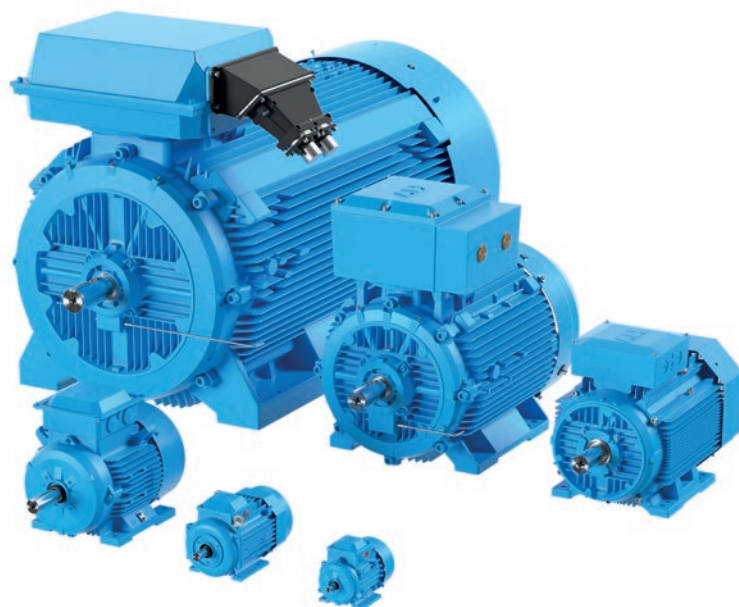


## PRODUCT NOTE

# South Korea updates MEPS scheme for low-voltage motors



## Mandatory efficiency grade label

Since South Korea's Ministry of Commerce Industry and Energy (MOCIE) implemented the mandatory MEPS scheme, further development has been introduced in steps during recent years. The next step in the MEPS scheme, from October 1, 2018, will extend the scope so that motors from 0.75 kW up to 375 kW are covered by the MEPS, and the IE3 efficiency level will be mandatory.

After October 1, 2018, the MEPS scheme will apply to two-, four-, six- and eight-pole motors in the range from 0.75 up to 200 kW, and to four- and six-pole motors up to 375 kW. All motors for direct on-line duty, including Ex motors and motors driving fans, blowers and pumps in VSD duty fall into the scope of the MEPS.

There are some exemptions to the MEPS, and the following motors are excluded from the MEPS:

- Totally enclosed non-ventilated motors
- Totally enclosed air over motors
- Two-speed motors
- Sleeve and thrust bearing motors
- Permanent magnet motors

Also motors in VSD duty driving other applications than those listed above are excluded. Some example applications are agitators, compressors, mills, cranes, and extruders.

Registered motors must be provided with a MEPS label showing the following information: motor type, number of poles, output power, efficiency, annual energy costs, and CO<sub>2</sub> emissions per hour.

Motors without the required label will not be allowed through Korean customs!

## Qualification for the label

To qualify for the label, motors must meet the energy efficiency and performance requirements of the MEPS scheme.

The efficiency level determined must be equal to or better than the value specified for the motor's rated output power (see table overleaf).

Testing must be performed according to IEC 60034-2-1 by a qualified test laboratory, which must be accredited by the Korea Energy Management Corporation (KEMCO). Registration is also granted by KEMCO.

Required minimum MEPS levels of motors, tolerances as per IEC

Rated Power kW	Energy Efficiency %			
	Grade 1			
	2 poles	4 poles	6 poles	8 poles
0.75	75.5	82.5	80	74
1.5	84	84	86.5	82.5
2.2	85.5	87.5	87.5	84
4	87.5	87.5	87.5	85.5
5.5	88.5	89.5	89.5	85.5
7.5	89.5	89.5	89.5	88.5
11	90.2	91	90.2	88.5
15	90.2	91	90.2	89.5
18.5	91	92.4	91.7	89.5
22	91	92.4	91.7	91
30	91.7	93	93	91
37	92.4	93	93	91.7
45	93	93.8	93.6	91.7
55	93	94.1	93.6	93
75	93.6	94.5	94.1	93
90	94.5	94.5	94.1	93.6
110	94.5	95	95	93.6
132	94.5	95	95	--
160	95	95	95	--
200	95	95	--	--

The requirements for the MEPS scheme are based on 60 Hz and an ambient temperature of 40 °C.

ABB motors and the MEPS scheme

IE3 Process performance M3BP cast iron motors in frame sizes 280–355 and in a power range from 37 kW up to 200 kW are registered. Due to the complex registration process, only registered motor types can be sold.



When ordering these motors for Korea, the following variant code must be added:  
500 – Fulfills Korean MEPS efficiency regulations

For more information, please contact your local ABB representative or visit:

[abb.com/motors-generators](http://abb.com/motors-generators)

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