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# Eurocode 3: Design of steel structures
# Part 4-1: Silos
# Estonian National Annex

# Eurokoodeks 3: Teraskonstruktsioonide projekteerimine
# Osa 4-1: Puistemahutid
# Eesti standardi rahvuslik lisa

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

## FOREWORD

This document:

— is the Estonian National Annex to the European Standard EN 1993-4-1:2007 “Eurocode 3: Design of steel structures – Part 4-1: Silos”. It includes Estonian Nationally Determined Parameters (NDP) and procedures and it must be used together with EN 1993-4-1:2007 for structural design of constructions built in Estonia;

— was ratified with order nr 7 of the Estonian Centre for Standardisation dated 26.01.2010;

— has been endorsed with a notification published in the February 2010 issue of the official bulletin of the Estonian centre for Standardisation.

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ICS 65.040.20 Buildings and installations for processing and storage of agricultural produce,
91.010.30 Technical aspects, 91.080.10 Metal structures
Price group L

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# Annex NA
(informative)
# National requirements for Estonia

According to EN 1993-4-1:2007 every country should implement a national annex that might give alternative procedures, values and recommendations for classes with Notes indicating where National choice may be made. National choice is allowed in the following clauses:

- 2.2 (1)
- 2.2 (3)
- 2.9.2.2 (3)
- 3.4 (1)
- 4.1.4 (2) and (4)
- 4.2.2.3 (6)
- 4.3.1 (6) and (8)
- 5.3.2.3 (3)
- 5.3.2.4 (10), (12) and (15)
- 5.3.2.5 (10) and (14)
- 5.3.2.6 (3) and (6)
- 5.3.2.8 (2)
- 5.3.3.5 (1) and (2)
- 5.3.4.3.2 (2)
- 5.3.4.3.3 (2) and (5)
- 5.3.4.3.4 (5)
- 5.3.4.5 (3)
- 5.4.4 (2), (3) b) and (3) c)
- 5.4.7 (3)
- 5.5.2 (3)
- 5.6.2 (1) and (2)
- 6.1.2 (4)
- 6.3.2.3 (2) and (4)
- 6.3.2.7 (3)
- 7.3.1 (4)
- 8.3.3 (4)
- 8.4.1 (6)
- 8.4.2 (5)
- 8.5.3 (3)
- 9.5.1 (3) and (4)
- 9.5.2 (5)
- 9.8.2 (1) and (2)
- A.2 (1) and (2)
- A.3.2.1 (6)
- A.3.2.2 (6)
- A.3.2.3 (2)
- A.3.3 (1), (2) and (3)
- A.3.4 (4)

## NA.2.2 Reliability differentiation

(1) For reliability differentiation, see EN 1990.

NOTE The national annex may define consequence classes for silos as a function of the location, type of infill and loading, the structural type, size and type of operation.

— *In Estonia, the consequence classes for silos defined in EN 1993-4-1 are used.*

(3) For this standard, 3 consequence classes are used, with requirements which produce designs with essentially equal risk in the design assessment and considering the expense and procedures necessary to reduce the risk of failure for different structures: Consequence Classes 1, 2 and 3.

NOTE 1 The national annex may provide information on the consequence classes. Table 2.1 gives an example for the classification of two parameters, the size and the type of operation into consequence classes when all other parameters result in medium consequences, see EN 1990, B.3.1.

— *In Estonia, the classification given in Table 2.1 is generally used. Higher consequence class may be used, provided it is agreed upon with the designer, buyer and an official.*

NOTE 2 For the classification into action assessment classes, see EN 1991-4

### NA.2.9.2.2 Partial factors for resistances

(3)P The partial factors $\gamma_{Mi}$ for different limit states shall be taken from table 2.2.

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