
**Equipment for harvesting — Combine
harvesters — Test procedure and
performance assessment**

*Matériel de récolte — Moissonneuses-batteuses — Mode opératoire
d'essai et évaluation des performances*



This document is a preview generated by EKO



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General requirements	2
5 Characteristics of machine	2
5.1 Significant details	2
5.2 Speeds	3
5.3 Configurations	3
5.4 Dimensions	3
5.5 Other measurements	5
5.5.1 Cylinders and rotors	5
5.5.2 Concaves	6
5.5.3 Separating devices	6
5.5.4 Straw walker	6
5.5.5 Conveying devices	6
5.5.6 Sieves and sieve area	7
5.5.7 Dirt screens, recleaners and other auxiliary cleaning devices	7
5.5.8 Permeable surfaces	7
5.5.9 Functional components	7
5.6 Other characteristics	7
5.7 Position of centre of gravity	7
5.8 Grain tank	8
6 Functional field tests	8
6.1 General	8
6.2 Information to be recorded	8
6.3 Behaviour and performance of combine harvester	8
6.3.1 General	8
6.3.2 Functional aspects	9
6.3.3 Comfort, convenience and safety	9
6.3.4 Ease of adjustment and routine maintenance	10
6.3.5 Repairs	10
7 Capacity tests	10
7.1 General	10
7.2 Crop selection and field conditions	10
7.3 Test and comparison combine harvesters	11
7.4 Adjustment of test and comparison combine harvesters	12
7.5 Catching apparatus	12
7.6 Conditions and procedure for collecting catch	13
7.7 Treatment and analysis of catches	14
7.8 Test data	14
7.9 Calculations	15
7.10 Graphical presentation of results to obtain capacity	15
8 Test report	15
8.1 General	15
8.2 Functional field tests	16
8.3 Capacity tests	16
Annex A (normative) Tests on sloping ground	17
Annex B (informative) Example calculations for a test run	18
Bibliography	20

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 7, *Equipment for harvesting and conservation*.

This second edition of ISO 8210 cancels and replaces ISO 8210:1989 and ISO 6689-2:1997, which have been technically revised.

The main changes compared to the previous edition are as follows.

- Test and performance requirements formerly found in ISO 6689-2 have been added.
- Keys have been added to [Figures 1](#) and [2](#).
- Clarifications have been made in [Clause 7](#).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Equipment for harvesting — Combine harvesters — Test procedure and performance assessment

1 Scope

This document specifies a test procedure for the measurement and testing of combine harvesters. It applies to either self-propelled or trailed type, either directly cutting the crop or picking it up from a windrow, for use in several crops.

This document specifies the terminology and methods to be used for measuring important characteristics of combine harvesters. It includes both functional and capacity tests, in other words, those conducted over an extended period when ease of operation, ease of adjustment, rate of work and general operating characteristics can be assessed, and those carried out on specific occasions for the determination of grain loss and capacity characteristics.

It applies to all types of combine harvesters.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 789-3, *Agricultural tractors — Test procedures — Part 3: Turning and clearance diameters*

ISO 4254-7, *Agricultural machinery — Safety — Part 7: Combine harvesters, forage harvesters, cotton harvesters and sugar cane harvesters*

ISO 5007, *Agricultural wheeled tractors — Operator's seat — Laboratory measurement of transmitted vibration*

ISO 5131, *Tractors for agriculture and forestry — Measurement of noise at the operator's position — Survey method*

ISO 5687, *Equipment for harvesting — Combine harvesters — Determination and designation of grain tank capacity and unloading device performance*

ISO 5702, *Equipment for harvesting — Combine harvester component parts — Equivalent terms*

ISO 6689:—¹⁾, *Equipment for harvesting — Combine harvesters and functional components — Vocabulary*

ISO 14396, *Reciprocating internal combustion engines — Determination and method for the measurement of engine power — Additional requirements for exhaust emission tests in accordance with ISO 8178*

3 Terms and definitions

For the purposes of the documents, the terms and definitions given in ISO 5702, ISO 6689, ISO 4254-7 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

1) Under preparation. Stage at the date of publication: ISO/FDIS 6689:2021.