
Earth-moving machinery — Hydraulic breakers — Terminology and commercial specifications

*Engins de terrassement — Brise-roche hydrauliques — Terminologie
et spécifications commerciales*

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Published in Switzerland

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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).

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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 127, *Earth-moving machinery*, Subcommittee SC 4, *Terminology, commercial nomenclature, classification and ratings*.

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.

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Earth-moving machinery — Hydraulic breakers — Terminology and commercial specifications

1 Scope

This document establishes the terminology and content of commercial specifications for hydraulic breakers which are mounted as an attachment on a carrier, typically earth-moving machinery such as an excavator, backhoe loader, skid steer loader, and compact loader as defined in ISO 6165; or mounted on a rig, pedestal boom system, demolition robot, etc., at the end of an arm.

Hydraulic breakers are typically used to demolish or break rock, concrete, brickwork, asphalt, etc.

This document does not cover breakers powered by pneumatic, thermomechanical, or electromagnetic energy. This document does not cover portable or hand-held breakers either.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

carrier

mobile or stationary machinery that provides power and a range of motion for the mounted item

Note 1 to entry: Mobile machinery is typically an excavator, backhoe loader, skid steer loader, or compact loader. Stationary machinery is typically a pedestal boom system, demolition robot, etc.

3.2

attachment

assembly of components that can be mounted onto the *carrier* (3.1) for specific use

[SOURCE: ISO 6746-2:2003, 3.5, modified — The term “base machine and equipment” has been replaced with “carrier”.]

3.3

hydraulic breaker

percussive hydraulic *attachment* (3.2) used for breaking up concrete, rock, brickwork, asphalt, etc.

3.3.1 Accumulator

3.3.1.1

hydraulic accumulator

pressure storage reservoir that enables a hydraulic system to cope with extremes of demand and to smooth out pulsations

3.3.1.2

piston accumulator

energy storage chamber charged with nitrogen into which the upper end of the *piston* (3.3.8) reciprocally projects and which imparts stored energy onto the upper surface area of the piston to assist with piston acceleration

3.3.2

back head

device that closes the upper end of the cylinder and has a space into which the upper end of the *piston* (3.3.8) reciprocally projects

3.3.3

bracket

side plate

device that supports the *power cell* (3.3.7) which includes mounting holes to either bolt on to the *carrier* (3.1) *mounting adapter* (3.3.11) or to connect directly to the mounting flange holes on the carrier

3.3.4

tool

device that transmits the impact energy of the reciprocating *piston* (3.3.8) to the material to be broken

3.3.5

front head

device that attaches to the lower end of the cylinder to guide and support the *tool* (3.3.4)

3.3.6

housing

device that encloses the *power cell* (3.3.7) on all sides and has mounting holes or is connected to the *carrier* (3.1) with a *mounting adapter* (3.3.11)

Note 1 to entry: Types of housings can be side-mount open, top-mount open, side-mount closed, and top-mount closed.

Note 2 to entry: The reference to open or closed refers to whether the power cell is exposed or not, respectively.

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3.3.7

power cell

assembly generating impact energy, having *piston* (3.3.8), *piston control valve* (3.3.10), *front head* (3.3.5) and *back head* (3.3.2)

3.3.8

piston

device that transfers the energy of pressurized fluid and optionally nitrogen by moving reciprocally to impact the *tool* (3.3.4) generating an impact force

3.3.9

through bolt

tie rod

device that ties the parts of the *power cell* (3.3.7) together

3.3.10

piston control valve

device that controls the reciprocating motion of the *piston* (3.3.8)

3.3.11

mounting adapter

device that connects the *hydraulic breaker* (3.3) to the *carrier* (3.1) for adapter-type hydraulic breakers

3.4 Masses