

# Bolted Connection Component Generator (Version: 2017 (Build 210142000, 142))

02.07.2025

## ▣ Project Info

## ▣ Static Calculation

### ▣ Guide

Type of Strength Calculation - Check Calculation

### ▣ Loads

Tightness Factor	k	1,50 ul
Maximum axial Force	$F_a$	0 N
Force Input Factor	n	0,50 ul
Maximum tangent Force	$F_t$	3500 N
Joint Friction Factor	f	0,40 ul

### ▣ Bolt

Bolt Number	z	1 ul
Thread Diameter	d	24,000 mm
Thread Pitch	p	1,500 mm
Mean Bolt Diameter	$d_s$	23,026 mm
Minimum Bolt Diameter	$d_{min}$	22,160 mm
Material		User material
Yield Strength	$S_y$	689 MPa
Required Safety Factor	$k_s$	3,00 ul
Allowable Thread Pressure	$p_a$	40 MPa
Modulus of Elasticity	E	206700 MPa
Thread Friction Factor	$f_1$	0,20 ul
Head Friction Factor	$f_2$	0,25 ul

### ▣ Material

Joint Functional Width	L	35,000 mm
Modulus of Elasticity	E	206700 MPa

### ▣ Results

Prestress Force	$F_v$	13125,000 N
Working Force	$F_{max}$	13125,000 N
Required Tightening Moment	$M_u$	93,979 N m
Tensile Stress	$\sigma_t$	34,032 MPa
Torsional Stress	$\tau_k$	43,985 MPa
Reduced Stress	$\sigma_{red}$	83,440 MPa

Stress from Maximum Force	$\sigma_{\max}$	34,032 MPa
Thread Pressure	$p_c$	17,337 MPa
Strength Check		Positive

☐ **Summary of Messages**

06:51:23 Calculation: Calculation indicates design compliance!