when no water is drawn for 24 hours			
5	The amount of condensate lost to the atmosphere (out of system) over a 24hr period (8hrs operational/16hrs standby) should be < 50mL			

Category: Catering and Hospitality Equipment

Technology: Commercial Laundry Driers

Commercial laundry driers are defined as products that automatically use mechanical motion and a heat source to dry laundry such as clothes, towels, sheets, etc.

Eligibility Criteria Overview

To be included on the ACA Specified List, a Commercial Laundry Drier must meet all the relevant requirements listed below.

No.	Condition				
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).				
2	The load capacity of the drier must be a minimum of 14 kg.				
3	Must comply with the Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) ¹⁰ and Waste Electrical and Electronic Equipment (WEEE) ¹¹ regulations.				
4	The performance of the laundry drier must be as per the minimum values set out in Table 1 below				
5	The drier must have a moisture sensing element that will automatically turn off the machine once the load is dry.				

Table 1. Minimum drier energy performance values

Drier Type	Energy Efficiency (kWh per kg dryer load)
Air vented drier	≤ 0.51
Condensing drier	≤ 0.55

¹⁰S.I. No. 341/2005 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 376/2008 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment)(Amendment) Regulations 2008.

¹¹S.I. No. 340/2005 — Waste Management (Waste Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 375/2008 — Waste Management (Waste Electrical and Electronic Equipment) (Amendment) Regulations 2008.

Category: Catering & Hospitality Equipment

Technology: Commercial Laundry Washers

Commercial laundry washers are defined as products that automatically use mechanical motion to clean laundry such as clothes, towels, sheets, etc, and use water as the primary washing solution.

Eligibility Criteria Overview

To be included on the ACA Specified List, a Commercial Laundry Washer must meet all the relevant requirements listed below.

No.	Condition			
1	All equipment and/or components must be CE-marked as required by the specific EU directive(s).			
2	The load capacity of the washing machine must be a minimum of 10 kg			
3	Must comply with the Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) ¹² and Waste Electrical and Electronic Equipment (WEEE) ¹³ regulations.			
4	The performance of the washing machine must be as per the minimum values set out in Table 1 below			

Table 1: Minimum laundry washer energy performance values

Performance Type	Minimum Value for A Rating		
Energy Consumption	≤ 0.15 kWh per kg wash load		
Washing Efficiency Index	≥ 1.03		

¹²S.I. No. 341/2005 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 376/2008 — Waste Management (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment)(Amendment) Regulations 2008.

¹³S.I. No. 340/2005 — Waste Management (Waste Electrical and Electronic Equipment) Regulations 2005 as amended by S.I. No. 375/2008 — Waste Management (Waste Electrical and Electronic Equipment) (Amendment) Regulations 2008.

Category: Motors and Drives

Technology: Permanent Magnet Motors

A Permanent Magnet Motor (PMM) is electric synchronous motor with a 3-phase wound stator, and a rotor that incorporates permanent magnets. When the wound stator is energised by a 3-phase alternating current, it creates a rotating magnetic field that causes the rotor to rotate synchronously with it, i.e. the rotor and the rotating electric field in the stator move at the same speed.

Eligibility Criteria Overview

To be included on the ACA Specified List, a permanent magnet motor must meet all the relevant requirements listed below.

No.	Condition				
1	Must be a sinusoidally commutated, 3-phase permanent magnet synchronous motor with a rated shaft output of at least 0.75 kW				
2	The motor must meet the efficiency requirements listed in Table 1				
3	All equipment and/or components must be CE-marked as required by the specific EU directive(s).				
4	Appropriate operating and maintenance manuals must be available to the end user in order to maximise the achievement of any potential energy-efficiency gains				

Table 1: Minimum Efficiency Criteria for Permanent Magnet Motors at 100% of max. continuous speed rating

Power Rating	Maximum continuous speed rating					
(kW)	Up to 325 rpm	326 rpm to 749 rpm	751 rpm to 1,000 rpm	1,001 rpm to 1,500 rpm	1,501 rpm to 3,000 rpm	Over 3,000 rpm
0.75	71.7	75.3	78.9	82.5	80.7	78.9
1.1	74.8	77.9	81.0	84.1	82.7	81.3
1.5	76.9	79.7	82.5	85.3	84.2	83.1
2.2	79.5	81.9	84.3	86.7	85.9	85.1
3.0	81.4	83.5	85.6	87.7	87.1	86.5
4.0	83.2	85.0	86.8	88.6	88.1	87.6
5.5	84.8	86.4	88.0	89.6	89.2	88.8
7.5	86.5	87.8	89.1	90.4	90.1	89.8
11.0	88.1	89.2	90.3	91.4	91.2	91.0
15.0	89.4	90.3	91.2	92.1	91.9	91.7
18.5	89.9	90.8	91.7	92.6	92.4	92.2
22.0	90.6	91.4	92.2	93.0	92.7	92.4
30.0	91.5	92.2	92.9	93.6	93.3	93.0
37.0	92.1	92.7	93.3	93.9	93.7	93.5
45.0	92.7	93.2	93.7	94.2	94.0	93.8
55.0	93.1	93.6	94.1	94.6	94.3	94.0
75.0	93.8	94.2	94.6	95.0	94.7	94.4
90.0	94.3	94.6	94.9	95.2	95.0	94.8
110.0	94.5	94.8	95.1	95.4	95.2	95.0
132.0	95.0	95.2	95.4	95.6	95.4	95.2
160.0	95.2	95.4	95.6	95.8	95.6	95.4
200.0	95.4	95.6	95.8	96.0	95.8	95.6
>200.0	95.4	95.6	95.8	96.0	95.8	95.6
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Notes:

Where a particular motor size is not listed, the required minimum efficiency level for the next size up must be met.

Category: Information and Communications Technology (ICT)

Technology: Blade Servers

A blade server is an optimised server computer of modular design for use in a shared blade chassis which can house multiple blade servers resulting in reduced space and energy usage. It will typically contain processors, memory, integrated network controllers, an optional fibre channel host bus adaptor (HBA) and other input/output (IO) ports. Blade servers can also optionally contain internal storage disks and cooling systems.

Eligibility Criteria Overview

To be included on the ACA Specified List, a Blade Server must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

No.	Condition			
1	Must be marketed and sold as an enterprise Blade Server			
2	Designed for, and listed as, supporting Blade Server operating systems and/or hypervisors, and targeted to run user-installed enterprise applications			
3	Be capable of remote power-down			
4	Must meet the relevant minimum performance to power ratios listed in Table 1, or scientifically equivalent measure			
5	Must be supplied with a software management system that renders the server virtualisation capable			

Table 1: Minimum server performance to power ratios

Server application	Minimum ratio*	
Performance at low utilisation of less than or equal to 30%	> 900	
Performance at moderate utilisation of greater than 30%, but less than 70%	> 1900	
Performance at high utilisation of greater than or equal to 70%	> 2500	

*Performance to Power Ratio

The ratio is based on the Standard Performance Evaluation Corporation (SPEC) industry standard benchmark performance test, SPECpower—ssj2008 V1.10. Under this test the energy use of a blade server is tracked (plug power) while the server performs a defined sequence of operational tasks.

The metric required is calculated using the sum of outputs (throughput per Watt of power) and power consumed at 10% utilisation intervals, as shown below:

- Performance to power ratio measured at low utilisation = Σ ssj ops(0%+10%+20%+30%) / Σ power (0%+10%+20%+30%)
- Performance to power ratio measured at moderate utilisation = Σ ssj ops(40%+50%+60%) / Σ power (40%+50%+60%)
- Performance to power ratio measured at high utilisation = Σ ssj ops(70%+80%+90%+100%) / Σ power (70%+80%+90%+100%)

where:

- ssj ops = Workload at the specified utilisation level
- Power = Energy consumed in watts at specified utilisation level

Part 47

Category: Information and Communications Technology (ICT)

Technology: ICT Optimisation Solutions

ICT Optimisation Solutions are defined as systems and/or software that improve the power efficiency of enterprise ICT hardware systems and/or of ICT-related infrastructure resources.

ICT Optimisation Solutions are considered to include the following:

ICT power efficiency systems

ICT power efficiency systems are designed to automatically and continuously identify under-use of installed ICT hardware (e.g. servers), and facilitate their optimisation, with the aim of reducing overall power consumption.

Virtualisation solutions

Virtualisation solutions are software platforms that allow multiple OS applications to run simultaneously on one physical machine, with the aim of reducing the number of physical machines required.

Infrastructure power efficiency systems

Infrastructure power efficiency systems are designed to visually map, automate and optimise ICT-related infrastructure resources such as cooling, power and space, with the aim of reducing overall power consumption.

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific ICT Optimisation Solution</u> must meet all the relevant requirements as listed below.

ICT Power Efficiency Systems — Specific Eligibility Criteria

No.	Condition
1	Must have the capability of continuously collecting utilisation data from IT equipment using RS232, Ethernet or wireless connectivity
2	Must have the capability of identifying power-saving opportunities and outputting commands to a power management system
3	Must have the capability of presenting utilisation data in a graphical format, and calculating and presenting performance metrics

Virtualisation Solutions — Specific Eligibility Criteria

No.	Condition
4	Must be capable of virtualising from a physical server to a virtual system. ¹⁴ The host physical server must be capable of accommodating a minimum of 20 virtual servers.
5	Physical servers, where included in the solution, must meet the separate ACA Enterprise Server eligibility criteria
6	Must be capable of powering down virtual machines and provisioning dynamically

Infrastructure Power Efficiency Systems — Specific Eligibility Criteria

No.	Condition
7	Must offer visual modelling of the physical, electrical and mechanical infrastructure within the data centre
8	Must offer a capacity management and infrastructure management capability
9	Must offer a data-centre efficiency reporting capability

Part 48

Category: Information and Communications Technology (ICT)

Technology: Enterprise Communication Equipment

Enterprise Communication Equipment is defined as equipment which enables a network of connected computers to communicate with each other. This equipment is made up of network devices which facilitate the intercommunication and resource sharing between the computers.

Enterprise Communication Equipment is considered to include the following:

Network Routers

A network router is a hardware device that interconnects wired or wireless networks. These may be subdivided into Core Routers, Carrier Edge/Ethernet Service Routers, and Multipurpose Routers.

Network Switches

A network switch is a hardware device that interconnects computers, forming a local area network (LAN).

¹⁴Physical to Virtual is often termed P2V.

Network Firewalls

A network firewall is a hardware device that protects a computer network from external unauthorised access.

Optical Transmission Equipment

Optical transmission equipment is communication hardware used for transmitting data over medium to long distances through a fibre-optic network.

Eligibility Criteria Overview

To be included on the ACA Specified List, the <u>specific</u> Enterprise Communication Equipment must meet all the relevant requirements listed below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

General Eligibility Criteria

(applicable to all Enterprise Communication equipment)

No.	Condition
1	Internal power supplies must achieve an 80 PLUS gold standard ¹⁵ or scientific equivalent
2	External power supplies must be Energy Star-compliant ¹⁶ or scientific equivalent

Network Router — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition		
3	Must achieve an ECR– VL^{17} energy consumption rating with variable load of less than or equal to 10 W/ Gbps		
4	Must have variable-load energy-management capabilities		

Network Switch — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition		
5	Must achieve an ECR-VL energy consumption rating with variable load of less than or equal to the values as set out in Table 1.		
6	Must have variable-load energy-management capabilities		

¹⁵The 80 PLUS performance specification requires multi-output power supplies in computers and servers to be 80% or greater energy-efficient at 20%, 50% and 100% of rated load with a true power factor of 0.9 or greater.

¹⁶The Energy Star compliance certification for external power supply is issued by the United Stated Environmental Protection Agency (EPA) in recognition of a product's compliance with defined efficiency levels as set out in the relevant EPA specification for external power supplies. ¹⁷As per ECR Specification V2.1.1

Network Firewall — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition		
7	Must achieve an ECR energy consumption rating of less than or equal to 3W/Gbps		
8	Must have variable-load energy-management capabilities		

Optical Transmission Equipment — Specific Eligibility Criteria

(to be met in addition to the general eligibility criteria)

No.	Condition		
9	Must achieve an ECR energy consumption rating with variable load of less than or equal to 3W/Gbps		
10	Must have variable-load energy-management capabilities		

Table 1: Network Switches — Maximum energy consumption values

Switch Type	Energy Consumption Rating (W/Gbps)
Stackable fixed port switches	€3
6 port modular chassis switches	€7.5
6-12 port modular chassis switches	≤11

Notes:

W = Watts

Gbps = Giga bits per second

ECR = energy consumption rating (peak efficiency metric, W/Gbps)

= Ef/Tf (expressed in Watts per Gbps)

Where:

Ef = energy consumption (Watts) measured during the running test

Tf = maximum throughput (Gbps) achieved in the measurement

ECR-VL = energy efficiency metric over a variable-load cycle (W/Gbps)

$$= \frac{(\alpha * \mathbf{E}100 + \beta * \mathbf{E}50 + \gamma * \mathbf{E}30 + \delta * \mathbf{E}10 + \epsilon * \mathbf{E}\mathbf{i})}{(\alpha * \mathbf{T}f + \beta * \mathbf{T}50 + \gamma * \mathbf{T}30 + \delta * \mathbf{T}10)}$$

Where.

 α , β , γ , δ , ϵ are weight coefficients selected such as $(\alpha + \beta + \gamma + \delta + \epsilon) = 1$

For test purposes the following values are used:

 $\alpha = 0.1$

 $\beta = 0.5$

 $\gamma = 0.25$

 $\delta = 0.05$ $\epsilon = 0.1$

Tf = maximum throughput (Gbps) achieved in the measurement cycle

- T50 = Tf * 0.5
- T30 = Tf * 0.3
- -T10 = Tf * 0.1

E100 = energy consumption under highest load accepted by System Under Test (SUT) (watts)

E50 = energy consumption under half load (watts)

E30 = energy consumption under 30% load (watts)

E10 = energy consumption under 10% load (watts)

Ei = energy consumption under 0% load (watts)

Part 49

Category: Heating and Electricity Provision

Technology: Biomass Boilers

Biomass Boilers provide an efficient, automatic method of generating hot water, steam or other heat-transporting fluids, using carbon-neutral biomass as the fuel source. The biomass boiler is considered as incorporating ancillary equipment such as control systems, fuel-feed system, fans and grit arrestors.

Eligibility criteria

To be included on the ACA Specified List, a biomass boiler must meet all the requirements set out below.

Note: Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.

No.	Condition			
1.	All equipment and/or components must be CE-marked as required by the specific EU directive(s).			
2.	Must be a minimum size of 50kW			
3.	Appropriate operating and maintenance manuals must be available for the end- user as part of the main contract of sale in order to maximise the achievement of potential efficiency improvements.			
4.	Must be equipped for automatic operation without the need for permanent supervision. This shall include: • Automatic start-up and shut-down • Ability to operate in slumber mode and to restart when the heating load demands • Automatic fuel loading commensurate with the heat/steam demand • Automatic ash removal • Automatic control of the burning rate commensurate with the heat demand			
5.	Must incorporate a system to automatically prevent burn-back through the fuel-feed system.			

No.	Condition
6.	Must incorporate a fault-monitoring system which should be capable of communicating remotely a fault. The parameters to be monitored shall include: • Fuel shortage or blockage • Boiler shut-down • Boiler hot water/thermal fluid outlet temperature or steam pressure • Flue gas temperature
7.	To facilitate automatic tube cleaning, the boiler must incorporate a mechanical or pneumatic system for heat exchanger cleaning on the gas side.
8.	Must incorporate an automatic system to 'trim' the combustion air commensurate with the oxygen content of the flue gases so as to minimise 'stack' losses caused by excess air.
9.	Must incorporate a system to prevent over-heating of the water within the boiler in the event of a mains electricity failure.
10.	Efficiency and certified dust-emission levels, both measured in accordance with a recognised European standard, must achieve the minimum and maximum limits listed in Table 1 when burning wood pellets or wood chips.

Table 1. Thermal efficiency and emissions

Boiler rating	Thermal	Dust emission ²	
	Chips	Pellets	
50 —150 kW	≥ 85%	90%	≤ 150
>150 — 500 kW	≥ 86%	91%	≤ 130
> 500 kW	≥ 87%	92%	≤ 120

- 1 The efficiencies shall be measured on a 'net' calorific value basis.
- 2 On an mg/Nm3 13 Vol.-%O2 basis".
- 8. Part 2 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSD32650	3AUA0000039625	ACS310-03E- 01A3-4	Variable Speed Drive	ABB Ltd
VSD32651	3AUA0000039626	ACS310-03E- 02A1-4	Variable Speed Drive	ABB Ltd
VSD32652	3AUA0000039627	ACS310-03E- 02A6-4	Variable Speed Drive	ABB Ltd
VSD32653	3AUA0000039628	ACS310-03E- 03A6-4	Variable Speed Drive	ABB Ltd
VSD32654	3AUA0000039629	ACS310-03E- 04A5-4	Variable Speed Drive	ABB Ltd
VSD32655	3AUA0000039630	ACS310-03E- 06A2-4	Variable Speed Drive	ABB Ltd
VSD32656	3AUA0000039631	ACS310-03E- 08A0-4	Variable Speed Drive	ABB Ltd

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSD32657	3AUA0000039632	ACS310-03E- 09A7-4	Variable Speed Drive	ABB Ltd
VSD32658	3AUA0000039633	ACS310-03E- 13A8-4	Variable Speed Drive	ABB Ltd
VSD32659	3AUA0000039634	ACS310-03E- 17A2-4	Variable Speed Drive	ABB Ltd
VSD32660	3AUA0000039635	ACS310-03E- 25A4-4	Variable Speed Drive	ABB Ltd
VSD32661	3AUA0000039636	ACS310-03E- 34A1-4	Variable Speed Drive	ABB Ltd
VSD32662	3AUA0000039637	ACS310-03E- 41A8-4	Variable Speed Drive	ABB Ltd
VSD32663	3AUA00000039638	ACS310-03E- 48A4-4	Variable Speed Drive	ABB Ltd
VSD32664	3AUA0000058182	ACS355-03E- 01A2-4	Variable Speed Drive	ABB Ltd
VSD32665	3AUA0000058183	ACS355-03E- 01A9-4	Variable Speed Drive	ABB Ltd
VSD32666	3AUA0000058184	ACS355-03E- 02A4-4	Variable Speed Drive	ABB Ltd
VSD32667	3AUA0000058185	ACS355-03E- 03A3-4	Variable Speed Drive	ABB Ltd
VSD32668	3AUA0000058186	ACS355-03E- 04A1-4	Variable Speed Drive	ABB Ltd
VSD32669	3AUA0000058187	ACS355-03E- 05A6-4	Variable Speed Drive	ABB Ltd
VSD32670	3AUA0000058188	ACS355-03E- 07A3-4	Variable Speed Drive	ABB Ltd
VSD32671	3AUA0000058189	ACS355-03E- 08A8-4	Variable Speed Drive	ABB Ltd
VSD32672	3AUA0000058190	ACS355-03E- 12A5-4	Variable Speed Drive	ABB Ltd
VSD32673	3AUA0000058191	ACS355-03E- 15A6-4	Variable Speed Drive	ABB Ltd
VSD32674	3AUA0000058192	ACS355-03E- 23A1-4	Variable Speed Drive	ABB Ltd
VSD32675	3AUA0000058193	ACS355-03E- 31A0-4	Variable Speed Drive	ABB Ltd
VSD32676	3AUA0000058194	ACS355-03E- 38A0-4	Variable Speed Drive	ABB Ltd
VSD32677	3AUA0000058195	ACS355-03E- 44A0-4	Variable Speed Drive	ABB Ltd

9. Part 3 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG33282	IND 354	Excel Industry 354	3x54W T5 Industrial Luminaire	Excel Lighting
LIG33283	IND 454	Excel Industry 454	4X54W T5 Industrial Luminaire	Excel Lighting
LIG33284	IND 349	Excel Industry 349	3x49W T5 Industrial Luminaire	Excel Lighting
LIG33285	IND 449	Excel Industry 449	4x49W T5 Industrial Luminaire	Excel Lighting
LIG33286	IND 380	Excel Industry 380	3x80W T5 Industrial Luminaire	Excel Lighting
LIG33287	IND 480	Excel Industry 480	4x80W T5 Industrial Luminaire	Excel Lighting
LIG31992	CLASSIC ASN PAR-V 414	CLASSIC ASN PAR-V 414	SURFACE 4 X 14W T5 LUMINAIRE	ACEC Distributors
LIG31993	DL VISION ECO 217	DL VISION ECO 217	2X17W PL-R ECO DOWNLIGHT	ACEC Distributors
LIG31994	FIVE 328-RBV 328	FIVE 328-RBV 328	RECESSED 3 X 28W T5 PAR LOUVRE	ACEC Distributors
LIG31995	PLAST 228PRISMA	PLAST 228PRISMA	SURFACE 2 x 28W T5 OPL FLATBACK	ACEC Distributors
LIG31996	PLAST 235PRISMA	PLAST 235PRISMA	SURFACE 2 x 28W T5 OPL FLATBACK	ACEC Distributors
LIG31997	PLAST 249PRISMA	PLAST 249PRISMA	SURFACE 2 x 28W T5 OPL FLATBACK	ACEC Distributors
LIG31998	PLAST 254PRISMA	PLAST 254PRISMA	SURFACE 2 x 28W T5 OPL FLATBACK	ACEC Distributors
LIG32134	ELC2	2ft Linear Converter	A T5 fluroescent tube adaptor to convert T8 & T12 fluorescent tube fittings	E-Matic
LIG32135	ELC4	4ft Linear Converter	A T5 fluroescent tube adaptor to convert T8 & T12 fluorescent tube fittings	E-Matic

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG32136	ELC5	5ft Linear Converter	A T5 fluroescent tube adaptor to convert T8 & T12 fluorescent tube fittings	E-Matic
LIG32137	ELC6	6ft Linear Converter	A T5 fluroescent tube adaptor to convert T8 & T12 fluorescent tube fittings	E-Matic
LIG32138	ELC8	8ft Linear Converter	A T5 fluroescent tube adaptor to convert T8 & T12 fluorescent tube fittings	E-Matic
LIG32139	ELCQ	2ft Quad Linear converter	A T5 fluroescent tube adaptor to convert T8 & T12 fluorescent tube fittings	E-Matic
LIG32166	T230	T230	2X24W RECESSED	Philips
LIG32167	MRS551	MRS551	35W CDM TRACK SPOT	Philips
LIG32179	ACDC1068/FX	EVO 100 Fixed	Recessed downlighter with fixed reflector	ACDC LED Ltd.
LIG32180	ACDC1068/AD	EVO 100 Adjustable	Recessed downlighter with adjustable reflector	ACDC LED Ltd.
LIG32181	ACDC1068/TR	EVO 90 Trimless	Recessed trimless downlighter for plaster ceilings	ACDC LED Ltd.
LIG29100	RBP436/2	Cleanline 236	Cleanroom luminaire IP54 with aluminium back reflectors	ACEC Distributors
LIG29103	Plast H 249 prisma	Plast H 249P	Linear Flat back luminaire with prismatic polycarbonate diffuser	ACEC Distributors
LIG29107	Plast P236 HF prisma	Plast P 236P	Linear Flat back luminaire with prismatic polycarbonate diffuser	ACEC Distributors
LIG29108	Plast P236 HF opal	Plast P 2360	Linear Flat back luminaire with opal polycarbonate diffuser	ACEC Distributors

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG29196	SR10-10	SunRAY10	Intelligent LED High Bay Light, 110W, automated & programmable power output increase/ decrease & on/off dimming & scheduling capabilities, light adjusting photocell & LED automatic temperature control	Low Energy Designs Limited
LIG29197	SR10-8	SunRAY8	Intelligent LED High Bay Light, 88W, automated & programmable power output increase/ decrease & on/off dimming & scheduling capabilities, light adjusting photocell & LED automatic temperature control	Low Energy Designs Limited
LIG29198	SR6-6	SunRAY6	Intelligent LED Modular Light, 66W, automated & programmable power output increase/ decrease & on/off dimming & scheduling capabilities, light adjusting photocell & LED automatic temperature control	Low Energy Designs Limited
LIG29199	SR6-4	SunRAY4	Intelligent LED Modular Light, 44W, automated & programmable power output increase/ decrease & on/off dimming & scheduling capabilities, light adjusting photocell & LED automatic temperature control	Low Energy Designs Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG29200	SR6-2	SunRAY2	Intelligent LED Modular Light, 22W, automated & programmable power output increase/ decrease & on/off dimming & scheduling capabilities, light adjusting photocell & LED automatic temperature control	Low Energy Designs Limited
LIG29201	SR6-1	SunRAY1	Intelligent LED Modular Light, 11W, automated & programmable power output increase/ decrease & on/off dimming & scheduling capabilities, light adjusting photocell & LED automatic temperature control	Low Energy Designs Limited
LIG31225	LUCI V01	LUCI	LED Under Canopy Illumination. LED Energy Saving	Bever Innovations B.V.
LIG31226	LIN454Z	LINER GY454W	Flourescent T5 Low bay luminaire with open area optics	Cooper Lighting & Safety Ltd.
LIG31227	LIN480Z	LINER GY480W	Flourescent T5 Low bay luminaire with open area optics	Cooper Lighting & Safety Ltd.
LIG31228	LIN654Z	LINER GY654W	Flourescent T5 Low bay luminaire with open area optics	Cooper Lighting & Safety Ltd.
LIG31229	LINR454Z	LINER GY454R	Flourescent T5 Low bay luminaire with racking aisle optics	Cooper Lighting & Safety Ltd.
LIG31230	LINR480Z	LINER GY480R	Flourescent T5 Low bay luminaire with racking aisle optics	Cooper Lighting & Safety Ltd.
LIG31231	LINR654Z	LINER GY654R	Flourescent T5 Low bay luminaire with racking aisle optics	Cooper Lighting & Safety Ltd.
LIG31232	MDI414Z	Modulay DI414	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31233	MDI224Z	Modulay DI224	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31234	MDI240Z	Modulay DI240	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31235	MDI155Z	Modulay DI155	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31236	MDI255Z	Modulay DI1255	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31237	WLT128ZX	Wavelite T5128	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31238	WLT228ZX	Wavelite T5228	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31239	WLT135ZX	Wavelite T5153	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31240	WLT235ZX	Wavelite T5235	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31241	WLT154ZX	Wavelite T5154	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31242	WLT149ZX	Wavelite T5149	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31243	WLT249ZX	Wavelite T5249	Surface mounted shallow profiled IP44 prismatic luminaire	Cooper Lighting & Safety Ltd.
LIG31244	SYWV128Z	Syntesis 128V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31245	SYWV228Z	Syntesis 228V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31246	SYWV135Z	Syntesis 135V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31247	SYWV235Z	Syntesis 235V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31248	SYWR128Z	Syntesis 128R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31249	SYWR228Z	Syntesis 228R	Extruded aluminium Supended T5 up/downlight luminaire withlow brightness louvre	Cooper Lighting & Safety Ltd.
LIG31250	SYWR135Z	Syntesis 135R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31251	SYWR235Z	Syntesis 235R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31252	SYWV154Z	Syntesis 154V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31253	SYWV254Z	Syntesis 254V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31254	SYWV149Z	Syntesis 149V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31255	SYWV249Z	Syntesis 249V	Extruded aluminium Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31256	SYWR154Z	Syntesis 154R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31257	SYWR254Z	Syntesis 254R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31258	SYWR149Z	Syntesis 149R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31259	SYWR249Z	Syntesis 249R	Extruded aluminium Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31260	LLWV128Z	Lasaline 128V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31261	LLWV228Z	Lazeline 228V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31262	LLWV135Z	Lazeline 135V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31263	LLWV235Z	Lazeline 235V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31264	LLWR128Z	Lazeline 128R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31265	LLWR228Z	Lazeline 228R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31266	LLWR135Z	Lazeline 135R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31267	LLWR235Z	Lazeline 235R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31268	LLWV154Z	Lazeline 154V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31269	LLWV254Z	Lazeline 254V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31270	LLWV149Z	Lazeline 149V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31271	LLWV249Z	Lazeline 249V	Square section steel Supended T5 up/downlight luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31272	LLWR154Z	Lazeline 154R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31273	LLWR254Z	Lazeline 254R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31274	LLWR149Z	Lazeline 149R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31275	LLWR249Z	Lazeline 249R	Square section steel Supended T5 up/downlight luminaire with low brightness louvre	Cooper Lighting & Safety Ltd.
LIG31276	CFL414Z	Combiform Layin 414	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31277	CFL224Z	Combiform Layin 224	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31278	CFL140Z	Combiform Layin 140	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31279	CFL240Z	Combiform Layin 240	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31280	CFL155Z	Combiform Layin 155	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31281	CFL255Z	Combiform Layin 255	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31282	MSFM314Z	Moduspec T5FM314	T5 Recessed modular luminaire with LG7 mirror louver and solid pannel	Cooper Lighting & Safety Ltd.
LIG31283	MSFM414Z	Moduspec T5FM414	T5 Recessed modular luminaire with LG7 mirror louver and solid pannel	Cooper Lighting & Safety Ltd.
LIG31284	MSPM314Z	Moduspec T5PM314	T5 Recessed modular luminaire with LG7 mirror louver and perforated pannel	Cooper Lighting & Safety Ltd.
LIG31285	MSPM414Z	Moduspec T5PM414	T5 Recessed modular luminaire with LG7 mirror louver and perforated pannel	Cooper Lighting & Safety Ltd.
LIG31286	MSFS314Z	Moduspec T5FS314	T5 Recessed modular luminaire with LG7 satin louver and solid pannel	Cooper Lighting & Safety Ltd.
LIG31287	MSFS414Z	Moduspec T5FS414	T5 Recessed modular luminaire with LG7 satin louver and solid pannel	Cooper Lighting & Safety Ltd.
LIG31288	MSPS314Z	Moduspec T5PS314	T5 Recessed modular luminaire with LG7 satin louver and perforated pannel	Cooper Lighting & Safety Ltd.
LIG31289	MSPS414Z	Moduspec T5PS414	T5 Recessed modular luminaire with LG7 satin louver and perforated pannel	Cooper Lighting & Safety Ltd.
LIG31290	MSTS314Z	Moduspec T5TS314	T5 Recessed modular luminaire with LG7 satin louver and tilted perforated pannel	Cooper Lighting & Safety Ltd.
LIG31291	MSTS414Z	Moduspec T5TS414	T5 Recessed modular luminaire with LG7 satin louver and tilted perforated pannel	Cooper Lighting & Safety Ltd.
LIG31292	ML314ZT/MLG318	Modulay T5GP314	Recessed T5 lay in Modular luminaire with General purpos louvre	Cooper Lighting & Safety Ltd.
LIG31293	ML414ZT/MLGP41	8Modulay T5GP414	Recessed T5 lay in Modular luminaire with General purpos louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31294	ML314ZT/MLV318	Modulay T5V314	Recessed T5 lay in Modular luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31295	ML414ZT/MLV418	Modulay T5V414	Recessed T5 lay in Modular luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31296	ML328ZT/MLG336	Modulay T5GP328	Recessed T5 lay in Modular luminaire with General purpose louvre	Cooper Lighting & Safety Ltd.
LIG31297	ML428ZT/MLG436	Modulay T5GP428	Recessed T5 lay in Modular luminaire with General purpose louvre	Cooper Lighting & Safety Ltd.
LIG31298	ML328ZT/MLV336	Modulay T5V328	Recessed T5 lay in Modular luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31299	ML428ZT/MLV436	Modulay T5V428	Recessed T5 lay in Modular luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31300	ML354ZT/MLG336	Modulay T5GP354	Recessed T5 lay in Modular luminaire with General purpose louvre	Cooper Lighting & Safety Ltd.
LIG31301	ML454ZT/MLG436	Modulay T5GP454	Recessed T5 lay in Modular luminaire with General purpose louvre	Cooper Lighting & Safety Ltd.
LIG31302	ML354ZT/MLV336	Modulay T5V354	Recessed T5 lay in Modular luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31303	ML454ZT/MLV436	Modulay T5V454	Recessed T5 lay in Modular luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31304	BALI224Z	BALI224	Recessed modular indirect/direct with pendant LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31305	BALI155Z	BALI155	Recessed modular indirect/direct with pendant LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31306	HAL414Z	HAL414	Semi recessed modular luminaire with drpoed LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31307	HAL424Z	HAL424	Semi recessed modular luminaire with drpoed LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31308	CFP140Z	Combiform CFP140	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31309	CFP155Z	Combiform CFP155	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31310	CFP240Z	Combiform CFP240	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31311	CFP25Z	Combiform CFP255	Recessed Modular indirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31312	ILDCFP240R	INTELLECT DIGITAL COMBIFORM CFP240	Intellect digital recessed Modular luminaire ndirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31313	ILDCFP255R	INTELLECT DIGITAL COMBIFORM CFP255	Intellect digital recessed Modular luminaire ndirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31314	ILDCFPS255R	INTELLECT DIGITAL COMBIFORM CFPS255	Intellect digital semi recessed Modular luminaire ndirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31315	ILRCFP240R	INTELLECT REGULATOR COMBIFORM CFP240	Intellect regulator recessed Modular luminaire ndirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31316	ILRCFP255R	INTELLECT REGULATOR COMBIFORM CFP255	Intellect regulator recessed Modular luminaire ndirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31317	ILRCFPS255R	INTELLECT REGULATOR COMBIFORM CFPS255	Intellect regulator semi recessed Modular luminaire ndirect/direct with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31318	CVX241Z	Chevinplus CVX241	Surface mounted luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31319	CVX242Z	Chevinplus CVX242	Surface mounted luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31320	CVX244Z	Chevinplus CVX244	Surface mounted luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31321	CXV261Z	Chevinplus CVX261	Surface mounted luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31322	CVX262Z	Chevinplus CVX262	Surface mounted luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31323	CVXR41Z	Chevinplus CVXR41	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.
LIG31324	CVXR42Z	Chevinplus CVXR42	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31325	CVXR44Z	Chevinplus CVXR44	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.
LIG31326	CVXR51Z	Chevinplus CVXR51	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.
LIG31327	CVXR52Z	Chevinplus CVXR52	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.
LIG31328	CVXR61Z	Chevinplus CVXR61	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.
LIG31329	CVXR62Z	Chevinplus CVXR62	Surface mounted luminaire with general propose louvre	Cooper Lighting & Safety Ltd.
LIG31330	WAVL128Z	WAVEFORM WAVL128	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31331	WAVL228Z	WAVEFORM WAVL228	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31332	WAVL154Z	WAVEFORM WAVL154	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31333	WAVL254Z	WAVEFORM WAVL254	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31334	WAVL135Z	WAVEFORM WAVL135	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31335	WAVL235Z	WAVEFORM WAVL235	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31336	WAVL149Z	WAVEFORM WAVL149	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31337	WAVL249Z	WAVEFORM WAVL249	Surface direct/indirect luminaire with LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31338	WAVP128Z	WAVEFORM WAVP128	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31339	WAVP228Z	WAVEFORM WAVP228	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.
LIG31340	WAVP154Z	WAVEFORM WAVP154	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.
LIG31341	WAVP135Z	WAVEFORM WAVP135	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.
LIG31342	WAVP235Z	WAVEFORM WAVP235	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.
LIG31343	WAVP149Z	WAVEFORM WAVP149	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.
LIG31344	WAVP249Z	WAVEFORM WAVP249	Surface direct/indirect luminaire with perforated basket	Cooper Lighting & Safety Ltd.
LIG31345	VYP128Z	VARSITY T5 VYP128	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31346	VYP228Z	VARSITY T5 VYP228	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31347	VYP135Z	VARSITY T5 VYP135	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31348	VYP235Z	VARSITY T5 VYP235	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31349	VYP149Z	VARSITY T5 VYP149	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31350	VYP249Z	VARSITY T5 VYP249	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31351	VYP136Z	VARSITY T8 VYP136	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31363	VYSP228Z	VARSITY SCHOOL T5 VYSP228	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31364	VYSP135Z	VARSITY SCHOOL T5 VYSP135	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31365		VARSITY SCHOOL T5 VYSP235	Surface T5 luminare with polycarbonate prismatic controller Surface T5	Cooper Lighting & Safety Ltd. Cooper Lighting &
		SCHOOL T5 VYSP149	luminare with polycarbonate prismatic controller	Safety Ltd.
LIG31367	VYSP249Z	VARSITY SCHOOL T5 VYSP249	Surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31368	VYSP136Z	VARSITY SCHOOL T8 VYSP136	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31369	VYSP236Z	VARSITY SCHOOL T8 VYSP236	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31370	VYSP158Z	VARSITY SCHOOL T8 VYSP158	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31371	VYSP258Z	VARSITY SCHOOL T8 VYSP258	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31372	VYSP170Z	VARSITY SCHOOL T8 VYSP170	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31373	VYSP270Z	VARSITY SCHOOL T8 VYSP270	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31374	ILDVYSP228R	INTELLECT VARSITY SCHOOL T5 VYSP228	surface T5 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31387	VYHP158Z	VARSITY HOSPITAL T5 VYHP158	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31388	VYHP258Z	VARSITY HOSPITAL T5 VYHP258	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31389	VYHP170Z	VARSITY HOSPITAL T5 VYHP170	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31390	VYHP270Z	VARSITY HOSPITAL T5 VYHP270	Surface T8 luminare with polycarbonate prismatic controller	Cooper Lighting & Safety Ltd.
LIG31391	MCX240Z/MXM22	MODUCELL 240	Recessed 600 x 600mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31392	MCX255Z/ MVXM22	MODUCELL255	Recessed 600 x 600mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31393	MCFX236Z/ MVFXM22	MODUCELL236	Recessed 500 x 500mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31394	ILDMCX240R/ ILMVXM22	INTELLECT DIGITAL MODUCELL 240	Intellect digital recessed 600 x 600mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31395	ILDMCX255R/ ILMVXM22	INTELLECT DIGTAL MODUCELL255	Intellect digital recessed 600 x 600mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31396	ILDMCFX236R/ ILMVFXM22	INTELLECT DIGITAL MODUCELL236	Intellect digital recessed 500 x 500mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31397	ILRMCX240R/ ILMVXM22	INTELECT REGULATOR MODUCELL 240	Intellect regulatorrecessed 600 x 600mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31398	ILRMCX255R/ ILMVXM22	INTELLECT REGULATOR MODUCELL255	Intellect regulator recessed 600 x 600mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31399	ILRMCFX236R/ ILMVFXM22	INTELLECT REGULATOR MODUCELL236	Intellect regulator recessed 500 x 500mm modular luminaire with 16 cell LG7 louvre	Cooper Lighting & Safety Ltd.
LIG31400	AFXS2240Z	AEROFORM 240	Recessed modular luminare with LG7 Louver	Cooper Lighting & Safety Ltd.
LIG31401	AFXS2255Z	AEROFORM 255	Recessed modular luminare with LG7 Louver	Cooper Lighting & Safety Ltd.
LIG31402	ILDAFXS2240R	INTELLECT DIGITAL AEROFORM 240	Intellect digitalRecessed modular luminare with LG7 Louver	Cooper Lighting & Safety Ltd.
LIG31403	ILDAFXS2255R	INTELLECT DIGITAL AEROFORM 255	Intellect digitalRecessed modular luminare with LG7 Louver	Cooper Lighting & Safety Ltd.
LIG31404	ILRAFXS2240R	INTELLECT REGULAR AEROFORM 240	Intellect digitalRecessed modular luminare with LG7 Louver	Cooper Lighting & Safety Ltd.
LIG31406	TFC118Z	TUFFLITE TFC118	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31407	TFC218Z	TUFFLITE TFC218	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31408	TFC136Z	TUFFLITE TFC136	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31409	TFC236Z	TUFFLITE TFC236	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31410	TFC158Z	TUFFLITE TFC158	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31411	TFC258Z	TUFFLITE TFC258	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31412	TFC170Z	TUFFLITE TFC170	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31413	TFC270Z	TUFFLITE TFC270	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31414	TFC128Z	TUFFLITE TFC128	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31415	TFC228Z	TUFFLITE TFC228	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31416	TFC135Z	TUFFLITE TFC135	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31417	TFC235Z	TUFFLITE TFC235	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31418	TFC149Z	TUFFLITE TFC149	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31419	TFC249Z	TUFFLITE TFC249	IP65 Corrosion Proof luminaire with GRP housing and Acrylic diffuser	Cooper Lighting & Safety Ltd.
LIG31420	TFW118Z	TUFFLITE TFW118	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31421	TFW218Z	TUFFLITE TFW218	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31422	TFW136Z	TUFFLITE TFW136	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31423	TFW236Z	TUFFLITE TFW236	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31424	TFW158Z	TUFFLITE TFW158	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31425	TFW258Z	TUFFLITE TFW258	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31426	TFW170Z	TUFFLITE TFW170	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31427	TFW270Z	TUFFLITE TFW270	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31428	TFW128Z	TUFFLITE TFW128	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31429	TFW228Z	TUFFLITE TFW228	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31430	TFW135Z	TUFFLITE TFW135	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31431	TFW235Z	TUFFLITE TFW235	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31432	TFW149Z	TUFFLITE TFW149	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.
LIG31433	TFW249Z	TUFFLITE TFW249	IP65 Corrosion Proof luminaire with Polycarbonate and housing and diffuser	Cooper Lighting & Safety Ltd.

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG31513	MASTER LEDbulb 6W E27 4200K 230V A55	MASTER LEDbulb 6W E27 4200K	LED Lamp	Philips
LIG31515	MASTER LEDbulb 6W E27 2700K 230V A55	MASTER LEDbulb 6W E27 2700K	LED Lamp	Philips
LIG33741	Plast H 280 Prisma	Plast H 280P	Linear Flatback luminaire with polycarbonate prismatic diffuser	ACEC Distributors
LIG33742	Plast H 254 Prisma	Plast H 254P	Linear Flatback luminaire with polycarbonate prismatic diffuser	ACEC Distributors
LIG33743	Plast H 235 Prisma	Plast H 235P	Linear Flatback luminaire with polycarbonate prismatic diffuser	ACEC Distributors
LIG33744	Plast H 228 Prisma	Plast H 228P	Linear Flatback luminaire with polycarbonate prismatic diffuser	ACEC Distributors

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10. Part 4 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LCO30110	Hid control unit	Hid light manager	High intensity discharge unit for the control and dimming of metal halides, high and low pressure sodiums and mercury vapour lights.	Power-save Energy Corp
LCO30772	eDin Control System	eDin	Din allows individual modules to be selected to create the desired lighting system. eDin provides solutions for simple standalone systems to a fully connected and integrated multiroom systems.	Mode Lighting Ltd.

11. Part 5 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
BEM32688	MONI/ 000006	Eniscope Energy Management System	A computer based energy management system which monitors and controls energy use providing salient real time information and historical trend data.	Enigin Plc
BEM33476	M90211	Power Studio	Energy supervision software allowing • monitoring in real time • Recording and printing of logs • XML Server • Multiple Users • Data can be exported to external applications	Circutor

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12. Part 6 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
EST31169	EqualLogi PS6010S	cPS6010S	PS6010 iSCSI SAN with either 8 or 16 SSD drives, and up to 1.6TB per array	Dell

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13. Part 7 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
ESE31518	Primergy RX300 S6	S26361-K1344- V201	RX300 S6, 2x Intel 55xx CPU, 144GB DDR3 Memory Rack Server	fujitsu
ESE31519	Primergy TX150 S7	S26361-K1265- V401	TX150 S7, Ix Intel CPU, Tower Server	fujitsu

14. Part 10 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CDC31990	1- M00024G	GDN.C.48.M24	20kW Guardian Access Power System for up to 10 x 2kW Rectifiers. ACC System controller. Distribution with up to 6 x battery MCBs, 24 x load MCBs. 400 or 500A LVD. PLD option. Up to 4 battery shelves. Optional Battery Temperature and Symmetry monitoring.	Power-One
CDC31991	1- M00029G	GDN.C.48.M29	96kW Guardian Central Power System. Single or twin cabinet with up to 24 x 2kW Rectifiers per cabinet. ACC System controller. Battery Distribution options foir MCCB and NH fuses. Load distribution options for MCB, MCCB and NH fuses. LVD and PLD options. Battery Temperature and Symmetry monitoring.	Power-One

15. Part 14 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
WTU33748	Aurora PVI- 3600- OUTD- IE-F-W	Aurora PVI-3600 Outdoor Inverter	Wind Turbine Inverter	Power-One
WTU33749	PVI- 6000- OUTD- IE-W	Aurora PVI-6000	Wind Turbine Inverter	Power-One
WTU33751	SMA WB2500	SMA Windboy 2500 Inverter	WInd Turbine Inverter	SMA
WTU33752	SMA WB3000	SMA Windy Boy 3000 Inverter	Wind Turbine Inverter	SMA
WTU33756	SMA WB6000A	SMA Windy Boy WB6000A	Wind Energy Inverter	SMA

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16. Part 18 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PSY33757	SMC5000A	SMA SMC 5000A	Photovoltiac Inverter	SMA
PSY33762	SB 1100	SMA Sunny Boy 1100	PV inverter 1.1kW	SMA
PSY33763	SB 1700	SMA Sunny Boy 1700	PV Inverter 1.7kW	SMA
PSY33764	SB 2500	SMA Sunny Boy 2500	PV Inverter 2.5kW	SMA
PSY33765	SB 3000	SMA Sunny Boy 3000	PV Inverter 3kW	SMA
PSY33745	SMC 4600A	Sunny Mini Central 4600A	PV Inverter	SMA
PSY33746	Sunny Boy 1200	Sunny Boy 1200	PV Inverter	SMA
PSY33747	Sunny Boy 3300	Sunny Boy 3300	PV Inverter	SMA
PSY33717	Sunmaster XS2000	Sunmaster XS2000	PV Inverter	Mastervolt
PSY33720	Sunmaster XS3200	Sunmaster XS3200	PV Inverter	Mastervolt
PSY33721	Sunmaster XS4300	Sunmaster XS4300	PV Inverter	Mastervolt
PSY33722	Sunmaster XS6500	Sunmaster XS6500	PV Inverter	Mastervolt
PSY33723	Sunmaster XL10	Sunmaster XL10	PV Inverter	Mastervolt

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PSY33724	Sunmaster XL15	Sunmaster XL15	PV Inverter	Mastervolt
PSY33725	Fronius IG15	Fronius IG15	PV Inverter	Fronius
PSY33726	Fronius IG20	Fronius IG20	PV Inverter	Fronius
PSY33727	Fronius IG30	Fronius IG30	PV Inverter	Fronius
PSY33728	Fronius IG40	Fronius IG40	PV Inverter	Fronius
PSY33729	Fronius IG60HV	Fronius IG60HV	PV Inverter	Fronius
PSY33730	Fronius IG Plus 35	Fronius IG Plus 35	PV Inverter	Fronius
PSY33731	Fronius IG Plus 50	Fronius IG Plus 50	PV Inverter	Fronius
PSY33732	Fronius IG Plus 70	Fronius IG Plus 70	PV Inverter	Fronius
PSY33733	Fronius IG Plus 100	Fronius IG Plus 100	PV Inverter	Fronius
PSY33734	Fronius IG Plus 120	Fronius IG Plus 120	PV Inverter	Fronius
PSY33735	Fronius IG Plus 150	Fronius IG Plus 150	PV Inverter	Fronius
PSY30799	PV-Modul SCHOTT POLY 225, 225Wp	Schott Poly 225	poly PV panel	SCHOTT Solar AG
PSY31221	A-277P	Atersa Solar PV Panel A-277P	Solar Photovoltaic Panel	Atersa
PSY31222	A-214P	Atersa Solar PV Panel A-214P	Solar Photovoltaic Panel	Atersa
PSY31223	A-222P	Atersa Solar PV Panel A-222P	Solar Photovoltaic System	Atersa
PSY31224	A-230P	Atersa Solar PV Panel A-230P	Solar Photovoltaic System	Atersa
PSY32935	SB3800	Sunnyboy SB3800	3800 watt Grid- Connected Solar PV Inverter	SMA
PSY32936	SB 4200TL HC	Sunnyboy SB 4200TL HC	4200 watt Grid- connected Multi- string Solar PV inverter	SMA
PSY32937	SB 5000TL HC	Sunnyboy SB 5000TL HC	5000 watt Grid- Connected Multi- string Solar PV inverter	SMA
PSY32938	SMC 5000A	Sunny Mini Central SMC 5000A	5000 watt Grid- Connected Solar PV Inverter	SMA
PSY32939	SMC 6000A	Sunny Mini Central SMC 6000A	6000 watt Grid- Connected Solar PV Inverter	SMA
PSY32940	SMC 7000 HV	Sunny Mini Central SMC 7000 HV	7000 watt Grid- Connected Solar PV Inverter	SMA
PSY32941	SMC 6000 TL	Sunny Mini Central SMC 6000TL	6000 watt Grid- connected Solar PV Inverter	SMA

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PSY32942	SMC 7000TL	Sunny Mini Central SMC 7000TL	7000 watt Grid- connected Solar PV Inverter	SMA
PSY32943	SMC 8000TL	Sunny Mini Central SMC 8000TL	8000 watt Grid- connected Solar PV Inverter	SMA

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17. Part 22 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
HHR32643	Brink-HRM 300	Brink Renovent HR-M	An MVHR unit capable of delivering up to 300m³/h @ 250Pa. Unit incorporatesconstant flow DC fan motors, a crosscounter flow exchanger and integrated thermostats.	Brink Climate Systems Ireland Ltd
HHR32644	Brink-HRL 400	Brink Renovent HR-L	An MVHR unit capable of delivering up to 400m³/h @ 275Pa. Unit incorporatesconstant flow DC fan motors, a crosscounter flow exchanger and integrated thermostats.	Brink Climate Systems Ireland Ltd
HHR32645	Brink-HRB/M 300	Brink Renovent HRB-M	An MVHR unit capable of delivering up to 300m³/h @ 250Pa. Unit incorporatesconstant flow DC fan motors, a crosscounter flow exchanger and integrated thermostats. 100% Summer bypass.	Brink Climate Systems Ireland Ltd

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
HHR32646	Brink-HRB/L 400	Brink Renovent HRB-L	An MVHR unit capable of delivering up to 400 m³/h @ 275 Pa. Unit incorporatesconstant flow DC fan motors, a crosscounter flow exchanger and integrated thermostats. 100% summer bypass.	Brink Climate Systems Ireland Ltd

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18. Part 24 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31019	107390801	SV405F11M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31020	107390811	SV406F11M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31021	107390821	SV407F11M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31022	107390831	SV408F15M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31023	107390841	SV409F15M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31024	101500861	SV411F22M/P ELP 220-240 50	Vertical Multistage Centrifugal	ITT Ireland
PUM31029	107390551	SV405F11T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31030	107390561	SV406F11T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31031	107390571	SV407F11T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31032	107390581	SV408F15T/A	Vertical Multistage Centrifugal	ITT Ireland

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31033	107390591	SV409F15T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31034	107390611	SV411F22T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31042	107391221	SV802F11M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31043	107391231	SV803F15M/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31044	101501241	SV804F22M/P ELP 220-240 50	Vertical Multistage Centrifugal	ITT Ireland
PUM31045	101501251	SV805F22M/P ELP 220-240 50	Vertical Multistage Centrifugal	ITT Ireland
PUM31046	107391021	SV802F11T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31047	107391031	SV803F15T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31048	107391041	SV804F22T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31049	107391051	SV805F22T/A	Vertical Multistage Centrifugal	ITT Ireland
PUM31050	101501061	SV806F30T/P ELP 23/40	Vertical Multistage Centrifugal	ITT Ireland
PUM31051	101501081	SV808F40T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31052	101501091	SV809F40T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31053	101501111	SV811F55T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31054	101501121	SV812F55T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31055	101501141	SV814F75T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31056	101501161	SV816F75T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31073	101570051	SV3302F55T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31074	101570061	SV3303/2F55T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31075	101570071	SV3303/1F75T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31076	101570081	SV3303F75T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31077	101570091	SV3304/2F75T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31078	101570101	SV3304/1F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31079	101570111	SV3304F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31080	101570121	SV3305/2F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31081	101570131	SV3305/1F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31082	101570141	SV3305F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31083	101570151	SV3306/2F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31084	101570161	SV3306/1F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31085	101570171	SV3306F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31086	101570181	SV3307/2F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31087	101570191	SV3307/1F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31088	101570201	SV3307F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31089	101570211	SV3308/2F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31090	101570221	SV3308/1F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31091	101570231	SV3308F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31092	101570241	SV3309/2F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31093	101570251	SV3309/1F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31094	101570261	SV3309F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31095	101570271	SV3310/2F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31096	102700281	SV3310/1F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31097	102700291	SV3310F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31098	102700301	SV3311/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31099	102700311	SV3311/1F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31100	102700321	SV3311F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31101	102700331	SV3312/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31102	102700341	SV3312/1F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31103	102700351	SV3312F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31104	102700361	SV3313/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31105	102700371	SV3313/1F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31106	101572011	SV4601/1F30T/P ELP 23/40	Vertical Multistage Centrifugal	ITT Ireland
PUM31107	101572021	SV4601F40T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31108	101572031	SV4602/2F55T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31109	101572041	SV4602F75T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31110	101572051	SV4603/2F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31111	101572061	SV4603F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31112	101572071	SV4604/2F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31113	101572081	SV4604F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31114	101572091	SV4605/2F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31115	101572101	SV4605F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31116	101572111	SV4606/2F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31117	101572121	SV4606F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31118	102702131	SV4607/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31119	102702141	SV4607F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31120	102702151	SV4608/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31121	102702161	SV4608F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31122	102702171	SV4609/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31123	102702181	SV4609F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31124	102702191	SV4610/2F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31125	102702201	SV4610F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31126	102702211	SV4611/2F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31127	102702221	SV4611F450T	Vertical Multistage Centrifugal	ITT Ireland

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31128	102702231	SV4612/2F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31129	102702241	SV4612F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31130	102702251	SV4613/2F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31131	101574011	SV6601/1F40T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31134	101574041	SV6602/1F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31135	101574051	SV6602F110T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31136	101574061	SV6603/2F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31137	101574071	SV6603/1F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31138	101574081	SV6603F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31139	101574091	SV6604/2F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31140	101574101	SV6604/1F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31141	101574111	SV6604F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31142	102704121	SV6605/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31143	102704131	SV6605/1F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31144	102704141	SV6605F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31145	102704151	SV6606/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31146	102704161	SV6606/1F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31147	102704171	SV6606F370T	Vertical Multistage Centrifugal	ITT Ireland

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
PUM31148	102704181	SV6607/2F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31149	102704191	SV6607/1F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31150	102704201	SV6607F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31151	102704211	SV6608/2F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31152	102704221	SV6608/1F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31153	102704231	SV6608F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31157	101576041	SV9202F150T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31158	101576051	SV9203/2F185T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31159	101576061	SV9203F220T/P ELP 40/69	Vertical Multistage Centrifugal	ITT Ireland
PUM31160	102706071	SV9204/2F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31161	102706081	SV9204F300T	Vertical Multistage Centrifugal	ITT Ireland
PUM31162	102706091	SV9205/2F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31163	102706101	SV9205F370T	Vertical Multistage Centrifugal	ITT Ireland
PUM31164	102706111	SV9206/2F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31165	102706121	SV9206F450T	Vertical Multistage Centrifugal	ITT Ireland
PUM31166	102706131	SV9207/2F450T	Vertical Multistage Centrifugal	ITT Ireland

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19. Part 28 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
EVA32232	Verde Scooter 1500w	Verde Scooter 1500w	1500w Electric Scooter	Verde Autos
EVA31520	MB7EVFA1A	REVAi	REVA Electric Car	Reva Electric Car Company

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20. Part 30 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CCU33429	114X4280	OP- MPUC046MLP 00G	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33430 CCU33431	114X4283 114X4364	OP- MPUC046MLP 00E OP- MPZC086MTP 00E	Danfoss Optyma Plus Condensing Unit Danfoss Optyma Plus Condensing Unit	Danfoss Danfoss
CCU33432	114X4310	OP- MPUC068MLP 00E	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33433	114X4323	OP- MPUC080MLP 00E	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33434	114X4343	OP- MPUC107MLP 00E	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33435	114X4488	OP- MPZC171MTP 00E	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33436	114X4413	OP- MPUC125MLP 00E	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33437	114X4433	OP- MPUC162MLP 00E	Danfoss Optyma Plus Condensing Unit	Danfoss
CCU33351	120U1016	HRP040T4	Danfoss Scroll Compressor	Danfoss
CCU33352	120U1026	HRP042T4	Danfoss Scroll Compressor	Danfoss
CCU33353	120U1036	HRP045T4	Danfoss Scroll Compressor	Danfoss
CCU33354	120U1046	HRP047T4	Danfoss Scroll Compressor	Danfoss

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
			Compressor	
CCU33381	121U8008	MLZ026T4	Danfoss Scroll Compressor	Danfoss
CCU33382	121U8010	MLZ030T4	Danfoss Scroll Compressor	Danfoss
CCU33383	121U8012	MLZ038T4	Danfoss Scroll Compressor	Danfoss
CCU33384	121U8014	MLZ045T4	Danfoss Scroll Compressor	Danfoss
CCU33385	121U8016	MLZ048T4	Danfoss Scroll Compressor	Danfoss
CCU33386	121U8018	MLZ058T4	Danfoss Scroll Compressor	Danfoss
CCU33387	121U8020	MLZ066T4	Danfoss Scroll Compressor	Danfoss
CCU33388	121U8022	MLZ076T4	Danfoss Scroll Compressor	Danfoss

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21. Part 31 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
RDC33400	185(-) AD	Paris 1	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33401	185(-) VSAD	Paris 2	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33402	185(U) VSAD	Paris 3	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33403	210(-)AD	Paris 4	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33404	210(-)VSAD	Paris 5	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33405	210(U) VSAD	Paris 6	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33406	250(-) AD	Paris 7	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33407	250(-) VSAD	Paris 8	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH
RDC33408	250(U) VSAD	Paris 9	Plug-In Display Freezer/Sliding Lids	AHT Cooling Systems GmbH

display cabinet

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
RDC32279	6180002	ARNEG NIMES 2 ES 88/200/125	Narrow width vertical multideck low front refrigerated display cabinet	Arneg SPA
RDC32949	MJC316-3	Merac Meat Multijet 1.875m	Meat Multideck	Hussmann Koxka S.L.
RDC32950	MJC316-4	Merac Meat Multijet 2.5m	Meat Multideck	Hussmann Koxka S.L.
RDC32951	MJC316-6	Merac Meat Multijet 3.75m	Meat Multideck	Hussmann Koxka S.L.

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22. Part 32 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON32952	10102014	SAV5R 4510	Axial fan type air cooled condenser	LU-VE SpA
CON32953	10102015	SAV5R 4511	Axial fan type air cooled condenser	LU-VE SpA
CON32954	10102016	SAV5R 4520	Axial fan type air cooled condenser	LU-VE SpA
CON32955	10102017	SAV5R 4521	Axial fan type air cooled condenser	LU-VE SpA
CON32956	10102018	SAV5R 4530	Axial fan type air cooled condenser	LU-VE SpA
CON32957	10101524	SAV5R 4531	Axial fan type air cooled condenser	LU-VE SpA
CON32958	10102019	SAV5R 4545	Axial fan type air cooled condenser	LU-VE SpA
CON32959	10102020	SAV5R 4546	Axial fan type air cooled condenser	LU-VE SpA
CON32960	10101919	SAV5R 4565	Axial fan type air cooled condenser	LU-VE SpA
CON32961	10102021	SAV5R 4566	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON32962	10102084	EAV5S 5410	Axial fan type air cooled condenser	LU-VE SpA
CON32963	10102085	EAV5S 5411	Axial fan type air cooled condenser	LU-VE SpA
CON32964	10102091	EAV5S 5420	Axial fan type air cooled condenser	LU-VE SpA
CON32965	10102092	EAV5S 5421	Axial fan type air cooled condenser	LU-VE SpA
CON32966	10102093	EAV5S 5430	Axial fan type air cooled condenser	LU-VE SpA
CON32967	10102094	EAV5S 5431	Axial fan type air cooled condenser	LU-VE SpA
CON32968	10102095	EAV5S 5440	Axial fan type air cooled condenser	LU-VE SpA
CON32969	10102096	EAV5S 5441	Axial fan type air cooled condenser	LU-VE SpA
CON32970	10102100	EAV5S 5450	Axial fan type air cooled condenser	LU-VE SpA
CON32971	10102102	EAV5S 5451	Axial fan type air cooled condenser	LU-VE SpA
CON32972	10102097	EAV5S 5445	Axial fan type air cooled condenser	LU-VE SpA
CON32973	10102099	EAV5S 5446	Axial fan type air cooled condenser	LU-VE SpA
CON32974	10102103	EAV5S 5465	Axial fan type air cooled condenser	LU-VE SpA
CON32975	10102104	EAV5S 5466	Axial fan type air cooled condenser	LU-VE SpA
CON32976	10102105	EAV5S 5485	Axial fan type air cooled condenser	LU-VE SpA
CON32977	10102106	EAV5S 5486	Axial fan type air cooled condenser	LU-VE SpA
CON32978	10102107	EAV5R 5510	Axial fan type air cooled condenser	LU-VE SpA
CON32979	10102108	EAV5R 5511	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON32980	10102109	EAV5R 5520	Axial fan type air cooled condenser	LU-VE SpA
CON32981	10102110	EAV5R 5521	Axial fan type air cooled condenser	LU-VE SpA
CON32982	10102111	EAV5R 5530	Axial fan type air cooled condenser	LU-VE SpA
CON32983	10102112	EAV5R 5531	Axial fan type air cooled condenser	LU-VE SpA
CON32984	10102113	EAV5R 5540	Axial fan type air cooled condenser	LU-VE SpA
CON32985	10102115	EAV5R 5541	Axial fan type air cooled condenser	LU-VE SpA
CON32986	10102119	EAV5R 5550	Axial fan type air cooled condenser	LU-VE SpA
CON32987	10102120	EAV5R 5551	Axial fan type air cooled condenser	LU-VE SpA
CON32988	10102116	EAV5R 5545	Axial fan type air cooled condenser	LU-VE SpA
CON32989	10102117	EAV5R 5546	Axial fan type air cooled condenser	LU-VE SpA
CON32990	10102121	EAV5R 5565	Axial fan type air cooled condenser	LU-VE SpA
CON32991	10102122	EAV5R 5566	Axial fan type air cooled condenser	LU-VE SpA
CON32992	10102123	EAV5R 5585	Axial fan type air cooled condenser	LU-VE SpA
CON32993	10102124	EAV5R 5586	Axial fan type air cooled condenser	LU-VE SpA
CON32994	10102156	SAV6S 6511	Axial fan type air cooled condenser	LU-VE SpA
CON32995	10102158	SAV6S 6521	Axial fan type air cooled condenser	LU-VE SpA
CON32996	10102160	SAV6S 6531	Axial fan type air cooled condenser	LU-VE SpA
CON32997	10102162	SAV6S 6541	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON32998	10102164	SAV6S 6551	Axial fan type air cooled condenser	LU-VE SpA
CON32999	10102166	SAV6S 6546	Axial fan type air cooled condenser	LU-VE SpA
CON33000	10102163	SAV6S 6566	Axial fan type air cooled condenser	LU-VE SpA
CON33001	10102170	SAV6S 6586	Axial fan type air cooled condenser	LU-VE SpA
CON33002	10102171	SAV6R 6610	Axial fan type air cooled condenser	LU-VE SpA
CON33003	10102172	SAV6R 6611	Axial fan type air cooled condenser	LU-VE SpA
CON33004	10102173	SAV6R 6621	Axial fan type air cooled condenser	LU-VE SpA
CON33005	10102174	SAV6R 6620	Axial fan type air cooled condenser	LU-VE SpA
CON33006	10102176	SAV6R 6630	Axial fan type air cooled condenser	LU-VE SpA
CON33007	10102177	SAV6R 6640	Axial fan type air cooled condenser	LU-VE SpA
CON33008	10102178	SAV6R 6641	Axial fan type air cooled condenser	LU-VE SpA
CON33009	10102181	SAV6R 6650	Axial fan type air cooled condenser	LU-VE SpA
CON33010	10102182	SAV6R 6651	Axial fan type air cooled condenser	LU-VE SpA
CON33011	10102179	SAV6R 6645	Axial fan type air cooled condenser	LU-VE SpA
CON33012	10102180	SAV6R 6646	Axial fan type air cooled condenser	LU-VE SpA
CON33013	10102183	SAV6R 6665	Axial fan type air cooled condenser	LU-VE SpA
CON33014	10102184	SAV6R 6666	Axial fan type air cooled condenser	LU-VE SpA
CON33015	10102185	SAV6R 6685	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33016	10102186	SAV6R 6686	Axial fan type air cooled condenser	LU-VE SpA
CON33017	10102226	EAV6S 7510	Axial fan type air cooled condenser	LU-VE SpA
CON33018	10102228	EAV6S 7511	Axial fan type air cooled condenser	LU-VE SpA
CON33019	10102229	EAV6S 7520	Axial fan type air cooled condenser	LU-VE SpA
CON33020	10102231	EAV6S 7521	Axial fan type air cooled condenser	LU-VE SpA
CON33021	10102232	EAV6S 7530	Axial fan type air cooled condenser	LU-VE SpA
CON33022	10102233	EAV6S 7531	Axial fan type air cooled condenser	LU-VE SpA
CON33023	10102234	EAV6S 7540	Axial fan type air cooled condenser	LU-VE SpA
CON33024	10102235	EAV6S 7541	Axial fan type air cooled condenser	LU-VE SpA
CON33025	10102239	EAV6S 7550	Axial fan type air cooled condenser	LU-VE SpA
CON33026	10102240	EAV6S 7551	Axial fan type air cooled condenser	LU-VE SpA
CON33027	10102236	EAV6S 7545	Axial fan type air cooled condenser	LU-VE SpA
CON33028	10102238	EAV6S 7546	Axial fan type air cooled condenser	LU-VE SpA
CON33029	10102241	EAV6S 7565	Axial fan type air cooled condenser	LU-VE SpA
CON33030	10102242	EAV6S 7566	Axial fan type air cooled condenser	LU-VE SpA
CON33031	10102243	EAV6S 7585	Axial fan type air cooled condenser	LU-VE SpA
CON33032	10102244	EAV6S 7586	Axial fan type air cooled condenser	LU-VE SpA
CON33033	10102246	EAV6R 7610	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33034	10102247	EAV6R 7611	Axial fan type air cooled condenser	LU-VE SpA
CON33035	10102248	EAV6R 7620	Axial fan type air cooled condenser	LU-VE SpA
CON33036	10102249	EAV6R 7621	Axial fan type air cooled condenser	LU-VE SpA
CON33037	10102250	EAV6R 7630	Axial fan type air cooled condenser	LU-VE SpA
CON33038	10102251	EAV6R 7631	Axial fan type air cooled condenser	LU-VE SpA
CON33039	10102252	EAV6R 7640	Axial fan type air cooled condenser	LU-VE SpA
CON33040	10102253	EAV6R 7641	Axial fan type air cooled condenser	LU-VE SpA
CON33041	10102256	EAV6R 7650	Axial fan type air cooled condenser	LU-VE SpA
CON33042	10102258	EAV6R 7651	Axial fan type air cooled condenser	LU-VE SpA
CON33043	10102254	EAV6R 7645	Axial fan type air cooled condenser	LU-VE SpA
CON33044	10102255	EAV6R 7646	Axial fan type air cooled condenser	LU-VE SpA
CON33045	10102259	EAV6R 7665	Axial fan type air cooled condenser	LU-VE SpA
CON33046	10102260	EAV6R 7666	Axial fan type air cooled condenser	LU-VE SpA
CON33047	10102261	EAV6R 7685	Axial fan type air cooled condenser	LU-VE SpA
CON33048	10102263	EAV6R 7686	Axial fan type air cooled condenser	LU-VE SpA
CON33049	10066276	SAV8R 4110	Axial fan type air cooled condenser	LU-VE SpA
CON33050	10066279	SAV8R 4111	Axial fan type air cooled condenser	LU-VE SpA
CON33051	10066283	SAV8R 4120	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33052	10066286	SAV8R 4121	Axial fan type air cooled condenser	LU-VE SpA
CON33053	10066290	SAV8R 4130	Axial fan type air cooled condenser	LU-VE SpA
CON33054	10066293	SAV8R 4131	Axial fan type air cooled condenser	LU-VE SpA
CON33055	10066297	SAV8R 4140	Axial fan type air cooled condenser	LU-VE SpA
CON33056	10066300	SAV8R 4141	Axial fan type air cooled condenser	LU-VE SpA
CON33057	10066304	SAV8R 4150	Axial fan type air cooled condenser	LU-VE SpA
CON33058	10066307	SAV8R 4151	Axial fan type air cooled condenser	LU-VE SpA
CON33059	10066311	SAV8R 4220	Axial fan type air cooled condenser	LU-VE SpA
CON33060	10066314	SAV8R 4221	Axial fan type air cooled condenser	LU-VE SpA
CON33061	10066318	SAV8R 4230	Axial fan type air cooled condenser	LU-VE SpA
CON33062	10066321	SAV8R 4231	Axial fan type air cooled condenser	LU-VE SpA
CON33063	10066325	SAV8R 4240	Axial fan type air cooled condenser	LU-VE SpA
CON33064	10066328	SAV8R 4241	Axial fan type air cooled condenser	LU-VE SpA
CON33065	10066332	SAV8R 4250	Axial fan type air cooled condenser	LU-VE SpA
CON33066	10066335	SAV8R 4251	Axial fan type air cooled condenser	LU-VE SpA
CON33067	10066339	SAV8R 4260	Axial fan type air cooled condenser	LU-VE SpA
CON33068	10066342	SAV8R 4261	Axial fan type air cooled condenser	LU-VE SpA
CON33069	10066346	SAV8R 4270	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33070	10066349	SAV8R 4271	Axial fan type air cooled condenser	LU-VE SpA
CON33071	10066353	SAV8R 4280	Axial fan type air cooled condenser	LU-VE SpA
CON33072	10066356	SAV8R 4281	Axial fan type air cooled condenser	LU-VE SpA
CON33084	10066491	EAV9U 5110	Axial fan type air cooled condenser	LU-VE SpA
CON33085	10066492	EAV9U 5111	Axial fan type air cooled condenser	LU-VE SpA
CON33086	10066493	EAV9U 5120	Axial fan type air cooled condenser	LU-VE SpA
CON33087	10066494	EAV9U 5121	Axial fan type air cooled condenser	LU-VE SpA
CON33088	10066495	EAV9U 5130	Axial fan type air cooled condenser	LU-VE SpA
CON33089	10066496	EAV9U 5131	Axial fan type air cooled condenser	LU-VE SpA
CON33090	10066497	EAV9U 5140	Axial fan type air cooled condenser	LU-VE SpA
CON33091	10066498	EAV9U 5141	Axial fan type air cooled condenser	LU-VE SpA
CON33092	10066499	EAV9U 5150	Axial fan type air cooled condenser	LU-VE SpA
CON33093	10066500	EAV9U 5151	Axial fan type air cooled condenser	LU-VE SpA
CON33094	10066501	EAV9U 5160	Axial fan type air cooled condenser	LU-VE SpA
CON33095	10066502	EAV9U 5161	Axial fan type air cooled condenser	LU-VE SpA
CON33096	10066503	EAV9U 5220	Axial fan type air cooled condenser	LU-VE SpA
CON33097	10066504	EAV9U 5221	Axial fan type air cooled condenser	LU-VE SpA
CON33098	10066505	EAV9U 5230	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short	Manufacturer
CON33099	10066506	EAV9U 5231	Axial fan type air cooled condenser	LU-VE SpA
CON33100	10066507	EAV9U 5240	Axial fan type air cooled condenser	LU-VE SpA
CON33101	10066508	EAV9U 5241	Axial fan type air cooled condenser	LU-VE SpA
CON33102	10066509	EAV9U 5250	Axial fan type air cooled condenser	LU-VE SpA
CON33103	10066510	EAV9U 5251	Axial fan type air cooled condenser	LU-VE SpA
CON33104	10066511	EAV9U 5260	Axial fan type air cooled condenser	LU-VE SpA
CON33105	10066512	EAV9U 5261	Axial fan type air cooled condenser	LU-VE SpA
CON33106	10066360	EAV8R 9110	Axial fan type air cooled condenser	LU-VE SpA
CON33107	10066364	EAV8R 9111	Axial fan type air cooled condenser	LU-VE SpA
CON33108	10066369	EAV8R 9120	Axial fan type air cooled condenser	LU-VE SpA
CON33109	10066373	EAV8R 9121	Axial fan type air cooled condenser	LU-VE SpA
CON33110	10066378	EAV8R 9130	Axial fan type air cooled condenser	LU-VE SpA
CON33111	10066382	EAV8R 9131	Axial fan type air cooled condenser	LU-VE SpA
CON33112	10066387	EAV8R 9140	Axial fan type air cooled condenser	LU-VE SpA
CON33113	10066391	EAV8R 9141	Axial fan type air cooled condenser	LU-VE SpA
CON33114	10066396	EAV8R 9150	Axial fan type air cooled condenser	LU-VE SpA
CON33115	10066400	EAV8R 9151	Axial fan type air cooled condenser	LU-VE SpA
CON33116	10066405	EAV8R 9160	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33117	10066409	EAV8R 9161	Axial fan type air cooled condenser	LU-VE SpA
CON33118	10066414	EAV8R 9220	Axial fan type air cooled condenser	LU-VE SpA
CON33119	10066418	EAV8R 9221	Axial fan type air cooled condenser	LU-VE SpA
CON33120	10066423	EAV8R 9230	Axial fan type air cooled condenser	LU-VE SpA
CON33121	10066427	EAV8R 9231	Axial fan type air cooled condenser	LU-VE SpA
CON33122	10066432	EAV8R 9240	Axial fan type air cooled condenser	LU-VE SpA
CON33123	10066436	EAV8R 9241	Axial fan type air cooled condenser	LU-VE SpA
CON33124	10066441	EAV8R 9250	Axial fan type air cooled condenser	LU-VE SpA
CON33125	10066445	EAV8R 9251	Axial fan type air cooled condenser	LU-VE SpA
CON33126	10066450	EAV8R 9260	Axial fan type air cooled condenser	LU-VE SpA
CON33127	10066454	EAV8R 9261	Axial fan type air cooled condenser	LU-VE SpA
CON33137	82052073	XDHVT 5114	Axial fan type air cooled condenser	LU-VE SpA
CON33138	82052074	XDHVT 5115	Axial fan type air cooled condenser	LU-VE SpA
CON33140	82052076	XDHVT 5124	Axial fan type air cooled condenser	LU-VE SpA
CON33141	82052077	XDHVT 5125	Axial fan type air cooled condenser	LU-VE SpA
CON33143	82052079	XDHVT 5134	Axial fan type air cooled condenser	LU-VE SpA
CON33144	82052080	XDHVT 5135	Axial fan type air cooled condenser	LU-VE SpA
CON33146	82052082	XDHVT 5144	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33147	82052083	XDHVT 5145	Axial fan type air cooled condenser	LU-VE SpA
CON33149	82052085	XDHVT 5154	Axial fan type air cooled condenser	LU-VE SpA
CON33150	82052086	XDHVT 5155	Axial fan type air cooled condenser	LU-VE SpA
CON33152	82052088	XDHVT 5164	Axial fan type air cooled condenser	LU-VE SpA
CON33153	82052089	XDHVT 5165	Axial fan type air cooled condenser	LU-VE SpA
CON33155	82052091	XDHVT 5174	Axial fan type air cooled condenser	LU-VE SpA
CON33156	82052092	XDHVT 5175	Axial fan type air cooled condenser	LU-VE SpA
CON33157	82052093	XDHVT 5184	Axial fan type air cooled condenser	LU-VE SpA
CON33158	82052094	XDHVT 5185	Axial fan type air cooled condenser	LU-VE SpA
CON33159	82052095	XDHVU 6113	Axial fan type air cooled condenser	LU-VE SpA
CON33160	82052096	XDHVU 6114	Axial fan type air cooled condenser	LU-VE SpA
CON33161	82052097	XDHVU 6123	Axial fan type air cooled condenser	LU-VE SpA
CON33162	82052098	XDHVU 6124	Axial fan type air cooled condenser	LU-VE SpA
CON33163	82052099	XDHVU 6133	Axial fan type air cooled condenser	LU-VE SpA
CON33164	82052100	XDHVU 6134	Axial fan type air cooled condenser	LU-VE SpA
CON33165	82052101	XDHVU 6143	Axial fan type air cooled condenser	LU-VE SpA
CON33166	82052102	XDHVU 6144	Axial fan type air cooled condenser	LU-VE SpA
CON33167	82052103	XDHVU 6153	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short	Manufacturer
			Description	
CON33186	82052122	XDHVR 7164	Axial fan type air cooled condenser	LU-VE SpA
CON33187	82052123	XDHVR 7173	Axial fan type air cooled condenser	LU-VE SpA
CON33188	82052124	XDHVR 7174	Axial fan type air cooled condenser	LU-VE SpA
CON33189	82052125	XDHVR 7183	Axial fan type air cooled condenser	LU-VE SpA
CON33190	82052126	XDHVR 7184	Axial fan type air cooled condenser	LU-VE SpA
CON33207	10062275	EHVDT 4226	Axial fan type air cooled condenser	LU-VE SpA
CON33208	10062280	EHVDT 4227	Axial fan type air cooled condenser	LU-VE SpA
CON33209	10062285	EHVDT 4236	Axial fan type air cooled condenser	LU-VE SpA
CON33210	10062290	EHVDT 4237	Axial fan type air cooled condenser	LU-VE SpA
CON33211	10062295	EHVDT 4246	Axial fan type air cooled condenser	LU-VE SpA
CON33212	10062300	EHVDT 4247	Axial fan type air cooled condenser	LU-VE SpA
CON33213	10062305	EHVDT 4256	Axial fan type air cooled condenser	LU-VE SpA
CON33214	10062309	EHVDT 4257	Axial fan type air cooled condenser	LU-VE SpA
CON33215	10062314	EHVDT 4266	Axial fan type air cooled condenser	LU-VE SpA
CON33216	10062319	EHVDT 4267	Axial fan type air cooled condenser	LU-VE SpA
CON33217	10062324	EHVDT 4277	Axial fan type air cooled condenser	LU-VE SpA
CON33218	10062329	EHVDT 4276	Axial fan type air cooled condenser	LU-VE SpA
CON33219	10062334	EHVDT 4286	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33220	10062339	EHVDT 4287	Axial fan type air cooled condenser	LU-VE SpA
CON33221	10062344	EHVDT 4296	Axial fan type air cooled condenser	LU-VE SpA
CON33222	10062349	EHVDT 4297	Axial fan type air cooled condenser	LU-VE SpA
CON33223	10062368	EHVDU 7225	Axial fan type air cooled condenser	LU-VE SpA
CON33224	10062369	EHVDU 7226	Axial fan type air cooled condenser	LU-VE SpA
CON33225	10062370	EHVDU 7235	Axial fan type air cooled condenser	LU-VE SpA
CON33226	10062371	EHVDU 7236	Axial fan type air cooled condenser	LU-VE SpA
CON33227	10062372	EHVDU 7245	Axial fan type air cooled condenser	LU-VE SpA
CON33228	10062373	EHVDU 7246	Axial fan type air cooled condenser	LU-VE SpA
CON33229	10062374	EHVDU 7255	Axial fan type air cooled condenser	LU-VE SpA
CON33230	10062375	EHVDU 7256	Axial fan type air cooled condenser	LU-VE SpA
CON33231	10062376	EHVDU 7265	Axial fan type air cooled condenser	LU-VE SpA
CON33232	10062377	EHVDU 7266	Axial fan type air cooled condenser	LU-VE SpA
CON33233	10062378	EHVDU 7275	Axial fan type air cooled condenser	LU-VE SpA
CON33234	10062379	EHVDU 7276	Axial fan type air cooled condenser	LU-VE SpA
CON33235	10062380	EHVDU 7285	Axial fan type air cooled condenser	LU-VE SpA
CON33236	10062381	EHVDU 7286	Axial fan type air cooled condenser	LU-VE SpA
CON33237	10062382	EHVDU 7295	Axial fan type air cooled condenser	LU-VE SpA

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
CON33238	10062383	EHVDU 7296	Axial fan type air cooled condenser	LU-VE SpA
CON33239	10062281	EHVDR 5225	Axial fan type air cooled condenser	LU-VE SpA
CON33240	10062276	EHVDR 5226	Axial fan type air cooled condenser	LU-VE SpA
CON33241	10062291	EHVDR 5235	Axial fan type air cooled condenser	LU-VE SpA
CON33242	10062286	EHVDR 5236	Axial fan type air cooled condenser	LU-VE SpA
CON33243	10062301	EHVDR 5245	Axial fan type air cooled condenser	LU-VE SpA
CON33244	10062296	EHVDR 5246	Axial fan type air cooled condenser	LU-VE SpA
CON33245	10062310	EHVDR 5255	Axial fan type air cooled condenser	LU-VE SpA
CON33246	10062351	EHVDR 5256	Axial fan type air cooled condenser	LU-VE SpA
CON33247	10062320	EHVDR 5265	Axial fan type air cooled condenser	LU-VE SpA
CON33248	10062315	EHVDR 5266	Axial fan type air cooled condenser	LU-VE SpA
CON33249	10062330	EHVDR 5275	Axial fan type air cooled condenser	LU-VE SpA
CON33250	10062325	EHVDR 5276	Axial fan type air cooled condenser	LU-VE SpA
CON33251	10062340	EHVDR 5285	Axial fan type air cooled condenser	LU-VE SpA
CON33252	10062335	EHVDR 5286	Axial fan type air cooled condenser	LU-VE SpA
CON33253	10062350	EHVDR 5295	Axial fan type air cooled condenser	LU-VE SpA
CON33254	10062345	EHVDR 5296	Axial fan type air cooled condenser	LU-VE SpA

23. Part 33 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
RSC33288	080Z2521	Danfoss AK- SC255E	System Manager for Control and Monitoring of Refrigeration Systems	Danfoss
RSC33289	080Z2520	Danfoss AK- SC255	System Manager for Control and Monitoring of Refrigeration systems	Danfoss
RSC33290	080Z2583	Danfoss AK- SC255 DIN	System Manager (w/o Display) for Control and Monitoring of Refrigeration Systems	Danfoss
RSC33291	080Z2551	Danfoss AK-CS	System Manager for control and monitoring of regrigeration system and ancilliary equipment in small and medium applications	Danfoss
RSC33347	084B8521	Danfoss EKC202A Controller	Refrigeration Controller for Display cabinets and Cold Rooms	Danfoss
RSC33348	084B8522	Danfoss EKC202B Controller	Refrigeration Display Cabinet and Cold Room Controller	Danfoss
RSC33349	084B8523	Danfoss EKC202C Controller	Refrigeration Display Cabinet and Cold Room Controller	Danfoss
RSC33350	084B8536	Danfoss EKC202D Controller	Refrigeration Display Cabinet and Cold Room Controller	Danfoss
RSC33415	080Z8500	Danfoss AK-SM 350	System Management front End for Refrigeration Applications	Danfoss
RSC33416	080Z8502	Danfoss AK- SM350	System Manager Front End for Refrigeration Applications	Danfoss

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
RSC33417	080Z8512	Danfoss AK-SM 720	System Management Gateway for Refrigeration Applications	Danfoss
RSC33418	080Z2553	Danfoss AK-CS Din Version	Front End System Manager for Small refrigeration Systems	Danfoss
RSC33419	084B8022	Danfoss AK-CC 450 Screw Terminals	Refrigeration Display Case and Coldroom Controller	Danfoss
RSC33420	084B8023	Danfoss AK-CC 450 Plug and Socket	Refrigeration Display Case and Coldroom Controller	Danfoss
RSC33421	080Z0117	Danfoss AK-PC730	Refrigeration Controller Multiple evaporators and Pack Controller	Danfoss
RSC33422	080Z0112	Danfoss AK- PC840	Refrigeration Controller for Multiple Compressors and Condensers	Danfoss
RSC33424	080Z0141	Danfoss AK-PC740	Refrigeration Controller for Multiple Compressors and Condensers with Oil Management	Danfoss
RSC33425	080Z0151	Danfoss AK-PC780	Refrigeration Controller for Multiple Compressors and Condensers with Oil Control	Danfoss
RSC33440	084B8012	Danfoss AK-PC 520	Refrigeration Controller for Multiple Compressors and Condensers	Danfoss
RSC33389	084B8520	Danfoss AK- CC210 Controller	Refrigeration Display Cabinet and Cold Room Controller	Danfoss
RSC33390	084B8524	Danfoss AK- CC450 Controller	Refrigeration Display Cabinet and Cold Room Controller	Danfoss
RSC33391	084B8011	Danfoss EKC414A1 Controller	Refrigeration Display Case and Cold Room Controller	Danfoss

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24. Part 35 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
IMM33697	1280130	vc330/60	servo hydrauic	ENGEL UK
IMM33698	2180190	vc750/150	servo hydrauic	ENGEL UK
IMM33699	2340210	vc2050/300	servo hydrauic	ENGEL UK
IMM33700	1280960	e-vic200/65	servo hydraulic / electric injection unit	ENGEL UK

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
IMM33701	1330975	e-vic310/120	servo hydraulic / electric injection unit	ENGEL UK
IMM33702	4900400	e-vic1640/280	servo hydraulic / electric injection unit	ENGEL UK
IMM33703	4100100	emax80/50	full servo	ENGEL UK
IMM33704	4300200	emotion200/55	full servo	ENGEL UK
IMM33705	4500150	emotion310/100	full servo	ENGEL UK
IMM33706	4900100	emotion740/280	full servo	ENGEL UK
IMM33707	4750300	emotion940/180	full servo	ENGEL UK
IMM33708	4920300	emotion2440/380	full servo	ENGEL UK
IMM33709	4300050	em50/55	full servo	ENGEL UK
IMM33710	4130200	em310/100	full servo	ENGEL UK
IMM33711	4130300	em440/100	full servo	ENGEL UK
IMM33712	4200300	emx740/180	full servo	ENGEL UK
IMM33713	4900300	em1340/280	full servo	ENGEL UK
IMM33714	4020300	em2440/380	full servo	ENGEL UK

25. Part 38 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32297	ESS-A-1-63	ESS-A-1-63	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32298	ESS-A-1-100	ESS-A-1-100	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32299	ESS-A-1-200	ESS-A-1-200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32300	ESS-A-1-400	ESS-A-1-400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32301	ESS-A-1-600	ESS-A-1-600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32302	ESS-A-1-800	ESS-A-1-800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
V\$A32303	ESS-A-1-1000	ESS-A-1-1000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32304	ESS-A-1-1200	ESS-A-1-1200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32305	ESS-A-1-1400	ESS-A-1-1400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
V\$A32306	ESS-A-1-1600	ESS-A-1-1600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
V\$A32307	ESS-A-1-1800	ESS-A-1-1800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32308	ESS-A-1-2000	ESS-A-1-2000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32309	ESS-B-1-45	ESS-B-1-45	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32310	ESS-B-1-90	ESS-B-1-90	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32311	ESS-B-1-150	ESS-B-1-150	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
V\$A32312	ESS-B-1-300	ESS-B-1-300	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32313	ESS-B-1-600	ESS-B-1-600	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32314	ESS-B-1-900	ESS-B-1-900	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32315	ESS-B-1-1200	ESS-B-1-1200	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32316	ESS-B-1-1500	ESS-B-1-1500	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32317	ESS-B-1-1800	ESS-B-1-1800	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32318	ESS-B-1-2100	ESS-B-1-2100	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32319	ESS-B-1-2400	ESS-B-1-2400	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32320	ESS-B-1-2700	ESS-B-1-2700	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32321	ESS-B-1-3000	ESS-B-1-3000	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32322	ESS-C-1-63	ESS-C-1-63	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32323	ESS-C-1-125	ESS-C-1-125	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32324	ESS-C-1-200	ESS-C-1-200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32325	ESS-C-1-400	ESS-C-1-400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32326	ESS-C-1-800	ESS-C-1-800	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32327	ESS-C-1-1200	ESS-C-1-1200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32328	ESS-C-1-1600	ESS-C-1-1600	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32329	ESS-C-1-2000	ESS-C-1-2000	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32330	ESS-C-1-2400	ESS-C-1-2400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32331	ESS-C-1-2800	ESS-C-1-2800	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32332	ESS-C-1-3200	ESS-C-1-3200	Dynamic voltage optimisation, voltage correction range '0 to -6.25%'	Claude Lyons Limited
VSA32333	ESS-C-1-3600	ESS-C-1-3600	Dynamic voltage optimisation, voltage correction range '0 to -6.25%'	Claude Lyons Limited
VSA32334	ESS-C-1-4000	ESS-C-1-4000	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
V\$A32335	ESS-D-1-75	ESS-D-1-75	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32336	ESS-D-1-125	ESS-D-1-125	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32337	ESS-D-1-250	ESS-D-1-250	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32338	ESS-D-1-500	ESS-D-1-500	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32339	ESS-D-1-750	ESS-D-1-750	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32340	ESS-D-1-1000	ESS-D-1-1000	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32341	ESS-D-1-1250	ESS-D-1-1250	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32342	ESS-D-1-1500	ESS-D-1-1500	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32343	ESS-D-1-1750	ESS-D-1-1750	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32344	ESS-D-1-2000	ESS-D-1-2000	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32345	ESS-D-1-2250	ESS-D-1-2250	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32346	ESS-D-1-2500	ESS-D-1-2500	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32347	ESS-AV-1-63	ESS-AV-1-63	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32348	ESS-AV-1-100	ESS-AV-1-100	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32349	ESS-AV-1-200	ESS-AV-1-200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32350	ESS-AV-1-400	ESS-AV-1-400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
V\$A32351	ESS-AV-1-600	ESS-AV-1-600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32352	ESS-AV-1-800	ESS-AV-1-800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32353	ESS-AV-1-1000	ESS-AV-1-1000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32354	ESS-AV-1-1200	ESS-AV-1-1200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
V\$A32355	ESS-AV-1-1400	ESS-AV-1-1400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32356	ESS-AV-1-1600	ESS-AV-1-1600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
V\$A32357	ESS-AV-1-1800	ESS-AV-1-1800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32358	ESS-AV-1-2000	ESS-AV-1-2000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32359	ESS-BV-1-45	ESS-BV-1-45	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32360	ESS-BV-1-90	ESS-BV-1-90	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32361	ESS-BV-1-150	ESS-BV-1-150	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32362	ESS-BV-1-300	ESS-BV-1-300	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32363	ESS-BV-1-600	ESS-BV-1-600	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32364	ESS-BV-1-900	ESS-BV-1-900	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32365	ESS-BV-1-1200	ESS-BV-1-1200	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32366	ESS-BV-1-1500	ESS-BV-1-1500	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32367	ESS-BV-1-1800	ESS-BV-1-1800	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32368	ESS-BV-1-2100	ESS-BV-1-2100	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32369	ESS-BV-1-2400	ESS-BV-1-2400	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32370	ESS-BV-1-2700	ESS-BV-1-2700	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32371	ESS-BV-1-3000	ESS-BV-1-3000	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32372	ESS-CV-1-63	ESS-CV-1-63	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32373	ESS-CV-1-125	ESS-CV-1-125	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32374	ESS-CV-1-200	ESS-CV-1-200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32375	ESS-CV-1-400	ESS-CV-1-400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32376	ESS-CV-1-800	ESS-CV-1-800	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32377	ESS-CV-1-1200	ESS-CV-1-1200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32378	ESS-CV-1-1600	ESS-CV-1-1600	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32379	ESS-CV-1-2000	ESS-CV-1-2000	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32380	ESS-CV-1-2400	ESS-CV-1-2400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32381	ESS-CV-1-2800	ESS-CV-1-2800	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32382	ESS-CV-1-3200	ESS-CV-1-3200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32383	ESS-CV-1-3600	ESS-CV-1-3600	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32384	ESS-CV-1-4000	ESS-CV-1-4000	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32385	ESS-DV-1-75	ESS-DV-1-75	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32386	ESS-DV-1-125	ESS-DV-1-125	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32387	ESS-DV-1-250	ESS-DV-1-250	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32388	ESS-DV-1-500	ESS-DV-1-500	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32389	ESS-DV-1-750	ESS-DV-1-750	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32390	ESS-DV-1-1000	ESS-DV-1-1000	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32391	ESS-DV-1-1250	ESS-DV-1-1250	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32392	ESS-DV-1-1500	ESS-DV-1-1500	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32393	ESS-DV-1-1750	ESS-DV-1-1750	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32394	ESS-DV-1-2000	ESS-DV-1-2000	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32395	ESS-DV-1-2250	ESS-DV-1-2250	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32396	ESS-DV-1-2500	ESS-DV-1-2500	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32397	ESS-A-3-32	ESS-A-3-32	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32398	ESS-A-3-63	ESS-A-3-63	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32399	ESS-A-3-100	ESS-A-3-100	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32400	ESS-A-3-200	ESS-A-3-200	Dynamic voltage optimisation, voltage correction range '0 to -12.5%'	Claude Lyons Limited
VSA32401	ESS-A-3-400	ESS-A-3-400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32402	ESS-A-3-600	ESS-A-3-600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32403	ESS-A-3-800	ESS-A-3-800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32404	ESS-A-3-1000	ESS-A-3-1000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32405	ESS-A-3-1200	ESS-A-3-1200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32406	ESS-A-3-1400	ESS-A-3-1400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32407	ESS-A-3-1600	ESS-A-3-1600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32408	ESS-A-3-1800	ESS-A-3-1800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32409	ESS-A-3-2000	ESS-A-3-2000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%'	Claude Lyons Limited
VSA32410	ESS-B-3-45	ESS-B-3-45	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32411	ESS-B-3-90	ESS-B-3-90	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32412	ESS-B-3-150	ESS-B-3-150	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32413	ESS-B-3-300	ESS-B-3-300	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32414	ESS-B-3-600	ESS-B-3-600	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32415	ESS-B-3-900	ESS-B-3-900	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32416	ESS-B-3-1200	ESS-B-3-1200	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32417	ESS-B-3-1500	ESS-B-3-1500	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32418	ESS-B-3-1800	ESS-B-3-1800	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32419	ESS-B-3-2100	ESS-B-3-2100	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32420	ESS-B-3-2400	ESS-B-3-2400	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32421	ESS-B-3-2700	ESS-B-3-2700	Dynamic voltage optimisation, voltage correction range '0 to —8.33%'	Claude Lyons Limited
VSA32422	ESS-C-3-63	ESS-C-3-63	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32423	ESS-C-3-125	ESS-C-3-125	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32424	ESS-C-3-200	ESS-C-3-200	Dynamic voltage optimisation, voltage correction range '0 to -6.25%'	Claude Lyons Limited
VSA32425	ESS-C-3-400	ESS-C-3-400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32426	ESS-C-3-800	ESS-C-3-800	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32427	ESS-C-3-1200	ESS-C-3-1200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32428	ESS-C-3-1600	ESS-C-3-1600	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32429	ESS-C-3-2000	ESS-C-3-2000	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32430	ESS-C-3-2400	ESS-C-3-2400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%'	Claude Lyons Limited
VSA32431	ESS-D-3-40	ESS-D-3-40	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32432	ESS-D-3-75	ESS-D-3-75	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
V\$A32433	ESS-D-3-125	ESS-D-3-125	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32434	ESS-D-3-250	ESS-D-3-250	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32435	ESS-D-3-500	ESS-D-3-500	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32436	ESS-D-3-750	ESS-D-3-750	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32437	ESS-D-3-1000	ESS-D-3-1000	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32438	ESS-D-3-1250	ESS-D-3-1250	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32439	ESS-D-3-1500	ESS-D-3-1500	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32440	ESS-D-3-1750	ESS-D-3-1750	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32441	ESS-D-3-2000	ESS-D-3-2000	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32442	ESS-D-3-2250	ESS-D-3-2250	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
VSA32443	ESS-D-3-2500	ESS-D-3-2500	Dynamic voltage optimisation, voltage correction range '0 to —10%'	Claude Lyons Limited
V\$A32444	ESS-AV-3-32	ESS-AV-3-32	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32445	ESS-AV-3-63	ESS-AV-3-63	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32446	ESS-AV-3-100	ESS-AV-3-100	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
V\$A32447	ESS-AV-3-200	ESS-AV-3-200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32448	ESS-AV-3-400	ESS-AV-3-400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32449	ESS-AV-3-600	ESS-AV-3-600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32450	ESS-AV-3-800	ESS-AV-3-800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32451	ESS-AV-3-1000	ESS-AV-3-1000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32452	ESS-AV-3-1200	ESS-AV-3-1200	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32453	ESS-AV-3-1400	ESS-AV-3-1400	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32454	ESS-AV-3-1600	ESS-AV-3-1600	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32455	ESS-AV-3-1800	ESS-AV-3-1800	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32456	ESS-AV-3-2000	ESS-AV-3-2000	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with 264V input voltage option	Claude Lyons Limited
VSA32457	ESS-BV-3-45	ESS-BV-3-45	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32458	ESS-BV-3-90	ESS-BV-3-90	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32459	ESS-BV-3-150	ESS-BV-3-150	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32460	ESS-BV-3-300	ESS-BV-3-300	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32461	ESS-BV-3-600	ESS-BV-3-600	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32462	ESS-BV-3-900	ESS-BV-3-900	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32463	ESS-BV-3-1200	ESS-BV-3-1200	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32464	ESS-BV-3-1500	ESS-BV-3-1500	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32465	ESS-BV-3-1800	ESS-BV-3-1800	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32466	ESS-BV-3-2100	ESS-BV-3-2100	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32467	ESS-BV-3-2400	ESS-BV-3-2400	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32468	ESS-BV-3-2700	ESS-BV-3-2700	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with 264V input voltage option	Claude Lyons Limited
VSA32469	ESS-CV-3-63	ESS-CV-3-63	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32470	ESS-CV-3-125	ESS-CV-3-125	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32471	ESS-CV-3-200	ESS-CV-3-200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32472	ESS-CV-3-400	ESS-CV-3-400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32473	ESS-CV-3-800	ESS-CV-3-800	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32474	ESS-CV-3-1200	ESS-CV-3-1200	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32475	ESS-CV-3-1600	ESS-CV-3-1600	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32476	ESS-CV-3-2000	ESS-CV-3-2000	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32477	ESS-CV-3-2400	ESS-CV-3-2400	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with 264V input voltage option	Claude Lyons Limited
VSA32478	ESS-DV-3-40	ESS-DV-3-40	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32479	ESS-DV-3-75	ESS-DV-3-75	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32480	ESS-DV-3-125	ESS-DV-3-125	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32481	ESS-DV-3-250	ESS-DV-3-250	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32482	ESS-DV-3-500	ESS-DV-3-500	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32483	ESS-DV-3-750	ESS-DV-3-750	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32484	ESS-DV-3-1000	ESS-DV-3-1000	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32485	ESS-DV-3-1250	ESS-DV-3-1250	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32486	ESS-DV-3-1500	ESS-DV-3-1500	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32487	ESS-DV-3-1750	ESS-DV-3-1750	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32488	ESS-DV-3-2000	ESS-DV-3-2000	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32489	ESS-DV-3-2250	ESS-DV-3-2250	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32490	ESS-DV-3-2500	ESS-DV-3-2500	Dynamic voltage optimisation, voltage correction range '0 to —10%' with 264V input voltage option	Claude Lyons Limited
VSA32491	ESS-A-1-63 'S'	ESS-A-1-63 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32492	ESS-A-1-100 'S'	ESS-A-1-100 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32493	ESS-A-1-200 'S'	ESS-A-1-200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32494	ESS-A-1-400 'S'	ESS-A-1-400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32495	ESS-A-1-600 'S'	ESS-A-1-600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32496	ESS-A-1-800 'S'	ESS-A-1-800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32497	ESS-A-1-1000 'S'	ESS-A-1-1000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32498	ESS-A-1-1200 'S'	ESS-A-1-1200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32499	ESS-A-1-1400 'S'	ESS-A-1-1400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32500	ESS-A-1-1600 'S'	ESS-A-1-1600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32501	ESS-A-1-1800 'S'	ESS-A-1-1800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32502	ESS-A-1-2000 'S'	ESS-A-1-2000 'S'	Dynamic voltage optimisation, voltage correction range '0 to -12.5%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32503	ESS-B-1-45 'S'	ESS-B-1-45 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32504	ESS-B-1-90 'S'	ESS-B-1-90 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32505	ESS-B-1-150 'S'	ESS-B-1-150 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32506	ESS-B-1-300 'S'	ESS-B-1-300 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32507	ESS-B-1-600 'S'	ESS-B-1-600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32508	ESS-B-1-900 'S'	ESS-B-1-900 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32509	ESS-B-1-1200 'S'	ESS-B-1-1200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32510	ESS-B-1-1500 'S'	ESS-B-1-1500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32511	ESS-B-1-1800 'S'	ESS-B-1-1800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32512	ESS-B-1-2100 'S'	ESS-B-1-2100 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32513	ESS-B-1-2400 'S'	ESS-B-1-2400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32514	ESS-B-1-2700 'S'	ESS-B-1-2700 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32515	ESS-B-1-3000 'S'	ESS-B-1-3000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32516	ESS-C-1-63 'S'	ESS-C-1-63 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32517	ESS-C-1-125 'S'	ESS-C-1-125 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32518	ESS-C-1-200 'S'	ESS-C-1-200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32519	ESS-C-1-400 'S'	ESS-C-1-400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32520	ESS-C-1-800 'S'	ESS-C-1-800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32521	ESS-C-1-1200 'S'	ESS-C-1-1200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32522	ESS-C-1-1600 'S'	ESS-C-1-1600 'S'	Dynamic voltage optimisation, voltage correction range '0 to -6.25%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32523	ESS-C-1-2000 'S'	ESS-C-1-2000 'S'	Dynamic voltage optimisation, voltage correction range '0 to -6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32524	ESS-C-1-2400 'S'	ESS-C-1-2400 'S'	Dynamic voltage optimisation, voltage correction range '0 to -6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32525	ESS-C-1-2800 'S'	ESS-C-1-2800 'S'	Dynamic voltage optimisation, voltage correction range '0 to -6.25%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32526	ESS-C-1-3200 'S'	ESS-C-1-3200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32527	ESS-C-1-3600 'S'	ESS-C-1-3600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32528	ESS-C-1-4000 'S'	ESS-C-1-4000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32529	ESS-D-1-75 'S'	ESS-D-1-75 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32530	ESS-D-1-125 'S'	ESS-D-1-125 'S'	Dynamic voltage optimisation, voltage correction range '0 to -10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32531	ESS-D-1-250 'S'	ESS-D-1-250 'S'	Dynamic voltage optimisation, voltage correction range '0 to -10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32532	ESS-D-1-500 'S'	ESS-D-1-500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32533	ESS-D-1-750 'S'	ESS-D-1-750 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32534	ESS-D-1-1000 'S'	ESS-D-1-1000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32535	ESS-D-1-1250 'S'	ESS-D-1-1250 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32536	ESS-D-1-1500 'S'	ESS-D-1-1500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32537	ESS-D-1-1750 'S'	ESS-D-1-1750 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32538	ESS-D-1-2000 'S'	ESS-D-1-2000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32539	ESS-D-1-2250 'S'	ESS-D-1-2250 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32540	ESS-D-1-2500 'S'	ESS-D-1-2500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32541	ESS-A-3-32 'S'	ESS-A-3-32 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32542	ESS-A-3-63 'S'	ESS-A-3-63 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32543	ESS-A-3-100 'S'	ESS-A-3-100 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32544	ESS-A-3-200 'S'	ESS-A-3-200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32545	ESS-A-3-400 'S'	ESS-A-3-400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32546	ESS-A-3-600 'S'	ESS-A-3-600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32547	ESS-A-3-800 'S'	ESS-A-3-800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32548	ESS-A-3-1000 'S'	ESS-A-3-1000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32549	ESS-A-3-1200 'S'	ESS-A-3-1200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32550	ESS-A-3-1400 'S'	ESS-A-3-1400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32551	ESS-A-3-1600 'S'	ESS-A-3-1600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32552	ESS-A-3-1800 'S'	ESS-A-3-1800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32553	ESS-A-3-2000 'S'	ESS-A-3-2000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —12.5%' with remote monitoring and metering options	Claude Lyons Limited
VSA32554	ESS-B-3-45 'S'	ESS-B-3-45 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32555	ESS-B-3-90 'S'	ESS-B-3-90 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32556	ESS-B-3-150 'S'	ESS-B-3-150 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32557	ESS-B-3-300 'S'	ESS-B-3-300 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32558	ESS-B-3-600 'S'	ESS-B-3-600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32559	ESS-B-3-900 'S'	ESS-B-3-900 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32560	ESS-B-3-1200 'S'	ESS-B-3-1200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32561	ESS-B-3-1500 'S'	ESS-B-3-1500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32562	ESS-B-3-1800 'S'	ESS-B-3-1800 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32563	ESS-B-3-2100 'S'	ESS-B-3-2100 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32564	ESS-B-3-2400 'S'	ESS-B-3-2400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited
VSA32565	ESS-B-3-2700 'S'	ESS-B-3-2700 'S'	Dynamic voltage optimisation, voltage correction range '0 to —8.33%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32566	ESS-C-3-63 'S'	ESS-C-3-63 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32567	ESS-C-3-125 'S'	ESS-C-3-125 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32568	ESS-C-3-200 'S'	ESS-C-3-200 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32569	ESS-C-3-400 'S'	ESS-C-3-400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32570	ESS-C-3-800 'S'	ESS-C-3-800 'S'	Dynamic voltage optimisation, voltage correction range '0 to -6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32571	ESS-C-3-1200 'S'	ESS-C-3-1200 'S'	Dynamic voltage optimisation, voltage correction range '0 to -6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32572	ESS-C-3-1600 'S'	ESS-C-3-1600 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
VSA32573	ESS-C-3-2000 'S'	ESS-C-3-2000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
V\$A32574	ESS-C-3-2400 'S'	ESS-C-3-2400 'S'	Dynamic voltage optimisation, voltage correction range '0 to —6.25%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32575	ESS-D-3-40 'S'	ESS-D-3-40 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32576	ESS-D-3-75 'S'	ESS-D-3-75 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
V\$A32577	ESS-D-3-125 'S'	ESS-D-3-125 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32578	ESS-D-3-250 'S'	ESS-D-3-250 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32579	ESS-D-3-500 'S'	ESS-D-3-500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32580	ESS-D-3-750 'S'	ESS-D-3-750 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32581	ESS-D-3-1000 'S'	ESS-D-3-1000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32582	ESS-D-3-1250 'S'	ESS-D-3-1250 'S'	Dynamic voltage optimisation, voltage correction range '0 to -10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32583	ESS-D-3-1500 'S'	ESS-D-3-1500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32584	ESS-D-3-1750 'S'	ESS-D-3-1750 'S'	Dynamic voltage optimisation, voltage correction range '0 to -10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32585	ESS-D-3-2000 'S'	ESS-D-3-2000 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32586	ESS-D-3-2250 'S'	ESS-D-3-2250 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32587	ESS-D-3-2500 'S'	ESS-D-3-2500 'S'	Dynamic voltage optimisation, voltage correction range '0 to —10%' with remote monitoring and metering options	Claude Lyons Limited
VSA32588	TS-3.5	TS-3.5	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32589	TS-4	TS-4	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32590	TS-5	TS-5	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32591	TS-6	TS-6	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32592	TS-8	TS-8	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32593	TS-9	TS-9	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32594	TS-10	TS-10	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32595	TS-11	TS-11	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32596	TS-12	TS-12	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32597	TS-2.5/3	TS-2.5/3	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32598	TS-333	TS-333	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32599	TS-3.5/3	TS-3.5/3	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32600	TS-444	TS-444	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32601	TS-555	TS-555	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32602	TS-666	TS-666	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32603	TS-777	TS-777	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32604	TS-888	TS-888	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32605	TS-999	TS-999	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32606	TS-1010	TS-1010	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32607	TS-1111	TS-1111	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited
VSA32608	TS-1212	TS-1212	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —17.5 +7.5%, Tap B — / +12.5%, Tap C —7.5 +17.5%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32609	TS-4X	TS-4X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32610	TS-5X	TS-5X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A -21 +9%, Tap B - / +15%, Tap C -9 +21%	Claude Lyons Limited
VSA32611	TS-6X	TS-6X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32612	TS-8X	TS-8X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32613	TS-9X	TS-9X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32614	TS-10X	TS-10X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A -21 +9%, Tap B - / +15%, Tap C -9 +21%	Claude Lyons Limited
VSA32615	TS-11X	TS-11X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32616	TS-12X	TS-12X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32617	TS-333 X	TS-333 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32618	TS-3.5/3 X	TS-3.5/3 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
VSA32619	TS-444 X	TS-444 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32620	TS-555 X	TS-555 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32621	TS-666 X	TS-666 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32622	TS-777 X	TS-777 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32623	TS-888 X	TS-888 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
V\$A32624	TS-999 X	TS-999 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
V\$A32625	TS-1010 X	TS-1010 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32626	TS-1111 X	TS-1111 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited
VSA32627	TS-1212 X	TS-1212 X	Servo mechanical AC voltage regulators/ stabilisers, Voltage correction ranges; Tap A —21 +9%, Tap B — / +15%, Tap C —9 +21%	Claude Lyons Limited

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26. Part 47 of Schedule 2 of the Principal Order is amended by inserting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
IOS33441	VS4-ENT-C	VMware vSphere 4 Enterprise for 1 processor (Max 6 cores per processor)	VMware vSphere 4 Enterprise for 1 processor (Max 6 cores per processor)	VMware International Limited
IOS33442	VS4-ENT-PL-C	VMware vSphere 4 Enterprise Plus for 1 processor (Max 12 cores per processor)	VMware vSphere 4 Enterprise Plus for 1 processor (Max 12 cores per processor)	VMware International Limited
IOS33443	VS4-EP-AK- VU-PRO	VMware vSphere Enterprise Plus Acceleration Kit PROMO for 8 processors	VMware vSphere Enterprise Plus Acceleration Kit PROMO for 8 processors	VMware International Limited
IOS33444	VS4-MS-AK- VU-PRO	VMware vSphere Midsize Acceleration Kit PROMO for 6 processors	VMware vSphere Midsize Acceleration Kit PROMO for 6 processors	VMware International Limited
IOS33445	VCS-FND-C	VMware vCenter Server 4 Foundation for vSphere up to 3 hosts	VMware vCenter Server 4 Foundation for vSphere up to 3 hosts	VMware International Limited
IOS33446	VCS-STD-C	VMware vCenter Server 4 Standard for vSphere (Includes Orchestrator and Linked Mode)	VMware vCenter Server 4 Standard for vSphere (Includes Orchestrator and Linked Mode)	VMware International Limited
IOS33447	VU4-PR-10-C	VMware View 4 Premier Bundle: 10 Pack	VMware View 4 Premier Bundle: 10 Pack	VMware International Limited
IOS33448	VU4-PR-100-C	VMware View 4 Premier Bundle: 100 Pack	VMware View 4 Premier Bundle: 100 Pack	VMware International Limited

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27. Part 49 of Schedule 2 of the Principal Order is amended by inserting the following:

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
BBO32285	USV 50 Wood Chips	KWB Multifire USV50— W	The KWB Multifire system runs on G30/W30 wood chips in accordance with ONORM M 7133 or B1 in accordance with CEN TC 335.	KWB Biomass Heating Systems
BBO32286	USV 50 Wood Pellets	KWB Multifire USV50— P	The KWB Multifire system runs on wood pellets dia=6 mm / dia=8 mm in accordance with ONORM M 7135 or DIN Plus and industrial pellets dia=11 mm in accordance with ONORM M 7135 HP2.	KWB Biomass Heating Systems
BBO32287	USV 60 Wood Chips	KWB Multifire USV60— W	The KWB Multifire system runs on G30/W30 wood chips in accordance with ONORM M 7133 or B1 in accordance with CEN TC 335.	KWB Biomass Heating Systems
BBO32288	USV 60 Wood Pellets	KWB Multifire USV60— P	The KWB Multifire system runs on wood pellets dia=6 mm / dia=8 mm in accordance with ONORM M 7135 or DIN Plus and industrial pellets dia=11 mm in accordance with ONORM M 7135 HP2.	KWB Biomass Heating Systems

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
BBO32289	USV 80 Wood Chips	KWB Multifire USV80— W	The KWB Multifire system runs on G30/W30 wood chips in accordance with ONORM M 7133 or B1 in accordance with CEN TC 335.	KWB Biomass Heating Systems
BBO32290	USV 80 Wood Pellets	KWB Multifire USV80— P	The KWB Multifire system runs on wood pellets dia=6 mm / dia=8 mm in accordance with ONORM M 7135 or DIN Plus and industrial pellets dia=11 mm in accordance with ONORM M 7135 HP2.	KWB Biomass Heating Systems
BBO32291	USV 100 Wood Chips	KWB Multifire USV100— W	The KWB Multifire system runs on G30/W30 wood chips in accordance with ONORM M 7133 or B1 in accordance with CEN TC 335.	KWB Biomass Heating Systems
BBO32292	USV 100 Wood Pellets	KWB Multifire USV100— P	The KWB Multifire system runs on wood pellets dia=6 mm / dia=8 mm in accordance with ONORM M 7135 or DIN Plus and industrial pellets dia=11 mm in accordance with ONORM M 7135 HP2.	KWB Biomass Heating Systems
BBO32293	TDS 130 Multifuel	KWB Powerfire TDS130	The KWB Powerfire operates on wood chips (G30/G50 in accordance with ONORM M7133) with up to 45 % water content, as well as wood pellets/ industrial pellets (dia=11mm) in accordance with ONORM M7135 or DIN Plus.	KWB Biomass Heating Systems

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
BBO32294	TDS 150 Multifuel	KWB Powerfire TDS150	The KWB Powerfire operates on wood chips (G30/G50 in accordance with ONORM M7133) with up to 45 % water content, as well as wood pellets/ industrial pellets (dia=11mm) in accordance with ONORM M7135 or DIN Plus.	KWB Biomass Heating Systems
BBO32295	TDS 240 Multifuel	KWB Powerfire TDS240	The KWB Powerfire operates on wood chips (G30/G50 in accordance with ONORM M7133) with up to 45 % water content, as well as wood pellets/ industrial pellets (dia=11mm) in accordance with ONORM M7135 or DIN Plus.	KWB Biomass Heating Systems
BBO32296	TDS 300 Multifuel	KWB Powerfire TDS300	The KWB Powerfire operates on wood chips (G30/G50 in accordance with ONORM M7133) with up to 45 % water content, as well as wood pellets/ industrial pellets (dia=11mm) in accordance with ONORM M7135 or DIN Plus.	KWB Biomass Heating Systems

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28. Part 3 of Schedule 2 of the Principal Order is amended by deleting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG9367	T5-ZP-28	T8/T5 Adapter 28W w Reflector	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir
LIG9366	T5-ZH-28	T8/T5 Adapter 28W w/o Reflector	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir
LIG9365	T5-ZP-21	T8/T5 Adapter 21W	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir
LIG9364	T5-ZH-21	T8/T5 Adapter 21W w/o Reflector	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir

Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LIG9363	T5-ZP-14	T8/T5 Adapter 14W w Refelctor	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir
LIG9362	T5-ZH-14	T8/T5 Adapter 14W w/o Reflector	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir
LIG9369	T5-XP-35	T8/T5 Adapter 35W w Reflector	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir
LIG9368	T5-X1-35	T8/T5 Adapter 35W w/o Reflector	Luminaire adaptor converting units with electromagnetic ballasts from T8/T12 fluorescent tubes (by use of electronic conversion units) to T5 fluorescent tubes.	Scremir

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29. Part 4 of Schedule 2 of the Principal Order is amended by deleting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
LCO30306	DIN-INT-CI-08	eDIN input/output module	An eight channel adaptable input/output which can be configured to accept 0-10v, DSI or switched contact as inputs or provide 0-10v, DSI or DMX outputs	Mode Lighting Ltd.

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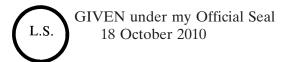
30. Part 6 of Schedule 2 of the Principal Order is amended by deleting the following:

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Triple E Code	Product Code	Product Name	Short Description	Manufacturer
ESE31538	R910 X7560	PowerEdge R910 X7560	4S, 4U Rack, 64 DIMMS, 16 HDDs, 10 PCI, 4 LOMS (2 x 10GB), Intel X7560 processor	Dell

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The Minister for Finance approves the making of the foregoing Order.



BRIAN LENIHAN, Minister for Finance.

GIVEN under my Official Seal, 20 October 2010.

EAMON RYAN,
Minister for Communications, Energy and Natural Resources.

EXPLANATORY NOTE

(This note is not part of the Instrument and does not purport to be a legal interpretation)

The effect of this Order is to update, in accordance with the provisions of section 285A of the Taxes Consolidation Act 1997 (inserted by section 46 of the Finance Act 2008), those energy efficient products whose capital cost will be eligible for accelerated capital allowances and to update the energy efficiency criteria used to determine eligibility for inclusion on those product lists.

The Accelerated Capital Allowance Scheme will involve quarterly updates to those product lists.

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