



**SLOVENSKI STANDARD**  
**SIST EN 1591-1:2002+A1:2009/AC:2010**  
**01-november-2010**

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**Prirobnice in prirobnični spoji - Pravila za načrtovanje okroglih prirobničnih spojev s tesnili - 1. del: Način izračuna - Popravek AC**

Flanges and their joints - Design rules for gasketed circular flange connections - Part 1: Calculation method

Flansche und Flanschverbindungen - Regeln für die Auslegung von Flanschverbindungen mit runden Flanschen und Dichtung - Teil 1: Berechnungsmethode

Brides et leurs assemblages - Règles de calcul des assemblages à brides circulaires avec joint - Partie 1: Méthode de calcul

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**Ta slovenski standard je istoveten z: EN 1591-1:2001+A1:2009/AC:2010**

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**ICS:**

23.040.60 Prirobnice, oglavki in spojni elementi Flanges, couplings and joints

**SIST EN 1591-1:2002+A1:2009/AC:2010 en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 1591-  
1:2001+A1:2009/AC**

September 2010  
Septembre 2010  
September 2010

ICS 23.040.60

English version  
Version Française  
Deutsche Fassung

Flanges and their joints - Design rules for gasketed circular flange connections - Part 1: Calculation method

Brides et leurs assemblages - Règles de calcul des assemblages à brides circulaires avec joint - Partie 1: Méthode de calcul

Flansche und Flanschverbindungen - Regeln für die Auslegung von Flanschverbindungen mit runden Flanschen und Dichtung - Teil 1: Berechnungsmethode

This corrigendum becomes effective on 29 September 2010 for incorporation in the three official language versions of the EN.

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Ce corrigendum prendra effet le 29 septembre 2010 pour incorporation dans les trois versions linguistiques officielles de la EN.

<https://standards.iteh.ai/catalog/standards/sist/ff7c34b5-0f80-42d5-9e03-293375b12409>

Die Berichtigung tritt am 29. September 2010 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.



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

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Ref. No.: EN 1591-1:2001+A1:2009/AC:2010 D/E/F

## EN 1591-1:2001+A1:2009/AC:2010

**1 Modifications to Clause 3****3.3, line with symbol  $n_B$** 

Replace "Number of bolts, equations (1), (4), (33), (34)" with "Number of bolts, Equations (1), (4), (33), (34), (56a), (56b), (58a), (58b), (D.1), (D.2), (D.8), (D.9), (D.10)".

**3.3, line with symbols  $\Phi_B, \Phi_F, \Phi_G, \Phi_L, \Phi_X$** 

Replace "(72)" with "(72c)".

**2 Modifications to Clause 4****4.1.3.3, Note**

Replace " $h_N$ " with " $h_H$ ".

**4.1.4.1, Equation (19)**

Replace " $\gamma$ " with " $\lambda$ ".

**4.1.4.1, Equation (20)**

Replace Equation (20) completely with the following editorially improved one: "

$$c_F = (1 + \gamma \vartheta) / \{1 + \gamma \vartheta [4 (1 - 3 \lambda + 3 \lambda^2) + 6 (1 - 2 \lambda) \vartheta + 6 \vartheta^2] + 3 \gamma^2 \vartheta^4 \} \quad (20)".$$

**4.1.4.2, Equation (29)**

Replace " $D_{Ge}$ " with " $d_{Ge}$ ".

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**4.3.3, Equation (42)**

Replace Equation (20) completely with the following: "

$$X_G = (e_G / A_{Gt}) \times (b_{Gt} + e_G / 2) / (b_{Ge} + e_G / 2) \quad (42)".$$

**4.3.3, Table 1, line "Type 1", last column, line below equation for  $b_{Gi}$** 

Replace complete sentence with the following: "

$E_{Gm} = E_{G0}$ , where the value for  $E_{G0}$  will be calculated for the pressure of  $Q_{G0} = F_{G0} / A_{Ge}$ , for flat metallic ring gaskets with rectangular cross section."

**4.3.3, Table 1, line "Type 2", last column, first equation,  $b_{Gi} = \dots$** 

Replace " $Q_{max}$ " with " $Q_{max,y}$ ".

**3 Modifications to Clause 5****5.1.2.3, Equation (45), first line**

Replace " $e_B$ " with " $l_B$ ".

**5.1.2.3, line below Equation (45), equation after "Herein shall hold:"**

Replace " $\tilde{e}_{Ft} + \tilde{e}_{Ft} + e_L + \tilde{e}_L + e_G = e_B$ "

with " $e_{Ft} + \tilde{e}_{Ft} + e_L + \tilde{e}_L + e_G = l_B$ ".

**5.3.2, Equation (50)**

Replace " $Q_{smin(L)I}$ " with " $Q_{Smin(L)I}$ ".

**5.4.1, 3<sup>rd</sup> paragraph**

Replace "repeated from equation (38)," with "repeated from Equation (37),".

**5.4.2, 2<sup>nd</sup> paragraph**

Replace " $n_b$ " with " $n_B$ ".

**5.4.2, Equations (56a), (56b), (58a) and (58b)**

Replace four times " $n_b$ " with " $n_B$ ".

**4 Modifications to Clause 6****6.2, Equation (71)**

Replace Equation (71) completely with the following: "

$$\Phi_B = \frac{1}{f_B} \sqrt{\left(\frac{F_B}{A_B}\right)^2 + 3\left(C \frac{M_{t,B}}{I_B}\right)^2} \leq 1 \quad (71)".$$

**6.2, first note**

Replace ", see 6.1)" with ", see 5.4.2)".

**6.3, Equation (72a)**

Replace Equation (72a) completely with the following: "

$$Q_{\max,Y} = Q_{S\max} / \{1 + c_1 \times (b_G/e_G)_{\text{ref}}\} \quad (72a)".$$

**6.3, Equation (72b)**

Replace Equation (72b) completely with the following: "

$$Q_{\max} = Q_{S\max} \times \{1 + c_1 \times (b_G/e_G)_{\text{actual}}\} / \{1 + c_1 \times (b_G/e_G)_{\text{ref}}\} \quad (72b)".$$

**6.4, Equation (74), symbol  $\psi$  in round brackets**

Replace " $\psi_{\text{opt}} \times \psi$ " with " $\psi_{\text{opt}} \times \psi$ ".

**6.4, Equation (77), second equation**

Replace " $\delta_R = F_R / (f_E \times d_E \times \cos \varphi_S)$ " with " $\delta_R = F_R / (f_E \times \pi \times d_E \times e_D \times \cos \varphi_S)$ ".

**6.4, Equation (79), upper line**

Replace " $-0,75 \times \delta_R$ " with " $-0,75 \times \delta_Q$ ".

**6.4, Equation (79), lower line**

Replace " $-0,25 \times \delta_R$ " with " $-0,25 \times \delta_Q$ ".

**6.4, Equation (82)**

Replace complete Equation (82) with the following: "

$$\Psi_{(j_S, k_M, k_S)} = \frac{f_E \times d_E \times e_D \times \cos \varphi_S}{f_F \times 2 \times b_F \times e_F} \times \left\{ (0,5 \times \delta_Q + \delta_R) \times \tan \varphi_S - \delta_Q \times 2 \times e_P / d_E + j_S \times k_S \times \sqrt{\frac{e_D \times c_M \times c_S \times (1 + j_S \times k_M)}{d_E \times \cos^3 \varphi_S}} \right\} \quad (82)".$$

**6.4, Equation (84), left side of equation**

Replace " $\Psi_{\text{opt}} =$ " with " $\Psi_0 =$ ".

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**5 Modifications to Annex E****E.3, Equation (E.7)**

Replace complete Equation (E.7) with the following: "

$$F_{GI \min} = \left\{ F_{G0 \min} \times Y_{G0} \times P_{QRI} - [F_{QI} \times Y_{QI} + (F_{RI} \times Y_{RI} - F_{RO} \times Y_{RO}) + \Delta U_I] \right\} / Y_{GI} \quad (\text{E.7}).$$

**E.3, Equation (E.8)**

Replace complete Equation (E.8) with the following: "

$$F_{GI \max} = \left\{ F_{G0 \max} \times Y_{G0} \times P_{QRI} - [F_{QI} \times Y_{QI} + (F_{RI} \times Y_{RI} - F_{RO} \times Y_{RO}) + \Delta U_I] \right\} / Y_{GI} \quad (\text{E.8}).$$

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