

# INTERNATIONAL STANDARD

# ISO 9374-3

First edition  
2002-08-15

---

---

## Cranes — Information to be provided for enquiries, orders, offers and supply

Part 3:

**Tower cranes**

**(standards.iteh.ai)**

*Appareils de levage à charge suspendue — Informations à fournir pour la  
recherche, la commande, la soumission et la fourniture*

*Partie 3: Grues à tour*  
<https://standards.iteh.ai/catalog/standards/st/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002>



Reference number  
ISO 9374-3:2002(E)

© ISO 2002

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

ISO 9374-3:2002

<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002>

© ISO 2002

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

Printed in Switzerland

## Contents

	Page
Foreword .....	iv
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Information to be provided by the purchaser with enquiry or order</b> .....	<b>1</b>
<b>5 Information to be provided by the manufacturer</b> .....	<b>2</b>
<b>5.1 Information to be provided when offering for a tower crane</b> .....	<b>2</b>
<b>5.2 Information to be provided before supplying a tower crane</b> .....	<b>2</b>
<b>Annex A (normative) Information to be provided by the purchaser with enquiry or order</b> .....	<b>11</b>
<b>Annex B (normative) Information to be provided by the manufacturer when offering tower crane(s)</b> .....	<b>13</b>
<b>Bibliography</b> .....	<b>15</b>

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 9374-3:2002](https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002)

<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002>

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 9374 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9374-3 was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 7, *Tower cranes*.

ISO 9374 consists of the following parts, under the general title *Cranes* — *Information to be provided for enquiries, orders, offers and supply*:

— *Part 1: General*

— *Part 3: Tower cranes*

— *Part 4: Jib cranes*

— *Part 5: Overhead travelling cranes and portal bridge cranes*

Annexes A and B form a normative part of this part of ISO 9374.

ITEH STANDARD PREVIEW  
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002>

# Cranes — Information to be provided for enquiries, orders, offers and supply

## Part 3: Tower cranes

### 1 Scope

This part of ISO 9374 specifies information to be provided

- a) by the purchaser when enquiring for a tower crane,
- b) by the purchaser when ordering a tower crane,
- c) by a manufacturer when offering (tendering) for a tower crane,
- d) by the manufacturer when supplying a tower crane.

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

### 2 Normative references

ISO 9374-3:2002

<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021->

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 9374. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 9374 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 4306 (all parts), *Cranes — Vocabulary*

ISO 7363:1986, *Cranes and lifting appliances — Technical characteristics and acceptance document*

### 3 Terms and definitions

For the purposes of this part of ISO 9374, the terms and definitions given in ISO 4306 (all parts) apply.

### 4 Information to be provided by the purchaser with enquiry or order

The purchaser shall provide all data listed in annex A, to the fullest extent possible. This information should enable the crane manufacturer/supplier to provide a tower crane equipped to meet the purchaser's specifications.

Figures 1 and 3 illustrate the dimensions to be supplied, as applicable, by the purchaser.

NOTE The format of the data presented in annex A is shown as an example only.

## 5 Information to be provided by the manufacturer

### 5.1 Information to be provided when offering for a tower crane

The manufacturer/supplier shall provide the information, as applicable, listed in annex B.

NOTE The format of the data presented in annex B is shown as an example only.

### 5.2 Information to be provided when supplying a tower crane

#### 5.2.1 Technical information

##### 5.2.1.1 Site preparation and crane support design data

Data to be used by the crane support designers should be provided, as listed below:

- a) vertical and horizontal forces and torsional and overturning moments applicable to the crane configuration(s) furnished. This data should indicate whether governing forces are due to in-service or out-of-service winds, and the applicable speed and direction of wind. For travelling cranes the data can be stated in terms of wheel or bogie loads;
  - b) maximum wind speed for which the travelling crane possesses adequate resistance to sliding, as determined by calculation, in the configuration(s) provided, and precautions that shall be taken at higher wind speeds than in-service speed;
  - c) rail track installation requirements;
  - d) anchorage arrangements for cranes to be installed on stationary (fixed) bases;
  - e) ballast requirements, as applicable;
- iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**  
[ISO 9374-3:2002](https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002)  
[ds.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002](https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002)

##### 5.2.1.2 Erection instructions

Data to be used by crane erection personnel should be provided, such as the following:

- a) mass and dimensions of components and sub-assemblies;
- b) recommended lifting attachment points, when applicable;
- c) centre of gravity location for non-uniform components and sub-assemblies, if handled in normal sequence of erection/dismantling;
- d) method and recommended sequence of assembly. Where applicable, warnings should be given to alert erection personnel when member strength or stability requires a particular method or sequence of erection;
- e) details of critical component connections, including diagrams where necessary, describing and identifying.
  - 1) bolts, pins and other parts needed,
  - 2) the method of assembling the joint,
  - 3) the torque or tension to be applied to prestressed bolts,
  - 4) the point in time during the erection process for applying final torque or tension,
  - 5) the means for retaining components such as pins.

### 5.2.1.3 Installation, testing and use

The manufacturer shall provide technical information such as listed in annex B and test certificates for the crane to facilitate its installation, testing and use in accordance with ISO 7363 and as appropriate for the appliance.

### 5.2.1.4 Operating instructions, limitations and precautions

Information, data and recommendations should be provided for the use of the crane driver and supervisory personnel, which, in the judgement of the manufacturer, would foster operation of the crane within the requirements of the design and would reduce the possibility of mishap or damage.

### 5.2.1.5 Maintenance requirements and recommendations

This information should include identification of those members or locations it is advisable to periodically observe or test by non-destructive means for the purpose of detecting the onset of metal fatigue, the loosening of prestressed bolts, or wear affecting the ability of the crane to support rated loads.

### 5.2.1.6 Design characteristics affecting competent use of the crane

In addition to the information called for in 5.2.1.2, data such as those listed below should be provided:

- a) location, proper settings and adjustments, and functioning of limiting and indicating devices;
- b) location and required settings of hydraulic or pneumatic pressure-relief valves and locations of points where circuit pressures can be checked;
- c) the manufacturer's recommendations for frequency of inspection as a function of the severity of service.

## 5.2.2 Dimensions

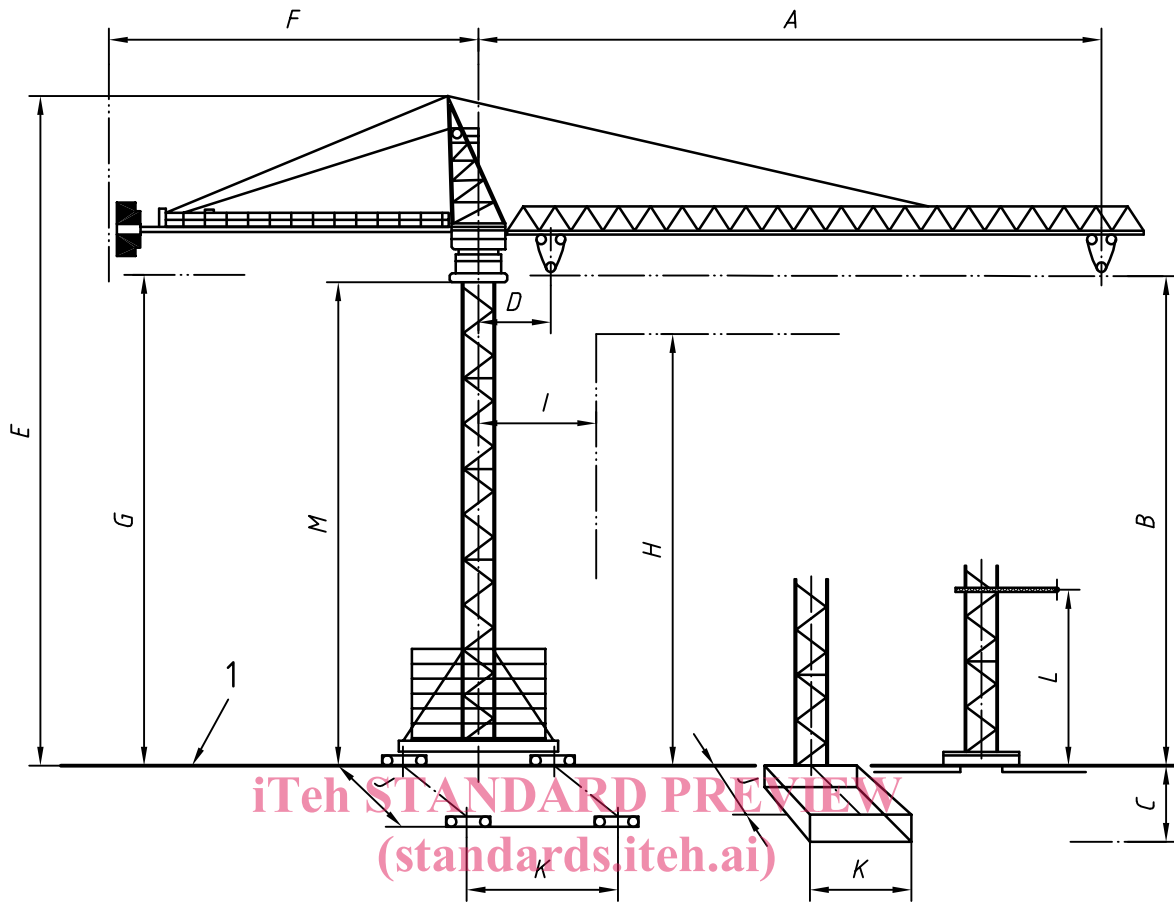
The manufacturer shall provide dimensional data appropriate to the configuration(s) of the crane furnished, such as those dimensions shown in Figures 2, 4 and 5.

**iTeh STANDARD PREVIEW**  
(Blank page)  
**(standards.iteh.ai)**

ISO 9374-3:2002

<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002>





iTeh STANDARD PREVIEW  
(standards.iteh.ai)

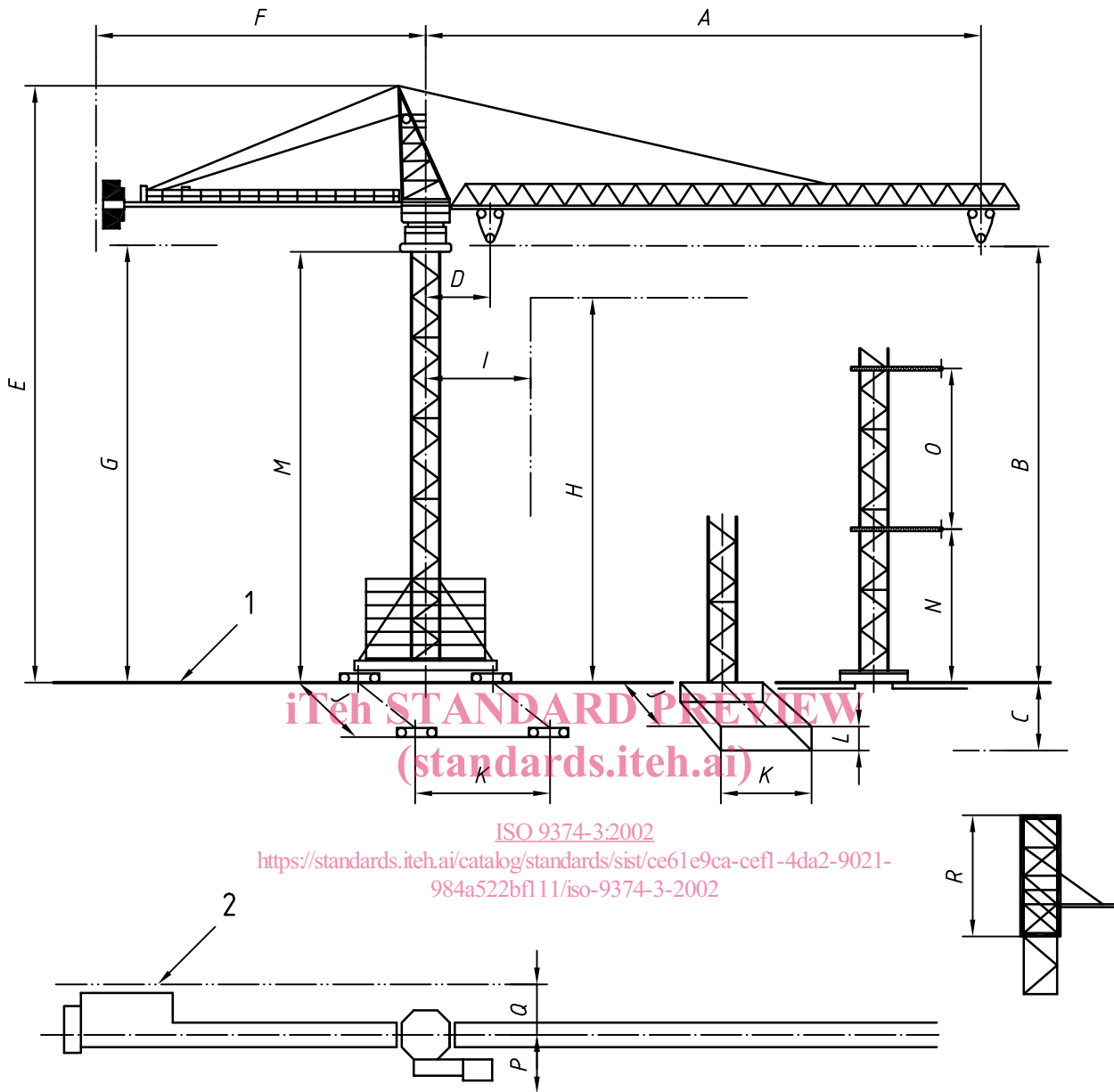
ISO 9374-3:2002

<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3:2002>

**Key**

- |   |  |
|---|--|
| 1 Datum                                     | G Clearance under tail swing                 |
| A Maximum radius                            | H Maximum height of the obstruction          |
| B Maximum hook height above the datum       | I Minimum distance to the obstruction        |
| C Maximum hook movement below the datum     | J Track rail gauge, or foundation width      |
| D Minimum radius                            | K Track rail wheelbase, or foundation length |
| E Maximum height to the top of the cat head | L Maximum free-standing height of tower      |
| F Tail radius                               | M Distance to the first tie                  |

**Figure 1 — Examples of dimensions to be provided by the purchaser, as applicable**

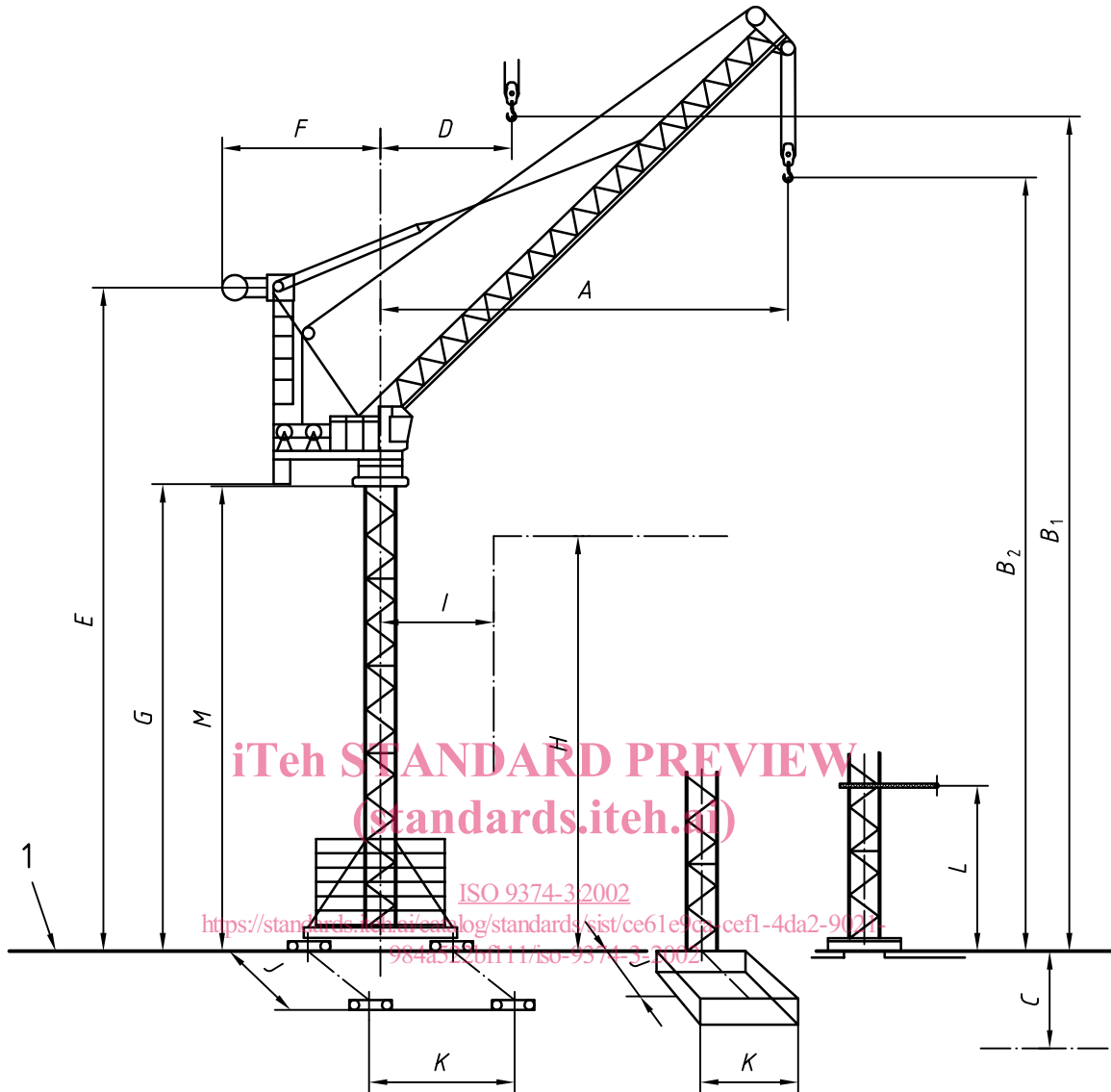


ISO 9374-3:2002  
<https://standards.iteh.ai/catalog/standards/sist/ce61e9ca-cef1-4da2-9021-984a522bfl11/iso-9374-3-2002>

**Key**

- |   |  |
|---|--|
| 1 Datum                                     | I Minimum distance to the obstruction        |
| 2 Building line                             | J Track rail gauge, or foundation width      |
| A Maximum radius                            | K Track rail wheelbase, or foundation length |
| B Maximum hook height above the datum       | L Depth of foundation                        |
| C Maximum hook movement below the datum     | M Maximum free-standing height of tower      |
| D Minimum radius                            | N Distance to the first tie                  |
| E Maximum height to the top of the cat head | O Distance between the ties                  |
| F Tail radius                               | P Minimum clearance, cab side                |
| G Clearance under tail swing                | Q Minimum clearance, other side              |
| H Maximum height of the obstruction         | R Height of climbing frame                   |

**Figure 2 — Examples of dimensions to be provided by the manufacturer, as applicable**



**Key**

- |  |  |
|--|--|
| 1 Datum  | G Clearance under tail swing                 |
| A Maximum radius                                   | H Maximum height of the obstruction          |
| B <sub>1</sub> Maximum hook height above the datum | I Minimum distance to the obstruction        |
| B <sub>2</sub> Maximum hook height above the datum | J Track rail gauge, or foundation width      |
| C Maximum hook height below the datum              | K Track rail wheelbase, or foundation length |
| D Minimum radius                                   | L Distance to the first tie                  |
| E Maximum height to the top of the cat head        | M Maximum free-standing height of tower      |
| F Tail radius                                      |  |

**Figure 3 — Examples of dimensions to be provided by the purchaser, as applicable**