

STN	Tanierové pružiny. Výpočet.	STN EN 16984 02 6060
------------	------------------------------------	--

Disc springs - Calculation

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/17

Obsahuje: EN 16984:2016

Oznámením tejto normy sa ruší
STN 02 6060 z 27.01.1977

124548

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 16984

November 2016

ICS 21.160

English Version

Disc springs - Calculation

Rondelles ressorts - Calculs

Tellerfedern - Berechnung

This European Standard was approved by CEN on 15 August 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms, definitions, symbols, units and abbreviated terms	4
3.1 Terms and definitions	4
3.2 Symbols, units and abbreviated terms	4
4 Representation.....	6
4.1 Single disc spring.....	6
4.2 Disc springs stacked in parallel	6
4.3 Disc springs stacked in series.....	6
4.4 Disc spring diagram	7
5 Design formulae for single disc springs.....	7
5.1 General.....	7
5.2 Test load	7
5.3 Deflection factors	8
5.4 Spring load.....	8
5.5 Design stresses.....	9
5.6 Spring rate	10
5.7 Energy capacity of springs	10
6 Load/deflection curve for a single disc spring	10
7 Stacking of disc springs.....	11
8 Effect of friction in load/deflection characteristic.....	13
9 Design stresses.....	14
10 Types of loading.....	15
10.1 Static loading and moderate fatigue conditions	15
10.2 Dynamic loading.....	15
Bibliography.....	16

European foreword

This document (EN 16984:2016) has been prepared by Technical Committee CEN/TC 407 “Cylindrical helical springs made from round wire and bar - Calculation and design”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

This European Standard has been prepared by the initiative of the Association of the European Spring Federation ESF and is based on the German Standard DIN 2092 “Disc springs — Calculation”, which is known and used in many European countries.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This standard specifies design criteria and features of disc springs, whether as single disc springs or as stacks of disc springs. It includes the definition of relevant concepts as well as design formulae, and covers the fatigue life of such springs.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16983:2016, *Disc springs - Quality specifications - Dimensions*

EN ISO 26909, *Springs - Vocabulary (ISO 26909)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN