

广州家用电器检测所

**GTIHEA**

Guangzhou Testing & Inspection Institute for Household Electrical Appliances

## **Air Conditioner Testing in China**

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CB laboratory

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## **Chinese Air conditioner Standard**

(Safe+Energy+Performance+EMC)

Mandatory Standard—GB\*\*\*\*

Voluntary/Recommended Standard—GB/T\*\*\*\*

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## **Chinese Air conditioner Standard-Safety**

GB4706.32-1996

Safety of household and similar electrical  
appliances Particular requirements for  
electrical heat pumps, air-conditioners and  
dehumidifiers(Ident IEC60335-2-40:1992)

GB10891-1989

Safety requirement for air handling units

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**Chinese Air conditioner Standard-Energy**  
GB12021.3-2000

The limited values of energy efficiency and evaluating values of energy conservation for room air conditioners

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**Chinese Air Conditioner Standard-Performance**

GB/T7725-1996 Room air conditioners ( non-conducted ) (Reference ISO5151:1994)

GB/T18836-2002Ducted air-conditioning (heat pump) unit (ReferenceISO13253:1995)

GB/T17758-1999Unitary air conditions

GB/T14294-93Central-station air handling units

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**Chinese Air conditioner Standard-EMC**  
GB17265.1-1998(IEC 61000-3-2-1995)

GB4343-1995(CISPR 14)

ect.

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**Differences between ISO5151 and GB/T7725-1996**

Scope for GB/T7725:

Non-conducted, air cool ,not more than 14 kW cooling capacity.

**Differences between ISO and GB/T**

- Energy efficiency ratio (EER)
- Co-efficient of performance (COP)

| Rated Capacity KW | EER and COP W/W |       |              |
|-------------------|-----------------|-------|--------------|
|                   | Integral        | Split | Water cooled |
| ≤2.5              | 2.45            | 2.65  | -            |
| 2.5<CC≤4.5        | 2.50            | 2.70  | -            |
| 4.5<CC≤7.1        | 2.45            | 2.65  | -            |
| 7.1<CC≤14         | 2.50            |       | -            |

**Differences between ISO and GB/T**

GB/T7725:

also includes the requirements for noise, package, transportation of the air conditioner and concerned testing method.

**Differences between ISO and GB/T**

Method for EER or COP

- Calorimeter or enthalpy method;
- For energy saving certificate, the calorimeter should be used.

**GB/T7725 in process of revision**

- Energy efficiency ratio (EER)
- Co-efficient of performance (COP)

| Rated Capacity<br>KW | EER and COP W/W |       |              |
|----------------------|-----------------|-------|--------------|
|                      | Integral        | Split | Water cooled |
| ≤2.5                 | 2.50            | 2.70  | -            |
| 2.5<CC≤4.5           | 2.55            | 2.80  | -            |
| 4.5<CC≤7.1           | 2.50            | 2.75  | -            |
| 7.1<CC≤14            | 2.55            |       | 2.70         |
| 14<CC≤28             | 2.45            |       | 2.75         |

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**GB/T7725 in process of revision**

Scope:

- Non-conducted, air cool and water cool, not more than 28 kW cooling capacity
- The requirements of noise decreased 1-5dB;

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**GB/T7725 in process of revision**

Increasing:

- Requirements of Cooling Seasonal Performance Factor-CSPF and Heating Seasonal Performance Factor-HSPF;
- Recommended testing method for frequency conversion and multi-indoor unit air conditioner;

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**GB12021.3-Energy saving requirement limited values of energy efficiency**

| Category | Rated Capacity | EER W/W |         |
|----------|----------------|---------|---------|
|          |                | Cool    | Recycle |
| Integral | CC≤4500        | 2.20    | 2.15    |
|          | CC>4500        | -       | -       |
| Split    | CC≤2500        | 2.50    | 2.40    |
|          | 2500<CC≤4500   | 2.45    | 2.35    |
|          | 4500<CC≤7100   | 2.40    | 2.30    |
|          | CC>7100        | 2.30    | 2.25    |

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**GB12021.3-Energy saving requirement  
Evaluating values of energy Conservation**

| Category | Rated Capacity | EER W/W |         |
|----------|----------------|---------|---------|
|          |                | Cool    | Recycle |
| Integral | CC≤4500        | 2.35    | 2.30    |
|          | CC>4500        | -       | -       |
| Split    | CC≤2500        | 2.85    | 2.75    |
|          | 2500<CC≤4500   | 2.70    | 2.60    |
|          | CC>4500        | 2.55    | 2.45    |

**Chinese Certificate required**

- CCC
- Scope: not more than 24.35kW;
- Standard:
- GB4706.32-1996(IEC60335-2-40) (Safety)
- GB17265.1-1998(IEC 61000-3-2-1995)+
- GB4343-1995(CISPR 14)(EMC)
- Mandatory(Compulsary)

**Chinese Certificate required**

- Energy Saving Certificate
- Scope: air cooled, not more than 14000W;
- Standard:
- GB12021.3-2000(Energy)
- GB4706.32-1996(IEC60335-2-40) (Safety)
- Voluntary
- Calorimeter method Chinese Certificate

**Chinese Certificate required**

- Manufacturing Permission License:
- Scope: more than 24.35kW;
- Standard:
- GB/T18836,or GB/T17758, ect.
- GB4706.32-1996(IEC60335-2-40) (Safety)
- Mandatory

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# Thank You!

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