

ICS 91.220
CCS P 97



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

GB/T 46046-2025

Replacing GB/T 7920.14-2004

**Road construction and maintenance equipment - Bituminous binder
sprayers and synchronous bituminous binder sprayers-chip spreaders
- Terminology and commercial specifications
(English Translation)**

Issued on: August 1, 2025

Implemented on: February 1, 2026

**Issued by: State Administration for Market Regulation, Standardization
Administration of China**

Table of Contents

Preface	
1 Scope	
2 Normative references	
3 Terms and Definitions	
4 Description of Asphalt Spreader Parts	
4.1 Transport vehicles	
4.2 Asphalt tank	
4.3 Asphalt conveying device	
4.4 Sprinkler pipe	
4.5 Control System	
5 Commercial specifications for asphalt spreaders and synchronized combination spreader components	
5.1 General Principles	
5.2 Asphalt Spreader Parts List	
5.3 Transport vehicle characteristic parameters	
5.4 Asphalt tank performance and characteristics	
5.5 Burner	
5.6 Asphalt conveying device	
5.7 Sprinkler pipe	
5.8 Control System Performance	
6 Commercial specifications for the spreading components of the synchronized assembly	
6.1 List of components for the synchronized assembly	
6.2 Control system performance	
6.3 Crushed stone silo	
6.4 Gravel spreader	
Figure 1 Asphalt spreader	
Figure 2 Synchronous combination device	
Figure 3 Asphalt tank	
Figure 4 Heating device for direct or indirect heating of the spreader	
Figure 5 Spreader with asphalt pump	
Figure 6 Constant pressure spreader with air compressor	
Figure 7 Structure type of the spreading pipe	

Figure 8 Nozzle spacing and asphalt spraying shape

Figure 9 Vehicle-mounted synchronous combination device

Figure 10 Semi-trailer type synchronous combination device

Figure 11 Asphalt spreader and towed spreader

Figure 12 Unloading by tilting the silo bottom

Figure 13 Unloading through a tilting silo

Figure 14 Unloading of materials from a silo with a flat belt conveyor

Figure 15 Telescopic gravel spreader

Figure 16 Folding gravel spreader

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 7920.14-2004 "Terms and Commercial Specifications for Asphalt Distributors/Sprayers for Road Construction and Maintenance Equipment".

Compared with GB/T 7920.14-2004, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) The terms "asphalt spreader", "spreader with thermal insulation", "direct heating spreader", "indirect heating spreader" and their English names have been changed.

Corresponding words in the text (see 3.1, 3.5~3.7, 2004 edition 2.1, 2.6~2.8);

b) Added the term "synchronized combination device/synchronized asphalt macadam spreader/spreader" and its definition (see 3.2);

c) The definitions of the terms "spreader with bitumen pump" and "constant pressure spreader" and their English equivalents have been changed (see 3.3 and 3.4, 2004 Versions 2.2 and 2.3);

d) The terms "asphalt spreader", "detachable spreader", "high viscosity asphalt spreader/vehicle", "high pressure asphalt spreader", "medium pressure asphalt spreader", "asphalt...

Asphalt spreader", "low-pressure asphalt spreader", "calibrated asphalt tank load" and their definitions (see 2.4, 2.5, 2004 edition) 2.11~2.14 and 2.17);

e) The terms "hot asphalt spreader" and "cold asphalt spreader" and their definitions regarding temperature have been changed (see 3.8 and 3.9, 2004).

Versions 2.9 and 2.10);

f) The definition of the term "spreading pipe width" has been changed (see 3.12, 2.18 of the 2004 edition);

g) The units of asphalt viscosity in the definitions of the terms "maximum output of asphalt pump" and "rated spreading rate" have been changed (see 3.13 and 3.14, 2004 edition 2.19 and 2.20);

h) The term "spreading height" and its unit have been changed (see 3.16, 2.22 of the 2004 edition);

i) The schematic diagram of the asphalt spreader has been changed (see Figure 1 of the 2004 edition);

j) Added a schematic diagram of the synchronous combination device structure (see Figure 2);

k) The characteristic parameters of transport vehicles have been changed (see 5.3, 4.2 of the 2004 edition);

l) The asphalt conveying device and its characteristics have been modified (see 5.6, 4.5 of the 2004 edition);

m) The schematic diagram of the spreader with asphalt pump has been changed (see Figure 5, Figure 4 of the 2004 edition);

n) The nozzle spacing and asphalt spraying pattern diagrams have been changed (see Figure 8, Figure 7 of the 2004 edition);

o) The relevant content of automatic measuring and control devices has been changed (see 5.8.2, 4.7.2 of the 2004 edition);

p) Added relevant content on the spreading components of the synchronized combination device (see Chapter 6).

This document is equivalent to ISO 15643:2020 "Road construction and maintenance equipment - Asphalt spreaders and bituminous gravel simultaneous spreading/spreading" Machine Terminology and Commercial Specifications.

The following minimal editorial changes have been made to this document.

--- Changed the incorrect information about the diagram of "receiving silo" in "gravel spreader" and changed "see No. 9 in Figure 13 or Figure 14" to Change to "see sequence number 8 in Figure 12 or sequence number 7 in Figure 13".

1 Scope

This document defines the terms for asphalt spreaders and synchronized asphalt crushed stone spreaders/spreaders (i.e. synchronized combination units) and their components.

Technical performance and commercial specifications.

This document applies to both cold and hot asphalt spreaders.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

Note: GB/T 7920.16-2004 Road construction and maintenance equipment - Gravel spreaders - Terminology and commercial specifications (ISO 15644:2002, IDT)

3 Terms and Definitions

For the purposes of this document, the terms and definitions defined in ISO 15644 and the following apply.

A machine used to spread asphalt evenly on the road surface in a predetermined amount.

NOTE: The classification of asphalt spreaders may be defined by a combination of operating principle, component geometry, type of asphalt and specified spraying performance.

It consists of an asphalt spreading device and a gravel spreading device, which is used to spread asphalt and gravel evenly and synchronously according to the predetermined spreading/spreading amount.

A machine that sprays/spreads to complete road surface treatment.

Asphalt spreader (3.1) that pumps asphalt from the asphalt tank to the spreading pipe.

Note: The output of the pump is proportional to its speed, which can be controlled by the vehicle's running speed.

Asphalt spreader (3.1) that transfers asphalt under pressure from the asphalt tank to the spreading pipe.

Note: The asphalt in the pipeline is directly pressurized by compressed air, or the pressure of the asphalt in the spreading pipeline is maintained stable by a pump and a pressure regulating valve.