

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 8616 : 2015

(JRAIA/JSA)

Package air conditioners

ICS 23.120

Reference number : JIS B 8616 : 2015 (E)

PROTECTED BY COPYRIGHT

67 S

B 8616 : 2015

Date of Establishment: 1979-02-01

Date of Revision: 2015-03-20

Date of Public Notice in Official Gazette: 2015-03-20

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Industrial Machinery

JIS B 8616 : 2015, First English edition published in 2024-03

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2024

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HN

PROTECTED BY COPYRIGHT

Contents

	Page
1	Scope 1
2	Normative references 1
3	Terms and definitions 3
3.1	Terms relating to system and configuration 3
3.2	Terms relating to cooling performance and heating performance 6
3.3	Terms relating to calculation of seasonal performance factor 12
3.4	Terms relating to water-cooled type (Annex C) 13
3.5	Terms relating to noise (Annex D) 14
3.6	Terms relating to controls verification procedure for part-load operation (Annex E) 14
3.7	Other terms 15
4	Classification 16
5	Rated voltage and rated frequency 17
6	Performance 17
6.1	Refrigerant leakage 17
6.2	Rated cooling performance 17
6.3	Half cooling performance 18
6.4	Minimum cooling performance 18
6.5	Rated heating performance 18
6.6	Half heating performance 18
6.7	Minimum heating performance 19
6.8	Maximum heating performance 19
6.9	Seasonal performance factor 19
6.10	Cooling operation performance 20
6.11	Heating operation performance 20
6.12	Airflow 20
6.13	Noise performance 20
7	Materials, construction and safety performance 21
7.1	Refrigerant circuit 21
7.2	Refrigerant and refrigerating machine oil 21
7.3	Materials, construction and performance relating to electrical safety 21
7.4	Drainage confirmation 21
7.5	Refrigerant recovery port 21
8	Tests 21
8.1	Refrigerant leakage test 21
8.2	Rated cooling performance test 21

8.3	Half cooling performance test	22
8.4	Minimum cooling performance test	23
8.5	Rated heating performance test	23
8.6	Half heating performance test	24
8.7	Minimum heating performance test	25
8.8	Maximum heating performance test	26
8.9	Cooling operation performance test	27
8.10	Heating operation performance test	27
8.11	Airflow test	27
8.12	Noise test	28
9	Inspections	28
9.1	Type inspection	28
9.2	Acceptance inspection	29
10	Designation of product	30
11	Marking	31
11.1	Marking on product main unit	31
11.2	Publication with technical documents	32
12	Instruction manual and installation manual	35
12.1	Instruction manual	35
12.2	Installation manual	36
Annex A (normative)	Calculation methods for seasonal performance factor	37
Annex B (normative)	Materials, construction and performance relating to electrical safety	81
Annex C (normative)	Rated performance and operation performance test methods for water-cooled air conditioners and wa- ter-to-air heat pumps	101
Annex D (normative)	Noise test method	108
Annex E (normative)	Controls verification procedure for part-load operation	120

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Refrigeration and Air Conditioning Industry Association (JRAIA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS B 8616** : 2006 is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

Blank

Package air conditioners

1 Scope

This Standard specifies requirements for air conditioners ¹⁾ designed and manufactured to be used mainly in commercial buildings for the purpose of providing comfortable indoor air conditioning and for cooling (including those that is also used for heating) by means of air circulation, which contain a motor compressor, indoor/outdoor heat exchanger, fan, etc. in one or two cabinets [hereafter referred to as package air conditioners (commercial air conditioners)]. It applies to air-cooled and water-cooled air conditioners with a standard rated cooling capacity of 56 kW or less. However, this Standard is not applicable to air conditioners :

- a) with special ²⁾ temperature conditions for the intake air;
- b) mainly intended for air conditioning of machinery and foodstuff;
- c) mainly intended for air conditioning by introducing only outside air into the room;
- d) mainly intended for supplying cool air to specific workers at work in certain areas in factory workshops;
- e) mainly intended for air conditioning in vehicles;
- f) with dedicated heat storage tanks (including those also used for heating) for storing heat for cooling;
- g) of other types intended for special applications similar to those listed in a) to f).

Notes ¹⁾ The term “air conditioner” in this Standard is a generic term for those used exclusively for cooling, those used for both cooling and heating, and those used for both cooling and heating by an electric heater.

²⁾ Examples are air conditioners for server room and fresh-air air conditioners.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For standards with the year indication, only the editions of the indicated year shall be applied and the revisions (including amendments) made thereafter shall not be applied. For those without the indication of the year, the most recent edition (including amendments) shall be applied.

JIS B 8615-1 : 2013 *Non-ducted air conditioners and heat pumps — Testing and rating for performance*

JIS B 8615-2 : 2015 *Ducted air-conditioners and air-to-air heat pumps — Testing and rating for performance*

JIS B 8615-3 : 2015 *Multiple split-system air-conditioners and air-to-air heat*