40% Energy Efficiency Calculations Summer 2018

40% energy efficiency is based on EER (cooling) and does not take into account COP (heating).

	Now	2002	
MODEL NUMBERS	MSZ-AP25VGD MUZ-AP25VGD	MSH-09RV MUH-09RV	PERCENTAGE INCREASE
Nominal Cooling Capacity (kW)	2.5	2.5	
EER (Cooling)	5.0	2.63	90.11%
Nominal Heating Capacity (kW)	3.2	3.1	
COP (Heating)	4.78	3.2	49.37%
MODEL NUMBERS	MSZ-AP35VGD MUZ-AP35VGD	MSH-12RV MUH-12RV	PERCENTAGE INCREASE
Nominal Cooling Capacity (kW)	3.5	3.4	
EER (Cooling)	4.02	2.58	55.81%
Nominal Heating Capacity (kW)	3.7	4	
COP (Heating)	4.57	2.86	59.79%
MODEL NUMBERS	MSZ-AP50VGD MUZ-AP50VGD	MSH-18RV MUH-18RV	PERCENTAGE INCREASE
Nominal Cooling Capacity (kW)	5.0	5.1	
EER (Cooling)	3.79	2.41	57.26%
Nominal Heating Capacity (kW)	6.0	5.4	
COP (Heating)	3.7	2.7	37.0%
MODEL NUMBERS	MSZ-AP60VGD MUZ-AP60VGD	MSH-24RV MUH-24RV	PERCENTAGE INCREASE
Nominal Cooling Capacity (kW)	6	6.3	
EER (Cooling)	3.77	2.31	63.2%
Nominal Heating Capacity (kW)	6.8	6.4	
COP (Heating)	4.07	2.38	71.0%
MODEL NUMBERS	MSZ-AP71VGD MUZ-AP71VGD	MSH-26SV MUH-26SV	PERCENTAGE INCREASE
Nominal Cooling Capacity (kW)	7.1	7.2	
EER (Cooling)	3.53	2.52	40.1%
Nominal Heating Capacity (kW)	8	8	
COP (Heating)	3.83	2.85	34.4%
MODEL NUMBERS	MSZ-AP80VGD MUZ-AP80VGD	MSH-30SV MUH-30SV	PERCENTAGE INCREASE
Nominal Cooling Capacity (kW)	7.8	8.1	
EER (Cooling)	3.31	2.33	42.1%
Nominal Heating Capacity (kW)	9	8.9	
COP (Heating)	3.53	2.54	39.0%

EER – Energy Efficiency Ratio (EER) is a measure of system efficiency at a given set of rating conditions. It is a ratio calculated by dividing the cooling capacity in kW by the power input in kW.

COP (Coefficient of Performance) – the ratio of the refrigerant effect (refrigeration capacity) to the work done by the compressor - the higher the number, the more efficient the system.

Air conditioners with a higher EER and COP values are more efficient. Therefore when we are comparing COP and EER values of two products in the same capacity range, it allows us to determine which product is more energy efficient.

EER is used to indicate performance ratio in cooling.
COP is used to indicate performance ratio in heating.

EER and COP Values are calculated at Test conditions based on AS/NZS3823.1.1 as per below.

Cooling: Indoor Dry-bulb temperature 27°C Wet-bulb temperature 19°C.
Outdoor Dry-bulb temperature 35°C Wet-bulb temperature 24°C.

Heating: Indoor Dry-bulb temperature 20°C.
Outdoor Dry-bulb temperature 7°C Wet-bulb temperature 6°C.

MSZ-AP42 excluded as it does not have a comparative product from 2002.