

ICS 53.020.99

CCS J 80



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 19154-2003

Replacing GB/T 19154-2003

**Building maintenance unit
(English Translation)**

Issued on: July 12, 2017

Implemented on: August 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Preface	
1 Scope	
2 Normative references	
3 Symbols, Codes, Abbreviations, Terms and Definitions	
4 Type and main parameters	
5 General technical requirements	
6 Equipment Structure, Stability, and Mechanical Design Calculations	
7 Gondolas	
8 Lifting mechanism	
9 Suspension device	
10 Track	
11 Electrical System, Control System	
12 Test methods	
13 Inspection Rules	
14 Logo	
15 Random file	
Appendix A (Normative) Gondola Test	
Appendix B (Normative Appendix) Lifting Mechanisms and Backup Devices Test	
Appendix C (Normative Appendix) Suspension Test	
Appendix D (normative) Description of the form of loads imposed on equipment and building structures	
Appendix E (Informative) Constraint Analysis	
Appendix F (Normative) Wireless Control System Requirements	
Appendix G (Normative) Design Requirements for Tracks, Suspended Monorails and Support Systems	
Appendix H (Normative) Slide Window Window Cleaner	
Appendix I (Informative) Record Table	
Appendix J (Informative) Symbols, Codes, Abbreviations	
References	

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 19154-2003 "Window polisher", compared with GB/T 19154-2003, the main technical changes are as follows.

- a) Add the assumptions of this standard, etc. to "Scope" (see Chapter 1);
- b) Add "building maintenance equipment", "sustained suspension access equipment", "qualified personnel", "operator", etc. to "terms" and "definitions" Language and definitions (see 3.2);
- c) The following changes have been made to the type and main parameters (see Chapter 4).
 - 1) Increased the type of slide window wiper;
 - 2) The main parameter has been increased by "630" and "1000";
 - 3) Added a typical window wiper icon.
- d) The operating speed of each agency is modified to 18m/min (see 5.3.2);
- e) The noise of the window wiper is modified to 79dB(A) (see 5.3.3);
- f) modified the reliability classification of the window wiper (see 5.3.4);
- g) increase the scrap of structural parts (see 5.4);
- h) increased safety requirements and measures (see 5.5);
- i) The original standard structural safety factor requirements, wind load design requirements, etc. were revised to include. equipment structure, stability and mechanical design requirements.

The following changes were made to the contents of the original standard (see Chapter 6).

- 1) Added an overview;
- 2) increase the content of allowable stress;
- 3) Increased design load and force content;
- 4) Added the content of the design load of the gondolas;
- 5) Added suspension device calculations;
- 6) Increased the calculation of wire ropes;
- 7) Added content of constraint system calculations;
- j) modified the contents of the gondola (see Chapter 7);

- k) revised the content of the lifting organization (see Chapter 8);
- l) revised the contents of the trolley, rail crawler, and jib (see Chapter 9);
- m) modified the contents of the orbit (see chapter 10);
- n) modified the contents of the electrical control system (see Chapter 11);
- o) modified the content of the test method (see Chapter 12);
- p) modified the contents of the inspection rules (see chapter 13);
- q) Changes to the mark, etc. (see Chapter 14);
- r) modified acceptance, inspection, operation and maintenance (see chapter 15);
- s) Added Appendix A, Appendix B, Appendix C, Appendix D, Appendix E, Appendix F, Appendix G, Appendix H, Appendix J.

This standard is proposed by China Machinery Industry Federation.

This standard is under the jurisdiction of the National Lift Working Platform Standardization Technical Committee (SAC/TC335).

1 Scope

This standard specifies the terms and definitions, types and main parameters of the window wiper, general technical requirements, equipment structure, stability and mechanical design Calculations, gondolas, hoisting mechanisms, suspensions, tracks, electrical systems and control systems, test methods, inspection rules, signs, random documents, etc.

This standard includes the design and calculation of the track and its support system of the window wiper, and the relevant load applied to the building structure by the wheel loader.

Regulations, installation of window cleaners and safety requirements for buildings and structures.

This standard includes significant risks associated with the operation of window cleaners. This standard describes the appropriateness of eliminating or reducing the occurrence of significant risks.

Technical measures.

The window wiper and the degree of danger involved in this standard need to be within the scope of this standard.

This standard assumes the following conditions.

- a) The manufacturer or supplier must work with the purchaser or employer under specific local installation conditions and desired functions and requirements Negotiation;

- b) A risk analysis has been done for each assembly part of the window wiper machine and the rules developed are based on this assumption;
- c) The basic safety requirements for the components of this standard are.
 - Design according to all failure modes and calculation rules of the current engineering practice;
 - Have reliable mechanical and electrical processing manufacturing capabilities and means;
 - Have sufficient strength and proper material manufacturing;
 - No visual defects;
- d) do not use harmful materials such as asbestos;
- e) The equipment maintains a good working condition;
- f) Any mechanical device that is well processed and produced in accordance with this standard will not be damaged without danger to the point of danger degree;
- g) working environment temperature range between -10°C~ 55°C;
- h) The structure of the window wiper installed shall have sufficient strength to withstand the expected load.

This standard applies to power-driven or manual window cleaners for buildings or structures.

This standard does not apply to.

- a) harsh and special working conditions (such as harsh environmental conditions, corrosive environments, strong magnetic field environments);
- b) work under specific rules (eg in explosive atmospheres, live work);
- c) transport personnel from one floor to another;
- d) Handling dangerous goods (such as molten metals, acidic substances, radioactive substances, fragile items);
- e) suspended gondolas on cranes;
- f) silo maintenance equipment;
- g) equipment for the direct suspension of suspended boats using chains;
- h) equipment for suspending suspended gondola directly using fibre ropes;
- i) Equipment for underground operations;
- j) equipment for well operations;
- k) equipment directly driven by an internal combustion engine;