



# Energy Labelling and MEPS program Regulatory Ruling – limited exemption for replacement electric motors

## Energy Labelling and MEPS program Regulatory Ruling

**Ruling Number:** 041

**Revision** A

This ruling has been prepared on behalf of all regulators for MEPS for electrical appliances in Australia and New Zealand. This ruling represents an agreed interpretation of the relevant regulations. This interpretation shall be recognised in all Australian and New Zealand jurisdictions.

**Product Type:** Rotating electrical machines—  
**Relevant Standard:** AS/NZS 1359.5:2004  
**Relevant Clause/s:** 1.2 Exclusions  
**Initial Date of Draft Ruling:** 21st June 2011  
**Date of Standard Amendment:** N/A

	NSW	QLD	SA	VIC	NZ
<b>Accepted By</b>	T Aldrich	Carl Porritt	J Corbett	M Grubert	E Thompson
	Department of Trade and Investment, Regional Infrastructure and Services	Department of Justice and Attorney-General	Department for Transport, Energy and Infrastructure	Energy Safe Victoria	Energy Efficiency and Conservation Authority
<b>Date Accepted</b>	16.1.2012	13.1.2012	19.1.2012	17.1.2012	19.1.2012

### Subject

Trial exemption where a MEPS-compliant motor is not a suitable replacement.

### Background

MEPS requirements for 3-phase motors were brought about by the introduction of the AS/NZS 1359.5:2000 standard, with increased MEPS levels (referred to here as “MEPS 2”) enforced from mid-2006 under the revised AS/NZS 1359.5:2004.

### Size issues

In order to achieve the required increase in efficiency, certain motors need to be made physically bigger and therefore have to be designed to suit the next larger frame-size.

During the lifespan of a piece of equipment, the motor may well need to be replaced over time. Occasionally, however, a MEPS 2-compliant replacement motor may not be of a suitable frame-size to be installed as a

replacement spare part. That is, it will not physically fit into a piece of equipment that was designed and built for an earlier model motor with a smaller frame-size.

When replacing older motors, in some cases this is currently being done using “grandfathered” or second-hand stock of motors, or rewinding motors – however, at some point, stocks will run out, and/or it may no longer be possible to keep rewinding older motors. Therefore, there needs to be an option for end-users to keep their machinery operational without major re-engineering.

### **Speed issues**

Additionally, a current MEPS 2 compliant model may operate at a higher rotational speed than its older and less efficient counterpart. For most applications, this is not an issue. However, there are a few applications where this is a problem.

For example, where more than one motor is mechanically coupled, all of the motors need to match exactly. Here the main criteria is that the motors operate in parallel, are coupled to the same mechanical load and need to share the load evenly, so mixing a MEPS 2-compliant motor with older, slower motors in a group of mechanically-coupled drives could lead to overloading of motors causing motor burn-out, and damage to mechanical components and eventual potentially catastrophic equipment failure.

For example:

- Crane structures can typically use groups of 2, 4, 8 or 16 motors
- Dual-lift hoists where motors drive the hoist rope drums individually, but can be coupled together to drive a common larger load with both motors operating in parallel.
- Conveyors where head and tail drums are both driven to distribute the load over multiple motors.

There may also be some specific cases where a single motor is used in a speed critical application, for example fans and pumps, where a MEPS-compliant motor may overdrive the load if they can **only** operate at a higher rotational speed than the load is designed to take.

### **Scope of the standard**

The scope of the standard (AS/NZS 1359.5:2004 Section 1.2.d) clearly identifies that the following products MAY be excluded from having to comply with the MEPS requirements of the Standard:

*Motors that have been granted exemption by the relevant Australian or New Zealand regulatory authority due to their application placing restraints on the motor dimensions or other key design aspects.*

*NOTE: Exclusion from MEPS for these types of motors is based on their low projected usage and hence low total energy consumption.*

**A trial will be undertaken whereby suppliers are permitted to supply no more than 10 non MEPS-compliant units per supplier within the period 1<sup>st</sup> February 2012 – 30<sup>th</sup> June 2012.**

### **Ruling:**

- All **new machines/applications** SHALL use MEPS-compliant motors, as required by the standard (AS/NZS 1359.5:2004).
- In **specific existing installations**, where a replacement motor is required, if a suitable size and speed MEPS-compliant product has been shown to NOT be available, a non MEPS 2-compliant motor MAY be installed, under the following provisos:
  1. Non MEPS 2-compliant motors must be to at least MEPS 2001 levels of energy performance. Tested evidence of such energy performance must be provided to regulators upon request.
  2. For each non MEPS-compliant motor supplied, before the sale, the end-user SHALL provide to the supplier a statutory declaration, or a declaration on the company letterhead, signed by the CEO/managing director/owner of the company, detailing the technical reasons why the motor cannot be replaced with a MEPS-compliant motor.
  3. For each non MEPS-compliant motor supplied, within two weeks of the sale, the supplier SHALL forward the above-mentioned statutory declaration or a declaration on company letterhead to [energyrating@climatechange.gov.au](mailto:energyrating@climatechange.gov.au). It will then be forwarded by DCCEE to the relevant regulatory authority.

4. Number of units supplied, serial numbers, and details of the old and replacement motors SHALL be recorded by the supplier.
5. The above-mentioned declaration and records SHALL be retained by the supplier, and would be fully auditable.
6. No more than 10 motors per supplier may be exempt from the current MEPS requirements, throughout the 5 month trial period.
7. Before 1 September 2012, a summary document of all items supplied, using the pro forma included in this ruling, SHALL be sent by the supplier to [energyrating@climatechange.gov.au](mailto:energyrating@climatechange.gov.au). It will then be forwarded by DCCEE to the relevant regulatory authority.

**This regulatory ruling is being offered as short term trial, effective from 1 February 2012 – 30 June 2012. A review shall be carried out by the E3 regulators to decide whether this regulatory ruling is to be extended after this period.**

Proposed revisions to the Standard

Nil.

Supplier Summary - A company seeking MEPS-exemption must submit the following pro forma before 1 September 2012.

The three-phase electric motors listed in the following table have been supplied on the understanding that they are intended for use in specific applications where a MEPS 2005 compliant unit is not suitable as a replacement.

No.	Brand	Model	Serial No. of the new/ replacement unit	Serial No. of the unit being replaced	Notes – justification for a non-compliant motor being used (e.g speed, frame-size)  a suitable size and speed MEPS-compliant product has been shown to NOT be available	MEPS 1 Record ID/ Registration No.	Rated load (kW)	Full load efficiency (%)	Date sold
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

If *{company making application}* fails to abide by this declaration, *{company making application}* agrees to have their exemption and registrations for the above mentioned energy efficiency cancelled. *{company making application}* acknowledges this will mean immediate cessation of sale of the equipment for any installation application and that appropriate compliance activity for breach of legislative requirements will be undertaken by the Regulator against *{company making application}*.

Name and position of signatory \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_