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## Liquid pumps and pump units — Noise test code — Grades 2 and 3 of accuracy

*Pompes et groupes motopompes pour liquides — Code d'essai acoustique — Classes de précision 2 et 3*



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## Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Pump family and pump configuration</b> .....	<b>2</b>
<b>5 Sound power level determination</b> .....	<b>2</b>
5.1 General.....	2
5.2 Specific considerations for reference box, measurement surface, position of microphones, and intensity probe.....	4
5.2.1 General.....	4
5.2.2 Reference box.....	4
5.2.3 Measurement surface and microphone positions.....	6
5.2.4 Position of microphones and intensity probes.....	10
<b>6 Emission sound pressure level determination</b> .....	<b>10</b>
6.1 Basic standard to be used.....	10
6.2 Relevant work station.....	10
6.3 Measurement uncertainty.....	10
<b>7 Installation and mounting conditions</b> .....	<b>11</b>
7.1 General.....	11
7.2 Noise test situation.....	11
7.2.1 General.....	11
7.2.2 Test on site.....	11
7.2.3 Test on shop test stand.....	11
7.2.4 Test on a specific facility intended for acoustic measurement.....	11
<b>8 Operating conditions during noise measurement</b> .....	<b>12</b>
8.1 General.....	12
8.2 Pumped liquid.....	12
8.3 NPSHA value.....	12
<b>9 Information to be recorded</b> .....	<b>12</b>
9.1 General.....	12
9.2 Test report.....	12
<b>10 Declaration and verification of noise emission values</b> .....	<b>13</b>
<b>Annex A (normative) Pump alone — Measurement surface</b> .....	<b>14</b>
<b>Annex B (normative) Pump units — Microphone positions for sound pressure level     measurement on the measurement surface for different pump types and sizes</b> .....	<b>15</b>
<b>Bibliography</b> .....	<b>22</b>

## 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](http://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](http://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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 115, *Pumps*.

This second edition cancels and replaces the first edition (ISO 20361:2007), which has been technically revised.

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## Introduction

The noise emitted by a pump unit can be radiated by the casing of the pump, the driving system (e.g. motor, gear box, coupling), the piping system, and all the connected structures.

On site, the perceived noise can be significantly increased by reverberation effects or by the radiation of extraneous sources.

Depending on the type of pump it can be useful to know the following:

- a) the noise of the pumping system (including piping);
- b) the noise of the pump unit, including the driver and the transmission elements but excluding the noise of the piping system;
- c) the noise emitted by the pump alone, excluding the noise from the driver, transmission elements, and the piping;
- d) the noise emitted by each of those elements in respect to a given requirement or in view of an efficient sound proofing of the installation.

This International Standard describes methods for the determination of the noise emitted by a pump unit [case b)] or a pump alone [case c)]. Noise emission is expressed in terms of the sound power level of the machine and the emission sound pressure level at the relevant work station (see [6.2](#)).

This International Standard is intended to enable the manufacturer to

- show the effectiveness of noise reduction, and
- declare the noise emission levels.

This International Standard is a type C standard as stated in ISO 12100-1 and ISO 12100-2.

When provisions of this type C standard are different from those which are stated in A or B standards, the provisions of this type C standard take precedence.

The machinery concerned and the extent to which noise is covered are indicated in the scope of this International Standard.