

# JIS

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

**JIS C 9108** : 2017

(JEMA)

**Electric vacuum cleaners**

---

ICS 97.080

Reference number : **JIS C 9108 : 2017 (E)**

C 9108 : 2017

Date of Establishment: 1955-03-05

Date of Revision: 2017-08-21

Date of Public Notice in Official Gazette: 2017-08-21

Investigated by: Japanese Industrial Standards Committee  
Standards Board for IEC area  
Technical Committee on Electricity

---

JIS C 9108:2017, First English edition published in 2018-11

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 2018

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

KK/AT

PROTECTED BY COPYRIGHT

## Contents

|      | Page                                      |
|------|---|
| 1    | Scope ..... 1                             |
| 2    | Normative references ..... 1              |
| 3    | Terms and definitions ..... 1             |
| 4    | Classification ..... 3                    |
| 5    | Rated voltage and rated frequency ..... 3 |
| 6    | Performance ..... 3                       |
| 6.1  | Voltage fluctuation ..... 3               |
| 6.2  | Starting ..... 3                          |
| 6.3  | Power consumption ..... 4                 |
| 6.4  | Temperature ..... 4                       |
| 6.5  | Insulation ..... 5                        |
| 6.6  | Suction power ..... 5                     |
| 6.7  | Withstand overspeed ..... 6               |
| 6.8  | Switch ..... 6                            |
| 6.9  | Flexure of cord ..... 7                   |
| 6.10 | Reeling of cord ..... 7                   |
| 6.11 | Mechanical strength ..... 7               |
| 6.12 | Durability ..... 8                        |
| 6.13 | Noise ..... 9                             |
| 6.14 | Flexure of hose ..... 9                   |
| 6.15 | Resistance to compression of hose ..... 9 |
| 6.16 | Mass ..... 9                              |
| 6.17 | Maximum dust collecting volume ..... 10   |
| 6.18 | Harmonic current ..... 10                 |
| 7    | Construction ..... 10                     |
| 7.1  | Construction in general ..... 10          |
| 7.2  | Live part ..... 13                        |
| 7.3  | Electrical insulating material ..... 15   |
| 7.4  | Wiring ..... 16                           |
| 7.5  | Components ..... 17                       |
| 8    | Materials ..... 18                        |
| 9    | Test procedure ..... 19                   |
| 9.1  | Test condition ..... 19                   |
| 9.2  | Construction test ..... 19                |
| 9.3  | Voltage fluctuation test ..... 19         |
| 9.4  | Starting test ..... 19                    |

|                       |   |    |
|-----------------------|---|----|
| 9.5                   | Power consumption test .....                              | 19 |
| 9.6                   | Temperature test .....                                    | 20 |
| 9.7                   | Insulation test .....                                     | 20 |
| 9.8                   | Suction power test .....                                  | 21 |
| 9.9                   | Overspeed test .....                                      | 21 |
| 9.10                  | Switch test .....   | 21 |
| 9.11                  | Flexure test of cord .....                                | 21 |
| 9.12                  | Test for cord reel mechanism .....                        | 24 |
| 9.13                  | Mechanical strength test .....                            | 24 |
| 9.14                  | Durability test .....                                     | 25 |
| 9.15                  | Noise test .....  | 26 |
| 9.16                  | Flexure test of hose .....                                | 26 |
| 9.17                  | Compression resistance test of hose .....                 | 26 |
| 9.18                  | Mass test .....   | 27 |
| 9.19                  | Maximum dust collecting volume test .....                 | 27 |
| 9.20                  | Impact drop test of carrying handle on cleaner body ..... | 27 |
| 10                    | Inspection .....  | 28 |
| 10.1                  | Type inspection .....                                     | 28 |
| 10.2                  | Acceptance inspection .....                               | 28 |
| 11                    | Designation of product .....                              | 29 |
| 12                    | Marking .....   | 29 |
| 12.1                  | Marking on product .....                                  | 29 |
| 12.2                  | Marking on package .....                                  | 29 |
| 13                    | Precaution for operation .....                            | 29 |
| Annex A (normative)   | Method for measurement of suction power .....             | 30 |
| Annex B (normative)   | Noise measurement method .....                            | 39 |
| Annex C (informative) | Method for measurement of performance on carpet floor ... | 43 |
| Annex D (informative) | Method for measurement of suction power consistency ..... | 51 |
| Annex E (informative) | Method for measurement of filtration efficiency .....     | 53 |

## 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 Electrical Manufacturers' Association (JEMA) 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 C 9108**:2009 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.

# Electric vacuum cleaners

## 1 Scope

This Japanese Industrial Standard specifies electric vacuum cleaners for household use which utilizes the back pressure of a blower driven by a motor and which has a rated power consumption of 100 W to 1 500 W (hereafter referred to as vacuum cleaners). However, this Standard is not applicable to the following.

- Vacuum cleaners having a rotary brush mechanically connected with a blower motor
- Rechargeable vacuum cleaners and industrial-use vacuum cleaners
- Vacuum cleaners with a floor cleaning head being directly attached to the cleaner body and with a floor cleaning head or its path that is inseparable
- Vacuum cleaners that require piping work

NOTE The term “body” used in this Standard refers to vacuum cleaner body.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS A 5705 *Polyvinyl chloride floorcoverings*

JIS C 3301 *Rubber insulated flexible cords*

JIS C 3306 *Polyvinyl chloride insulated flexible cords*

JIS C 8303 *Plugs and receptacles for domestic and similar general use*

JIS C 60695-11-10 *Fire hazard testing—Part 11-10: Test flames—50 W horizontal and vertical flame test methods*

JIS C 61000-3-2 *Electromagnetic compatibility (EMC)—Part 3-2: Limits—Limits for harmonic current emissions (equipment input current  $\leq 20$  A per phase)*

JIS K 2240 *Liquefied petroleum gases*

JIS K 5600-5-4 *Testing methods for paints—Part 5: Mechanical property of film—Section 4: Scratch hardness (Pencil method)*

JIS K 7202-2 *Plastics—Determination of hardness—Part 2: Rockwell hardness*

JIS S 6006 *Pencil, coloured pencils and leads for them*

JIS Z 8731 *Acoustics—Description and measurement of environmental noise*

## 3 Terms and definitions

For the purpose of this Standard, the following terms and definitions apply.