



APPLICATIONS NOTICE

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Form NS 006

TO: AUTHORISED DEALERS/DISTRIBUTORS
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APPLICATION NOTICE GENERAL LIST

ISSUE NO. : 04/08

DATE : JULY 2008
FROM : T KING/K EDWARDS

SUBJECT : KULTHORN MOTORS AS REPLACEMENTS FOR RUAMTHONG, SISME, ELCO & OLMO EMERSON (MESSA) MOTORS

UNITS : SPLIT SYSTEMS, HIDEAWAYS, UNITARY C150 SERIES, FAN COIL UNITS

NOTE : THIS NOTICE SUPERCEDES THE NOW OBSOLETE ISSUE 02/95

We currently use Kulthorn electric motors instead of the Ruamthong and SISME motors we used previously. The Kulthorn motor is also a suitable alternative to the Elco and Olmo Emmerson (Messa) 4 pole and 6 pole motors that we were using in various air conditioning units between 1972 and 1992.

The Kulthorn motor like the Ruamthong, Sisme and Elco motor has the advantage that it can replace both the Messa 4 pole and 6 pole motor. However, if only one fan is fitted on the motor then the 50 watt version of the motor should be used.

All units that previously used the Olmo Emerson (Messa), Elco, Sisme or Ruamthong motors are now fitted with Kulthorn motors (this commenced mid 2002).

Kulthorn 150 watt – 3 available speeds	Part No. 046-000-212
Kulthorn 50 watt – 3 available speeds	Part No. 046-000-208

However, there are some complications to be encountered when substituting the Kulthorn motor as a replacement for an existing Sisme, Elco or Messa motor.

1. The mounting bracket supplied with the Kulthorn motor has differing mounting hole positions and only two of the four holes match the positions of the existing Messa motor mounting holes. Some modification is therefore required.
2. It is important to know the difference in wiring of these motors, especially as there were two breeds of Olmo Emmerson (Messa) motors with different wire colours. Also note that early versions of the Elco motor were fitted with a terminal block, the later version had colour coded wires attached. A wiring guide is tabled overleaf.

SPEED	PRE 1984 OLMO EMMERSON (MESSA)	1984 OLMO EMERSON (MESSA)	1986 ELCO	1987 ELCO	1992 SISM	2002 KULTHORN 1995 RUAMTHONG 1994 SISME
	(- - - - - - -Neutral Tapping- - - - - - - -)				(Phase Tapping)	
	4 pole	4 pole				
1	Black (High)	Black (High)	Terminal 1	Black	Brown	Brown (High)
2	Blue (Med)	Blue (Med)	Terminal 2	Grey	Grey }	
3	Red (Low)	Yellow (Low)	Terminal 3	Blue	Orange }	Red (Med)
	(- - - - - - -Neutral Tapping- - - - - - - -)					
	6 pole	6 pole				
4	Black (High)	Black (High)	Terminal 4	Orange	Purple }	
5	Blue (Med)	Blue (Med)	Terminal 5	Brown	Red }	White (Low)
6	Red (Low)	Yellow (Low)	Terminal 6	Red	White	-
7	-	-	-	-	Yellow	-
	(- - - - - - -Phase- - - - - - - -)				(- - Neutral - -)	
Common	White	Brown	Terminal 10	White	Blue	Blue
Earth	Green/Yellow	Green/Yellow	Green/Yellow	Green/Yellow	Green/Yellow	Green/Yellow

3. If a motor has only one fan fitted instead of two, then the 50 watt motor should be used (the 120 watt motor would be so lightly loaded it would run close to top speed on all speed tapplings).
4. Units manufactured with Kulthorn, Ruamthong or Sisme motors have them wired Blue as Neutral (Common) and the speed wires are available as phase speed tapping options. The 3 speeds available generally relate to speeds 1, 3 and 5 on earlier models.

NOTE : The common wire (blue) on the Kulthorn motor is Neutral; the speed tapplings are phase tapplings.