

PFNA Results and study set-up

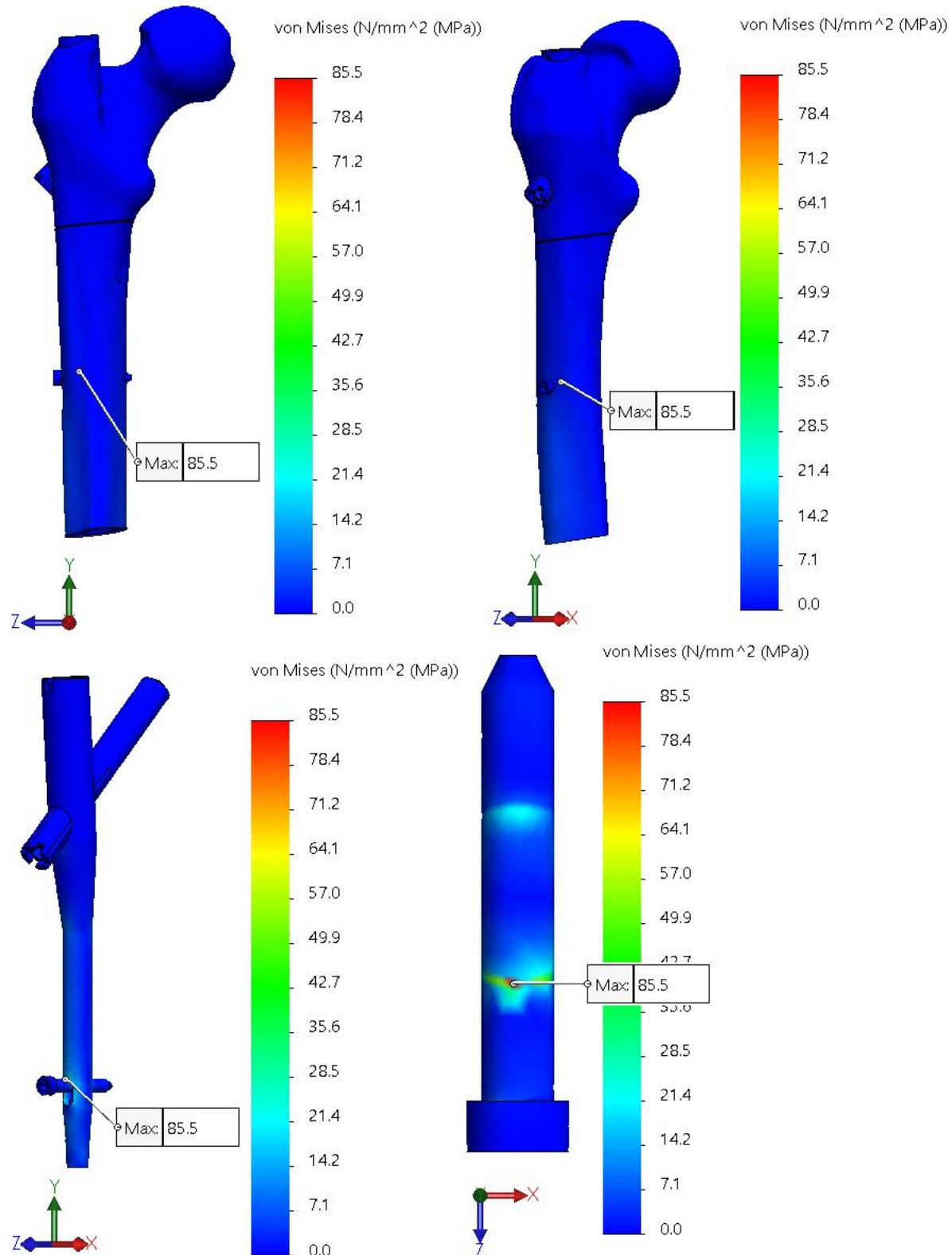
Contents

PFNA (location 1: 0.5 cm below LT)	3
Force: 125 N.....	3
Force: 250 N.....	4
Force: 375 N.....	5
Force: 500 N.....	6
PFNA (location 2: 1 cm below LT)	8
Force: 125 N.....	8
Force: 250 N.....	9
Force: 375 N.....	10
Force: 500 N.....	11
PFNA (location 3: 1.5 cm below LT)	13
Force: 125 N.....	13
Force: 250 N.....	14
Force: 375 N.....	15
Force: 500 N.....	16
PFNA (location 4: 2 cm below LT)	18
Force: 125 N.....	18
Force: 250 N.....	19
Force: 375 N.....	20
Force: 500 N.....	21
PFNA (location 5: 2.5 cm below LT)	23
Force: 125 N.....	23
Force: 250 N.....	24
Force: 375 N.....	25
Force: 500 N.....	26
PFNA (location 6: 3 cm below LT)	28
Force: 125 N.....	28
Force: 250 N.....	29
Force: 375 N.....	30

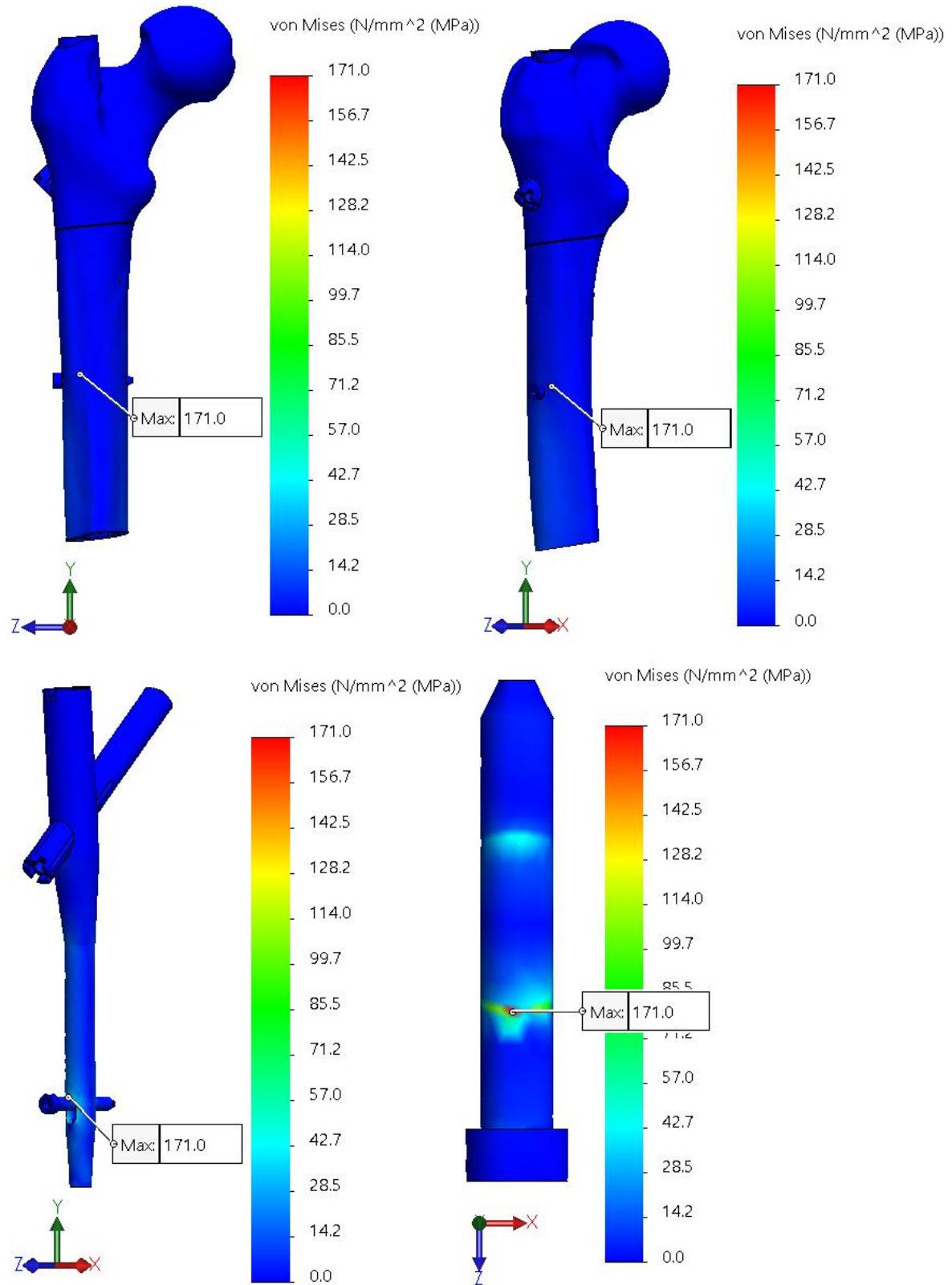
Force: 500 N.....	31
PFNA (location 7: 3.5 cm below LT).....	33
Force: 125 N.....	33
Force: 250 N.....	34
Force: 375 N.....	35
Force: 500 N.....	36
PFNA (location 8: 4 cm below LT).....	38
Force: 125 N.....	38
Force: 250 N.....	39
Force: 375 N.....	40
Force: 500 N.....	41
PFNA (location 9: 4.5 cm below LT).....	43
Force: 125 N.....	43
Force: 250 N.....	44
Force: 375 N.....	45
Force: 500 N.....	46
PFNA Simulation FEM Set-Up	48
Fracture height / location.....	48
Force & Fixture	49
Connection	50
Contact-Set	50
Global-Contact.....	51
Mesh.....	52
Material	53
Femur.....	53
DHS & PFNA	54

PFNA (location 1: 0.5 cm below LT)

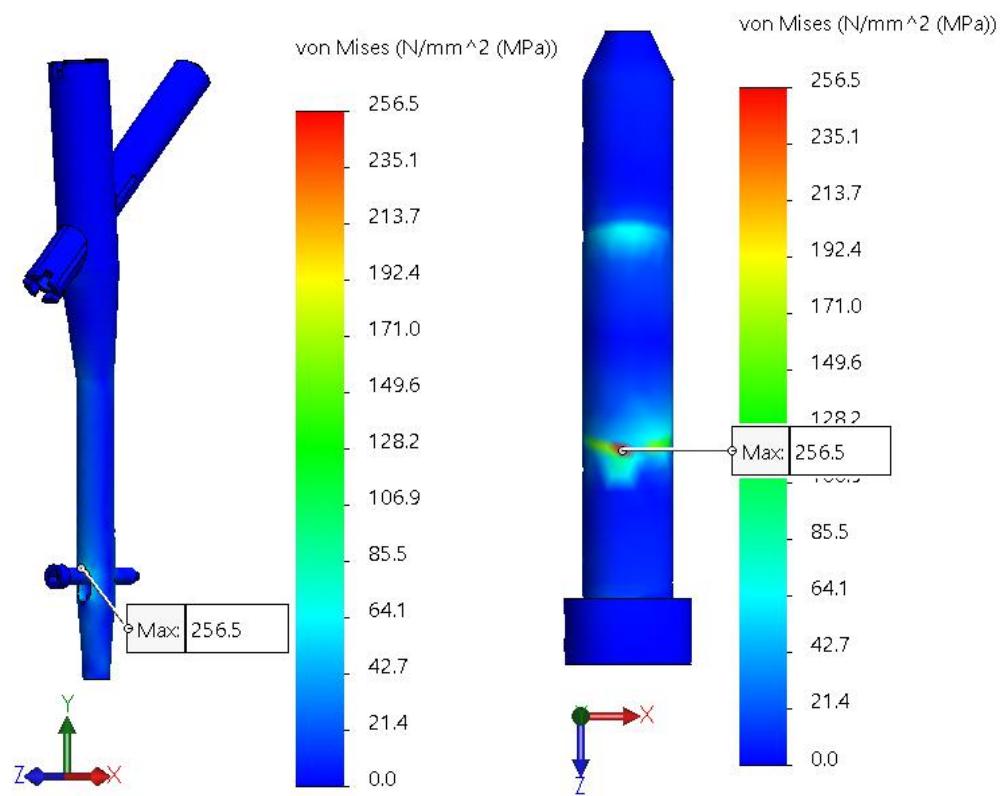
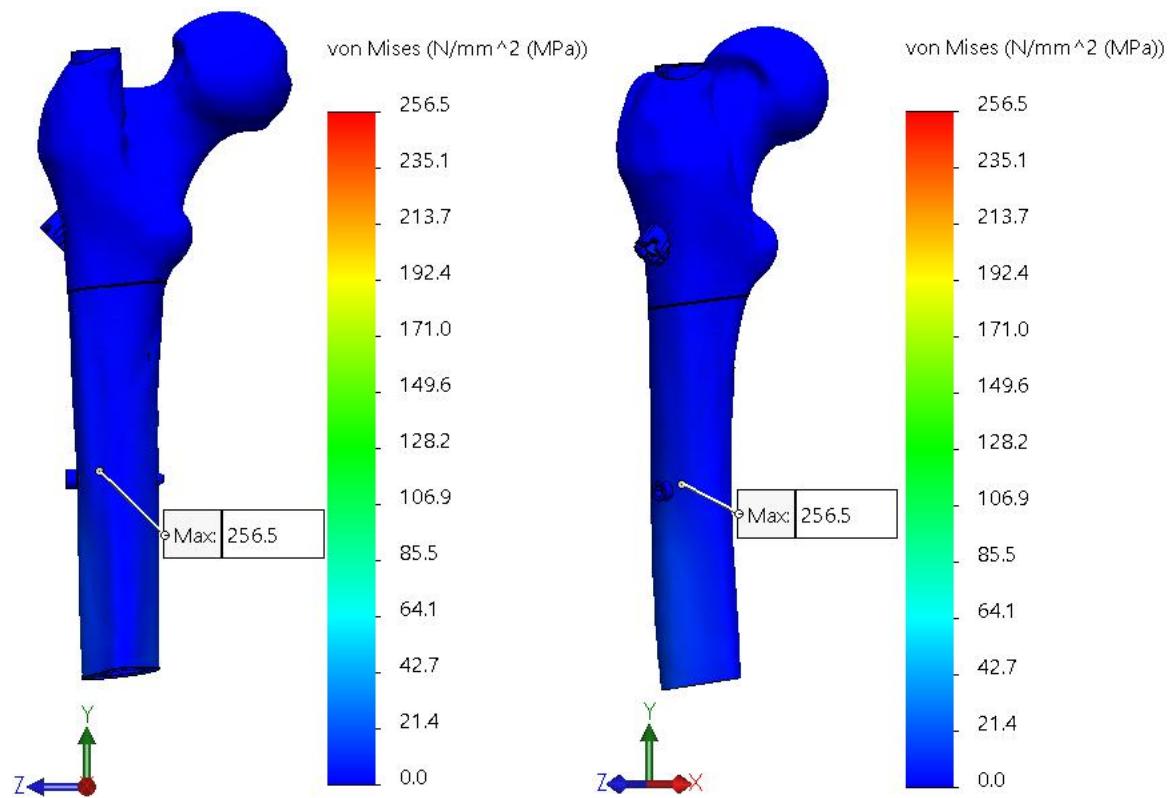
Force: 125 N



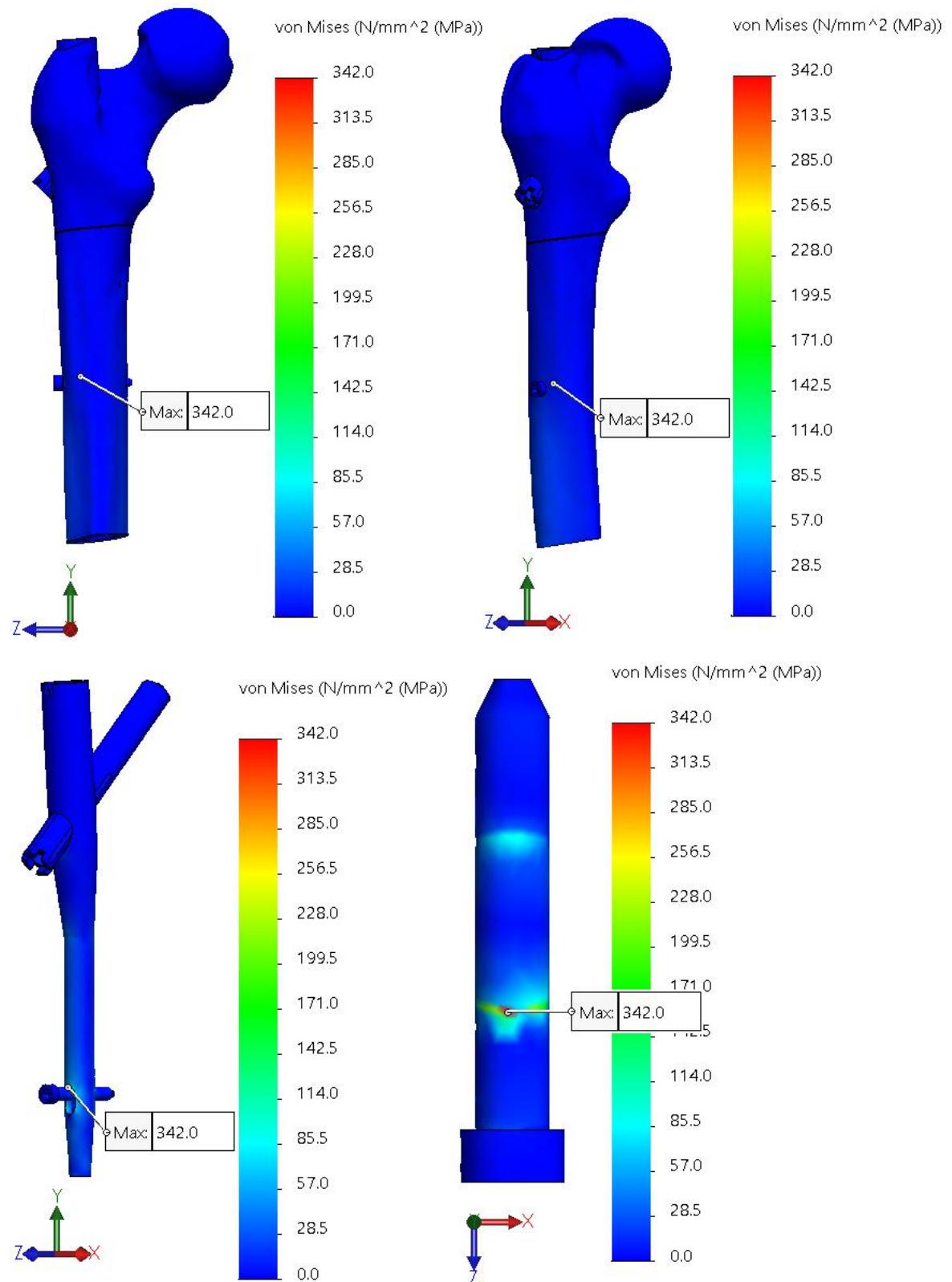
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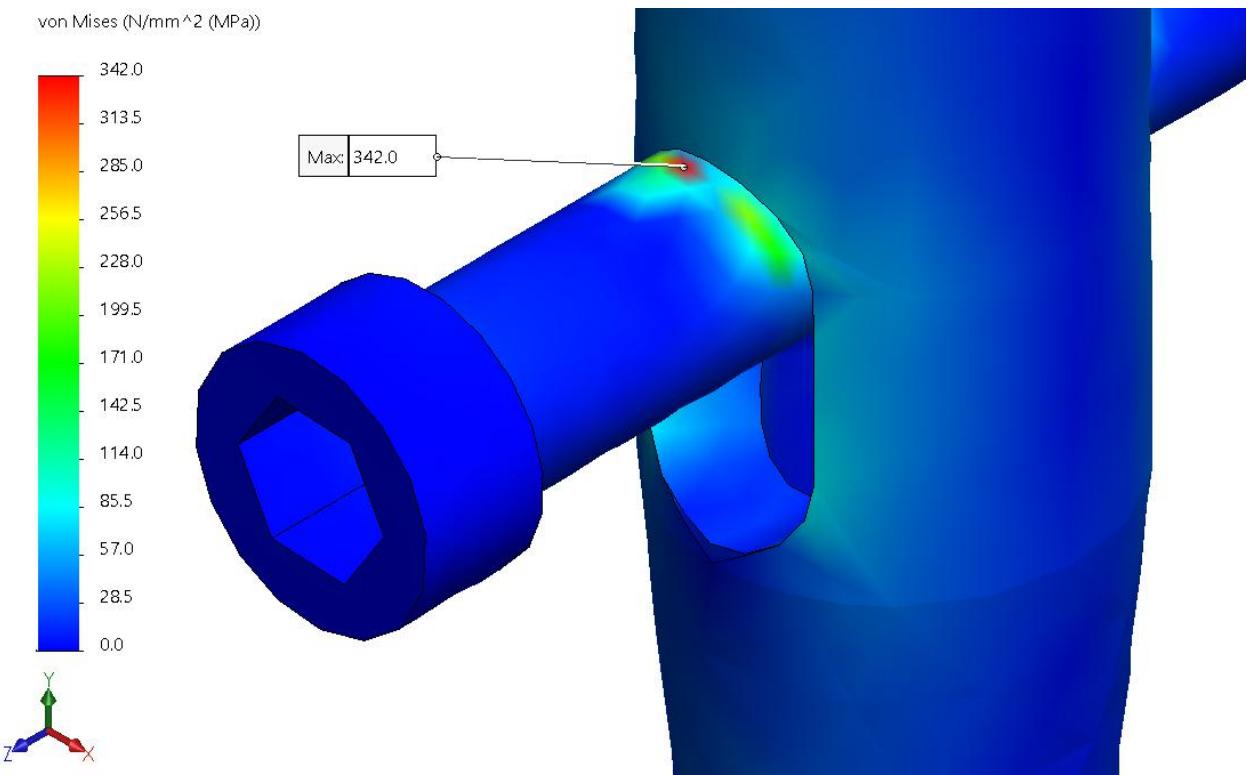


Force: 375 N



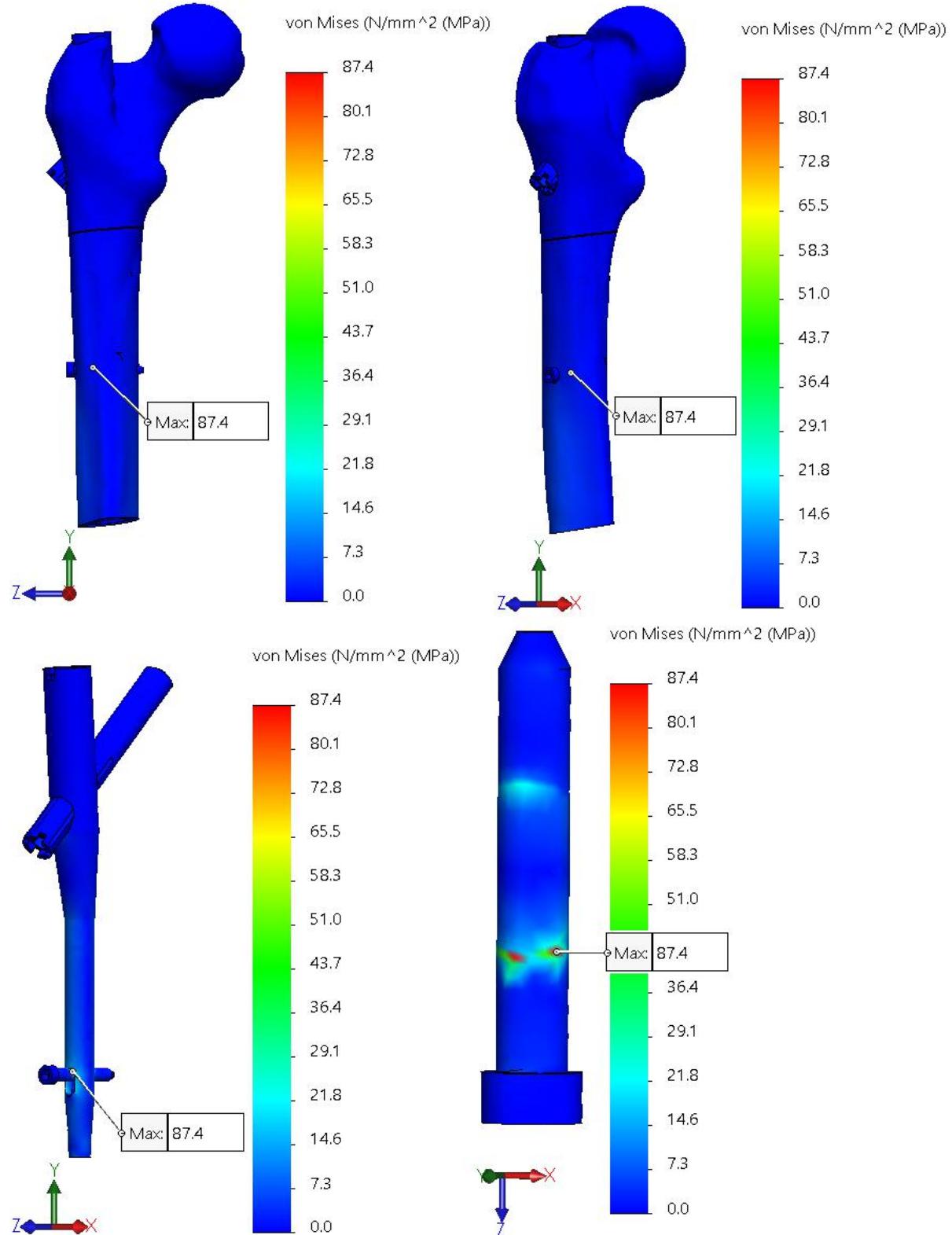
Force: 500 N



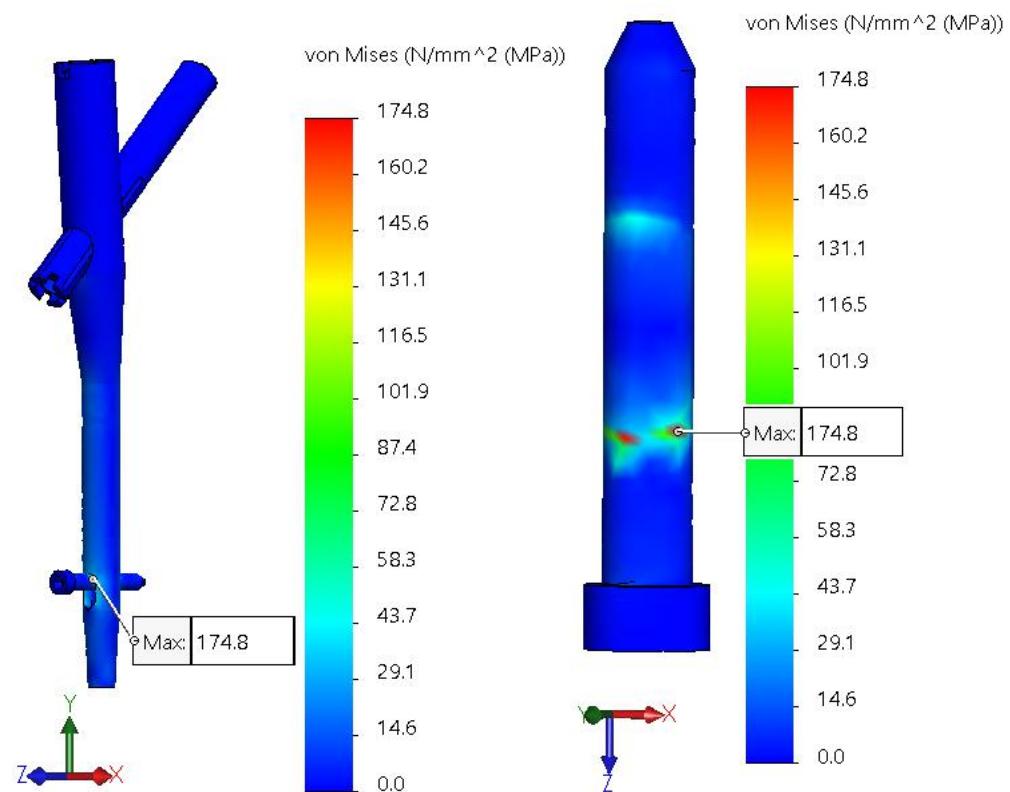
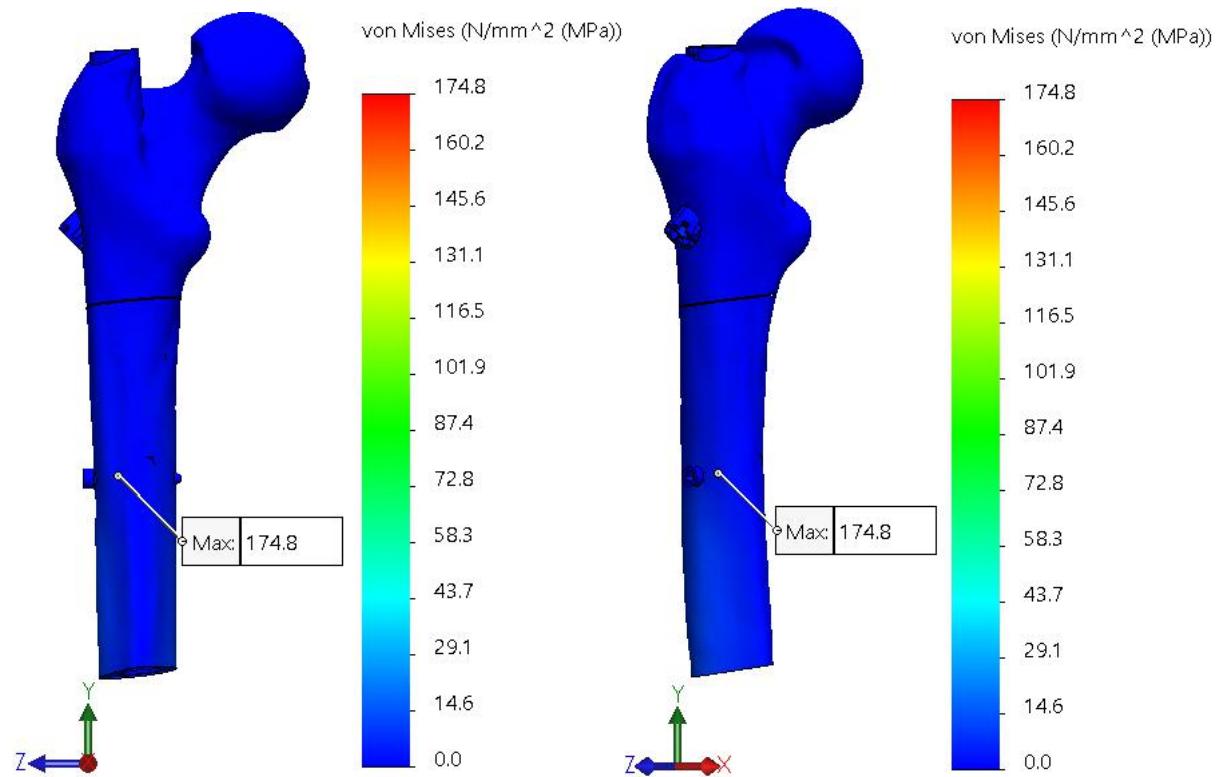


PFNA (location 2: 1 cm below LT)

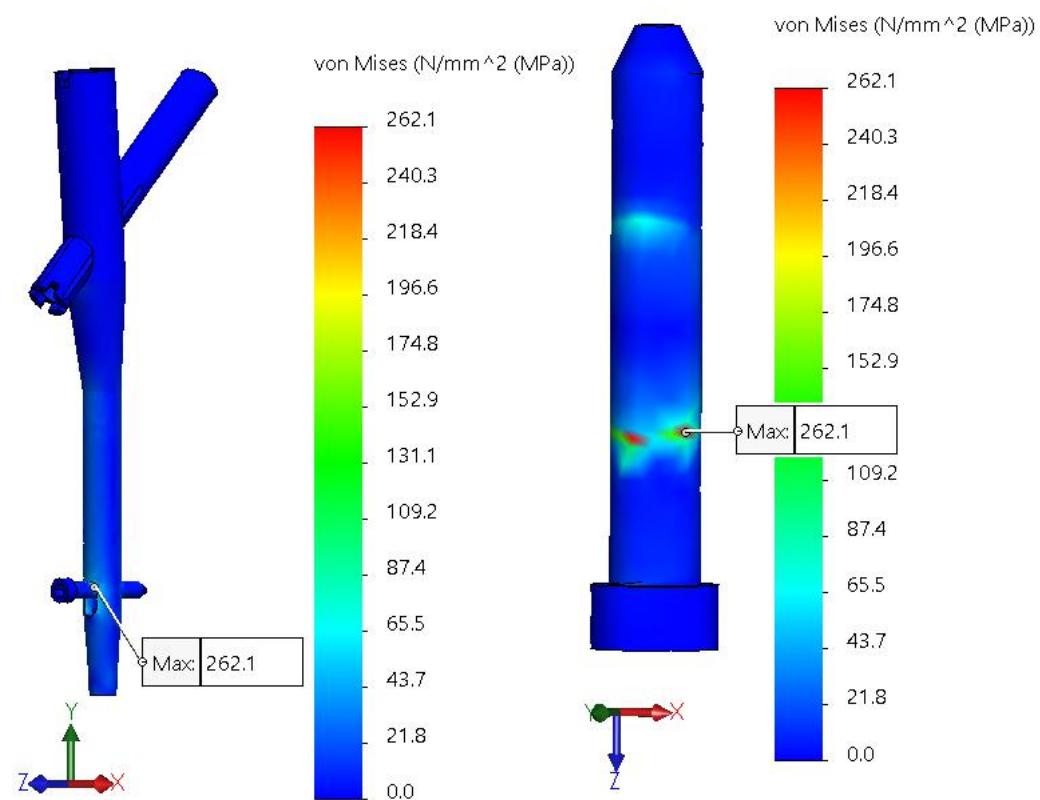
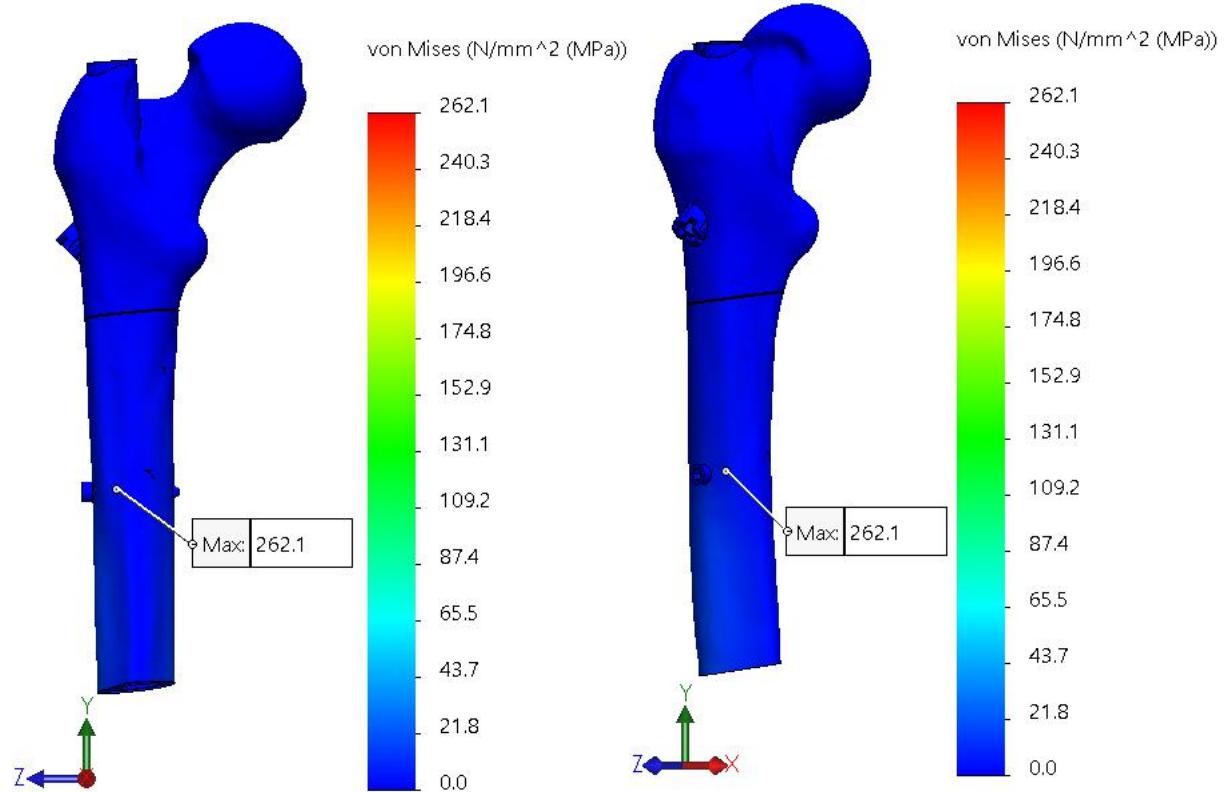
Force: 125 N



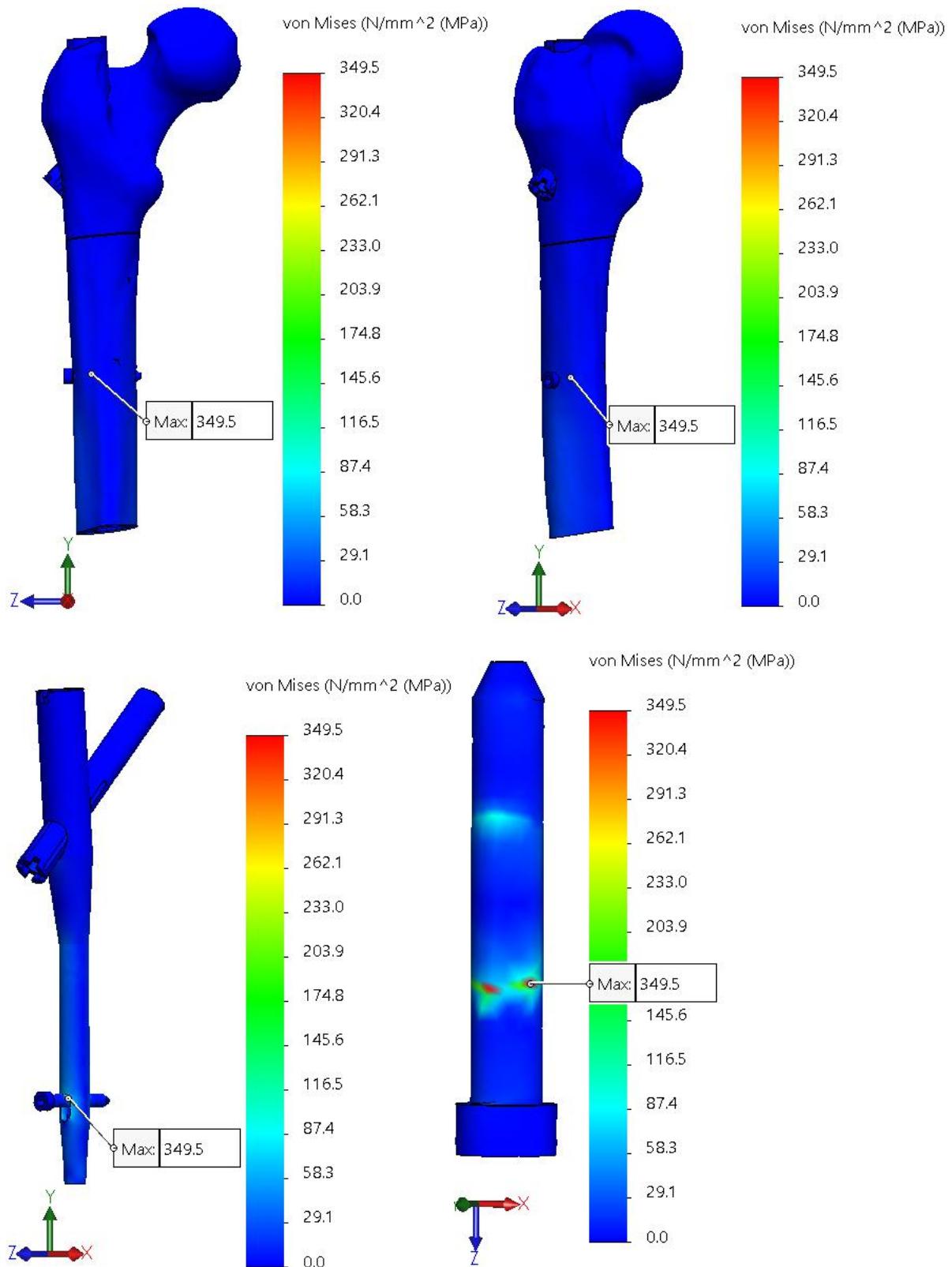
Force: 250 N

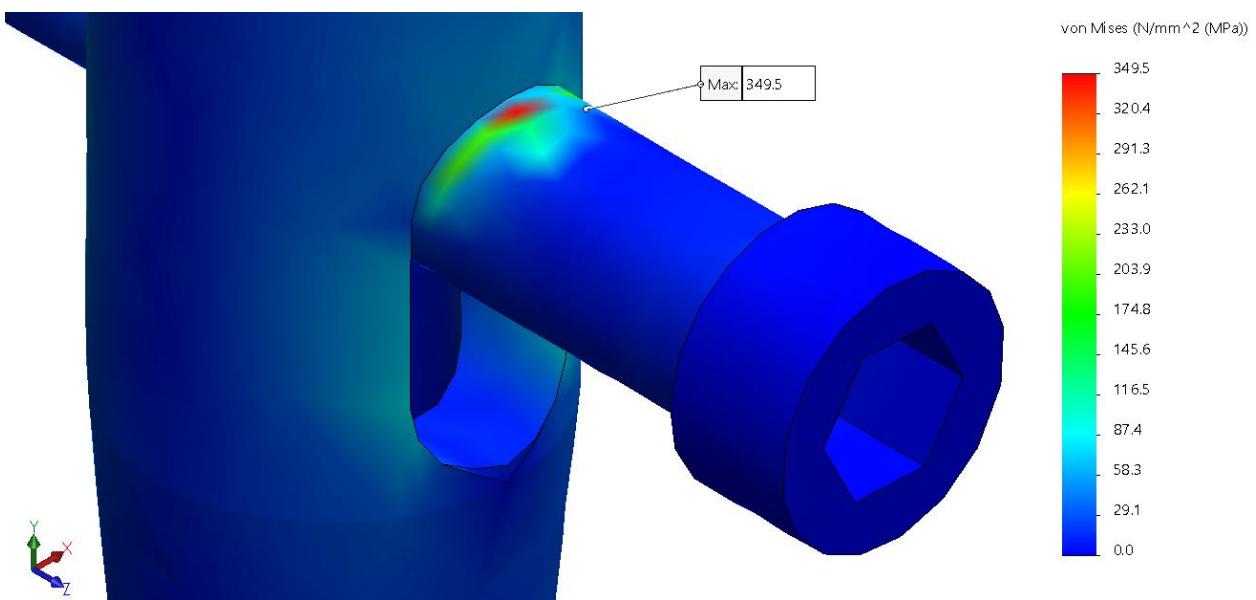
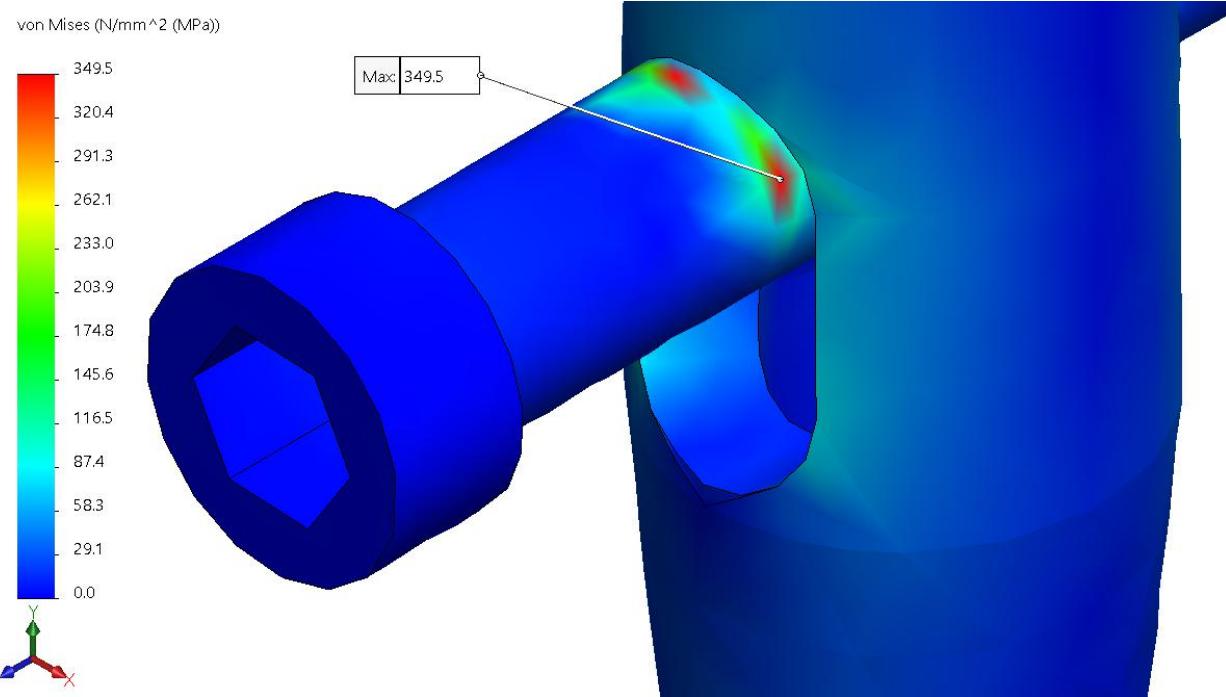


Force: 375 N



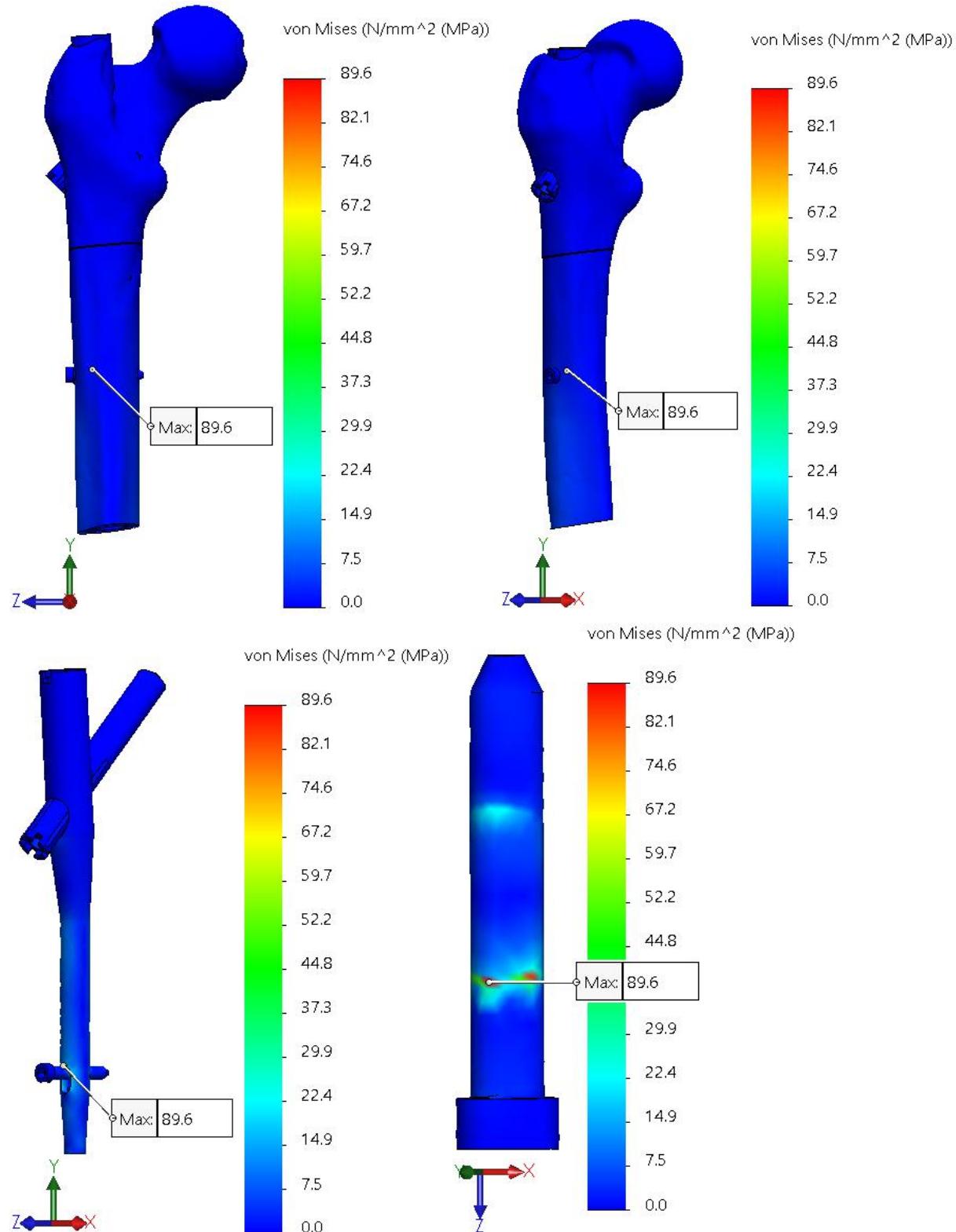
Force: 500 N



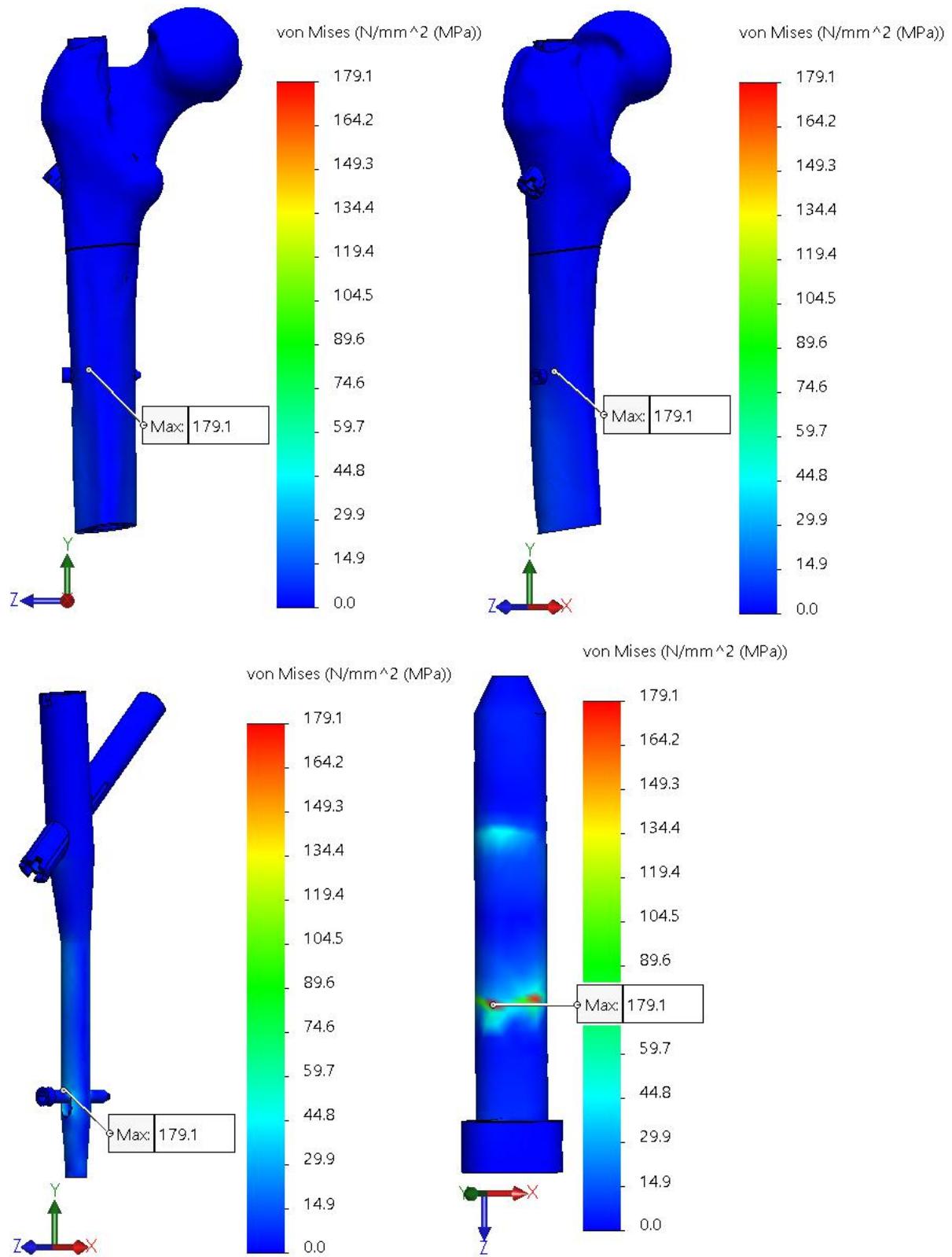


PFNA (location 3: 1.5 cm below LT)

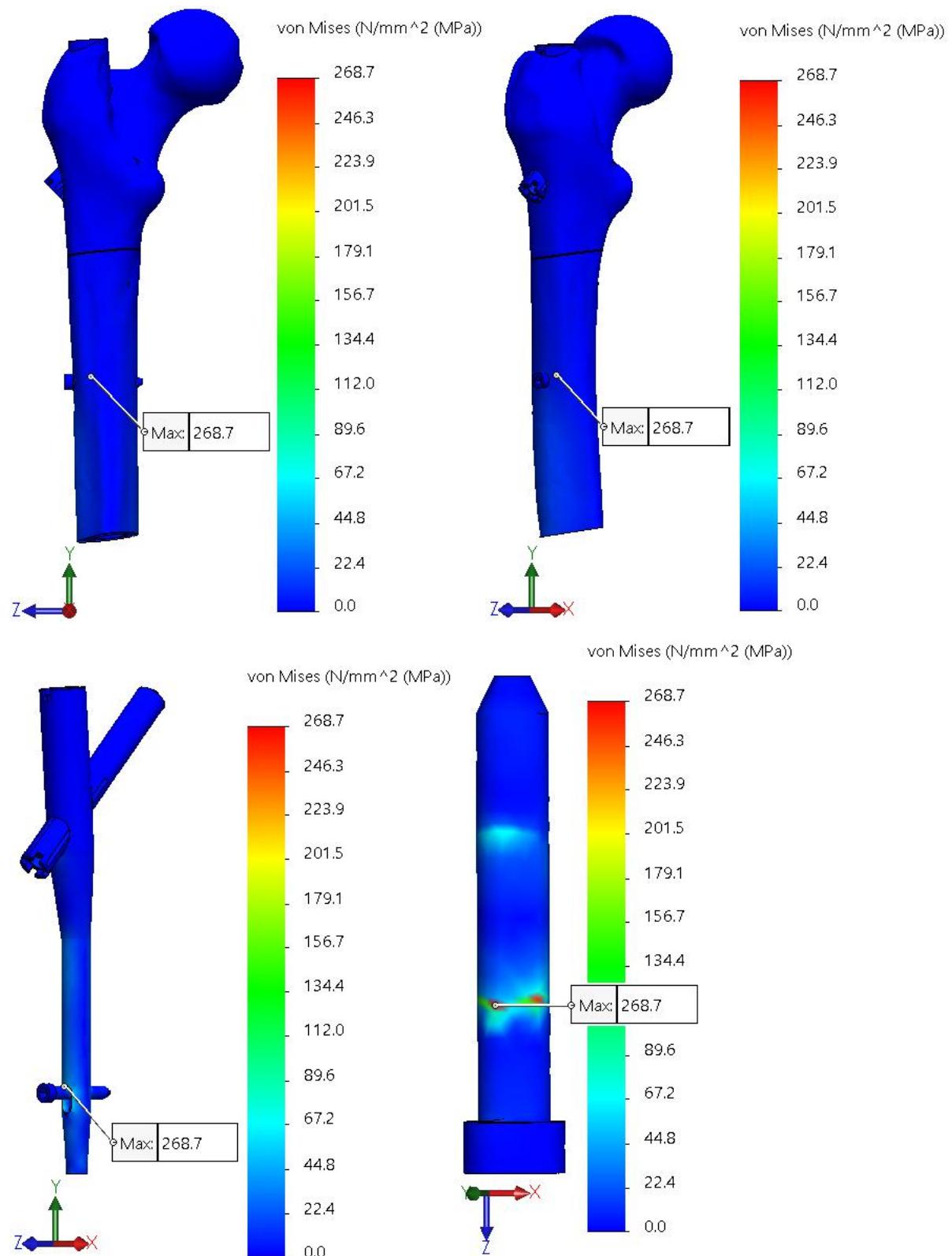
Force: 125 N



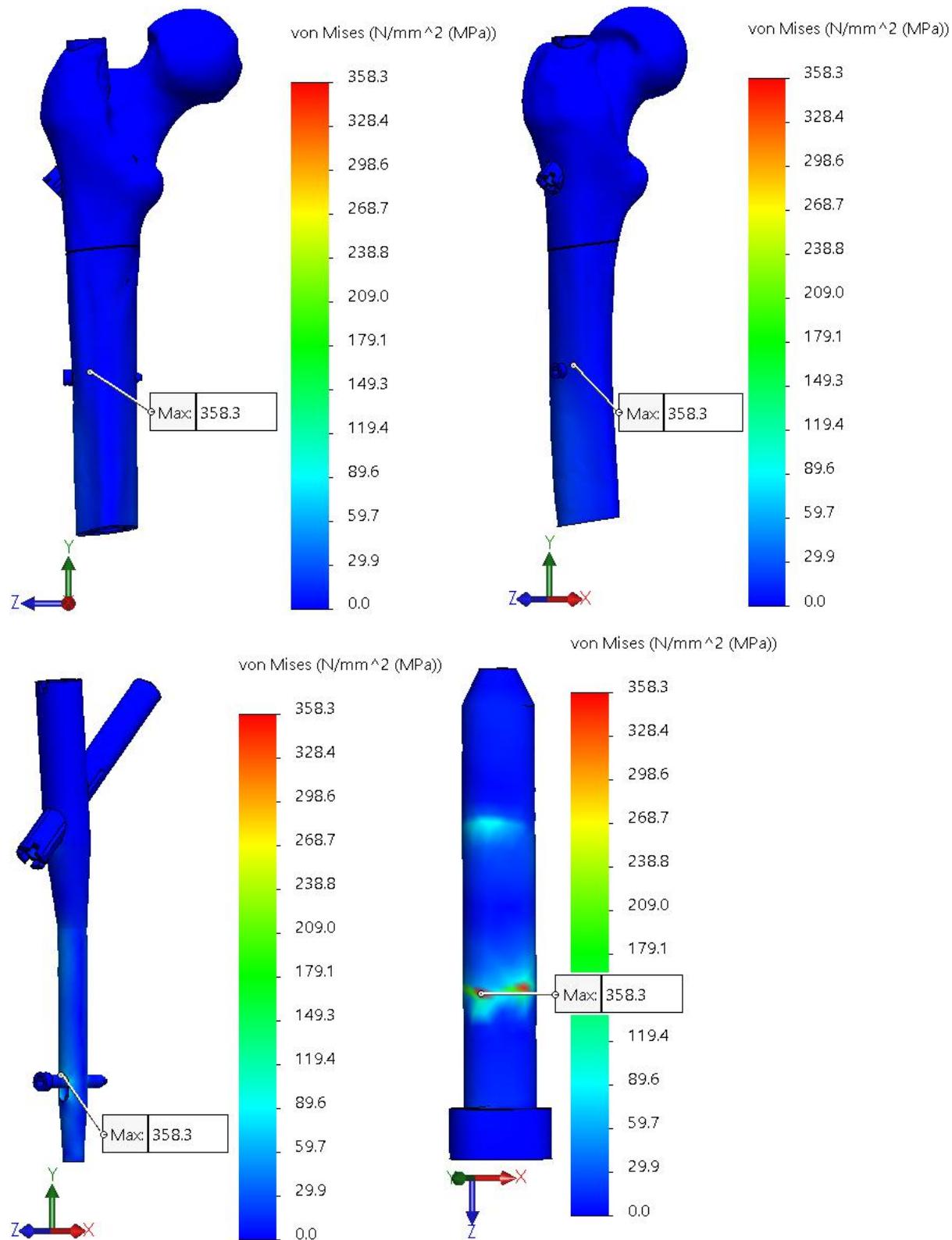
Force: 250 N

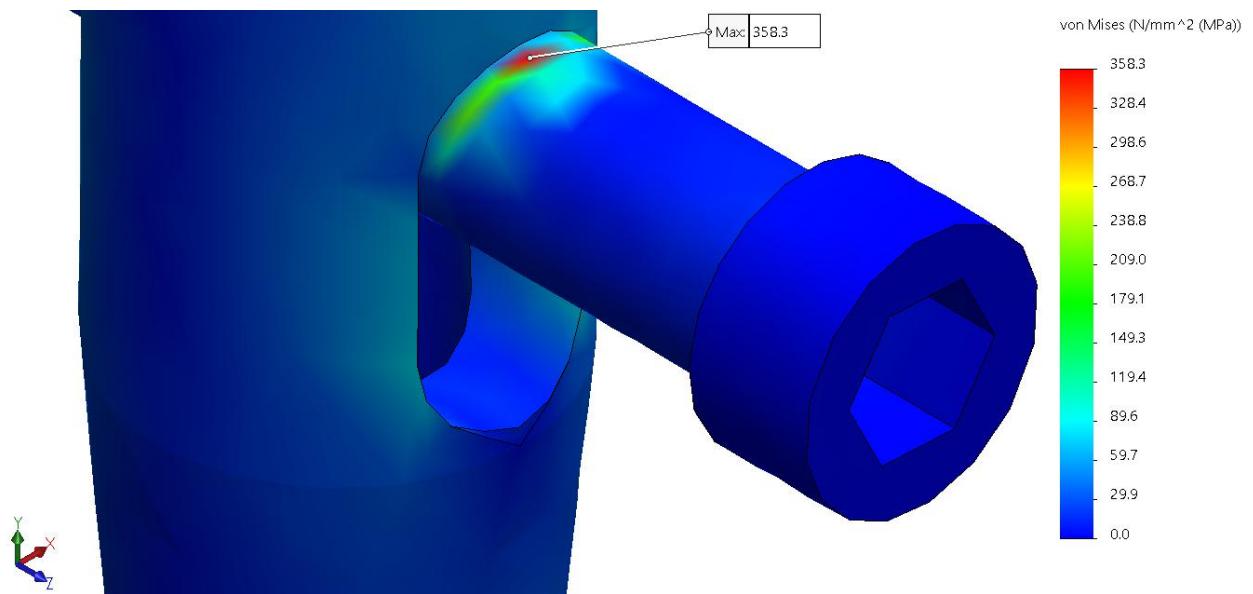
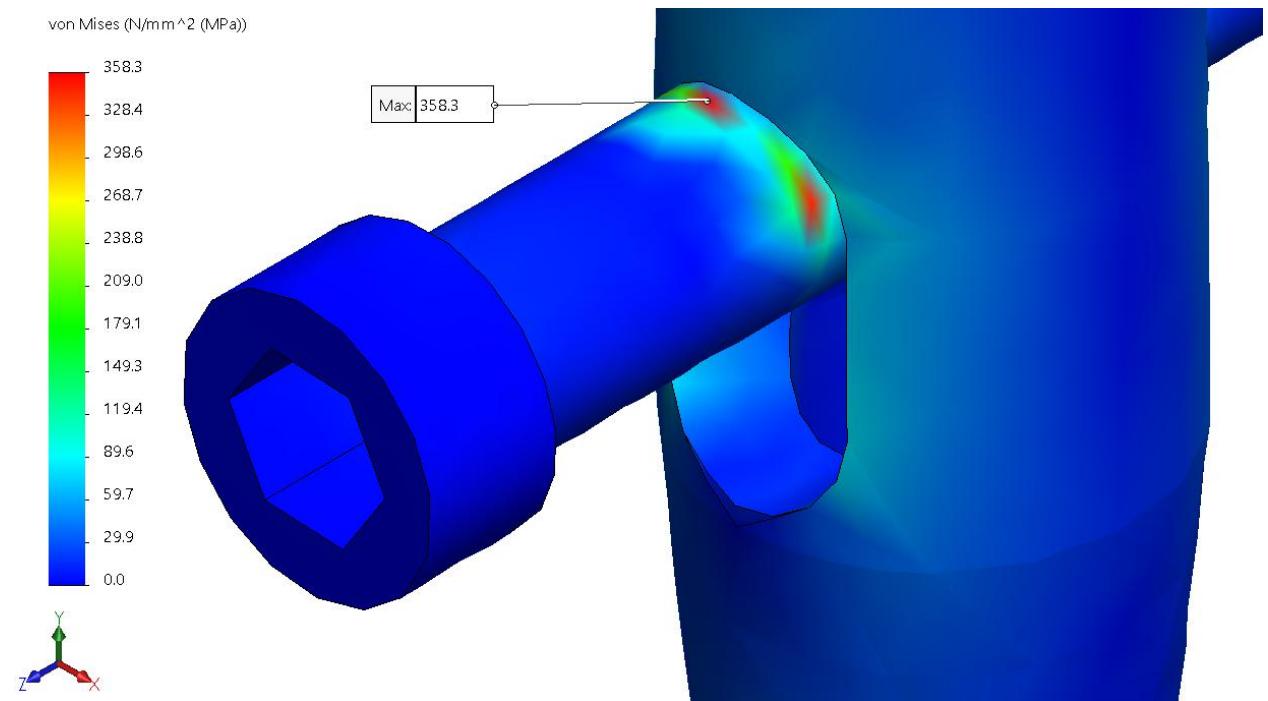


Force: 375 N



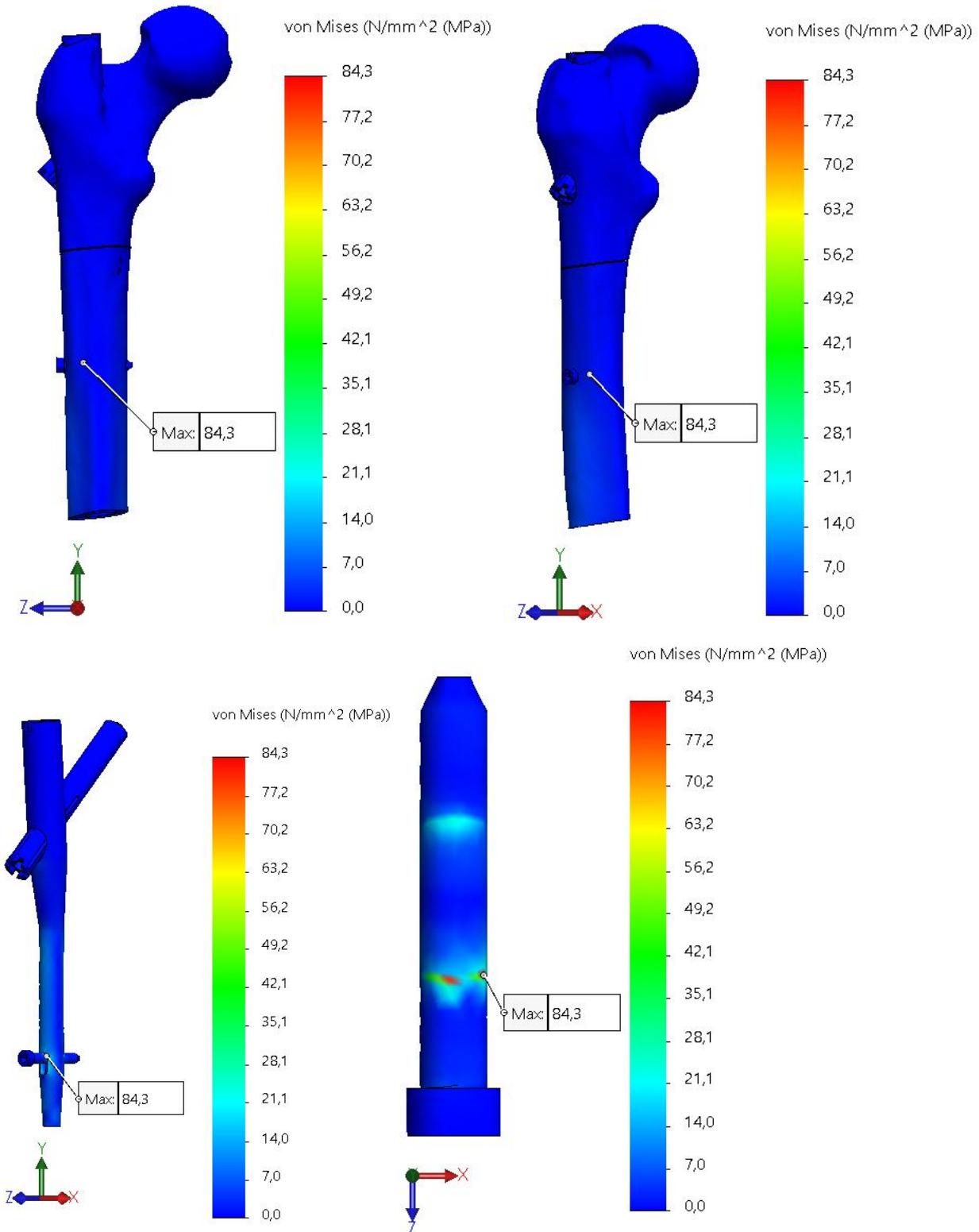
Force: 500 N



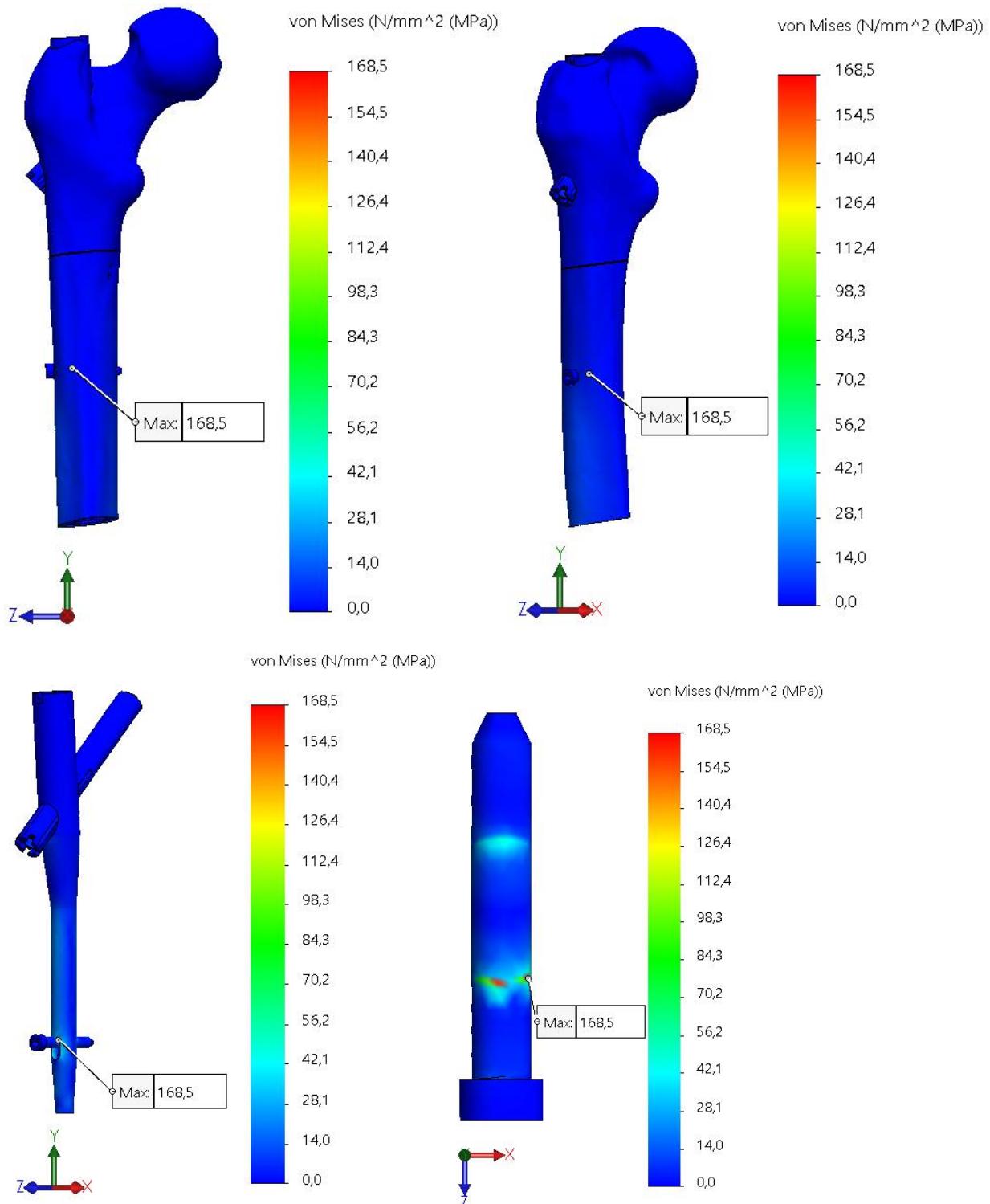


PFNA (location 4: 2 cm below LT)

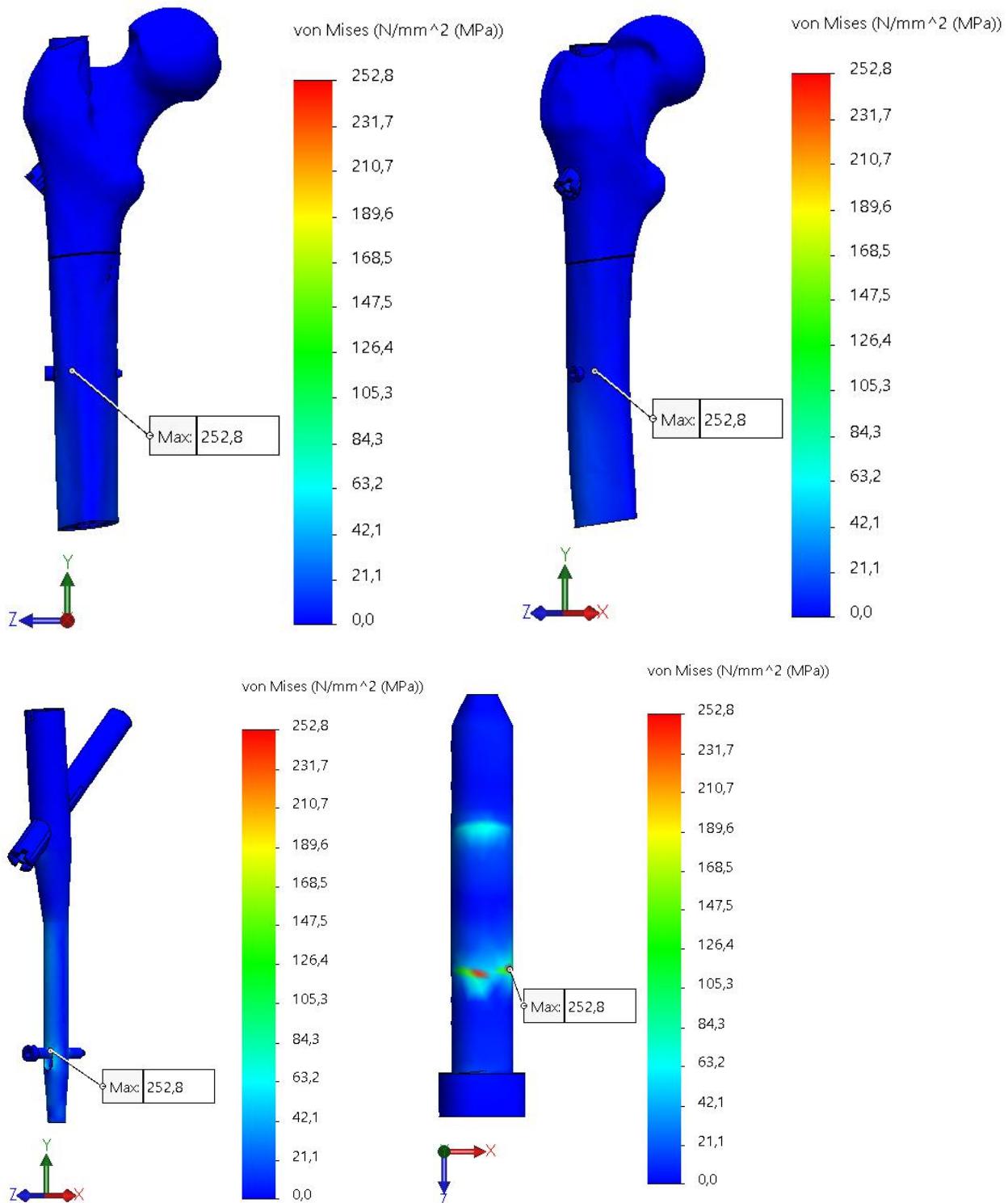
Force: 125 N



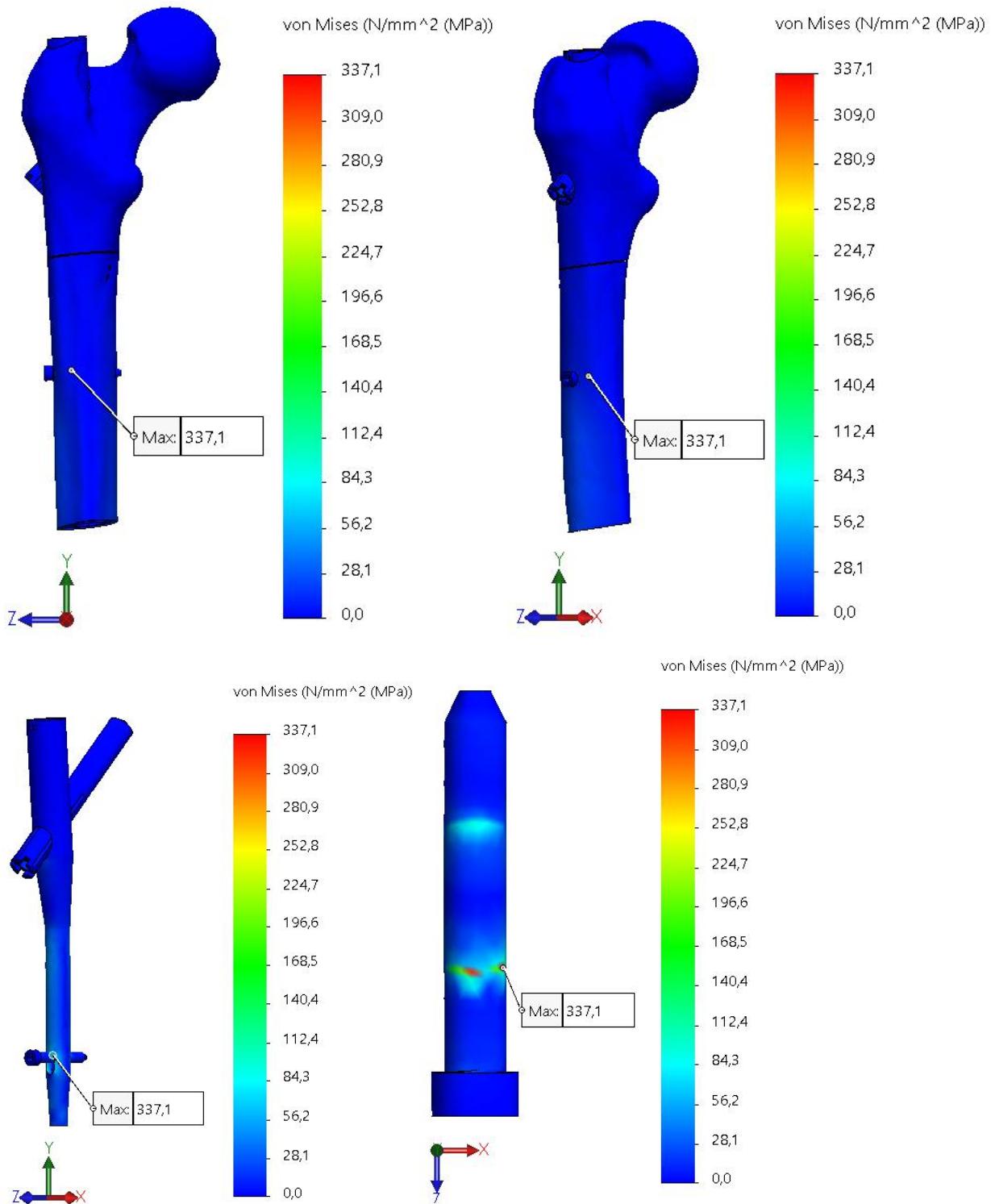
Force: 250 N

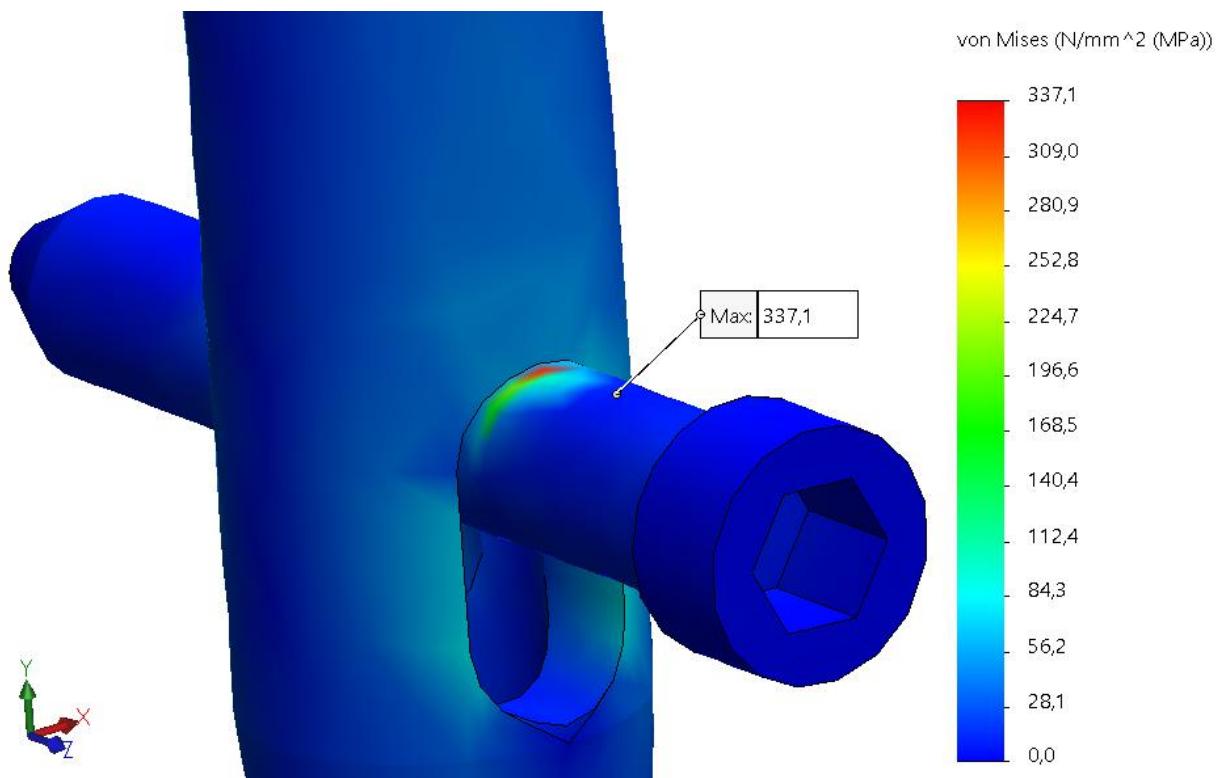
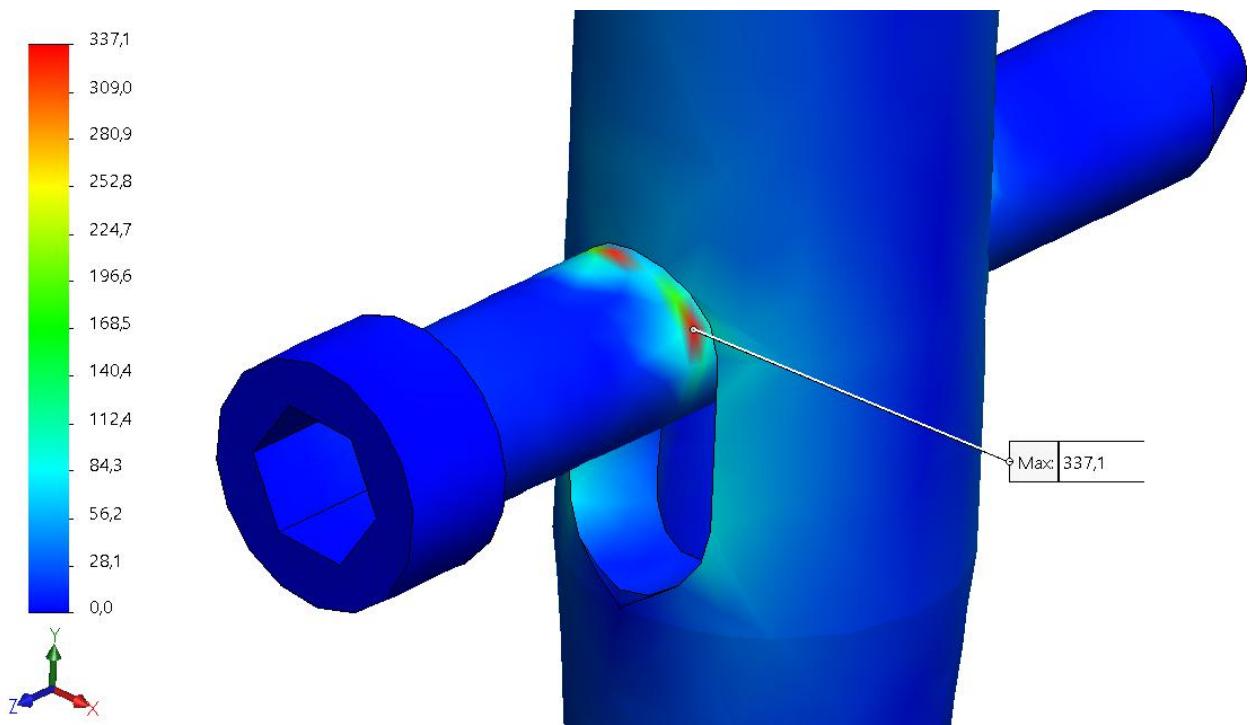


Force: 375 N



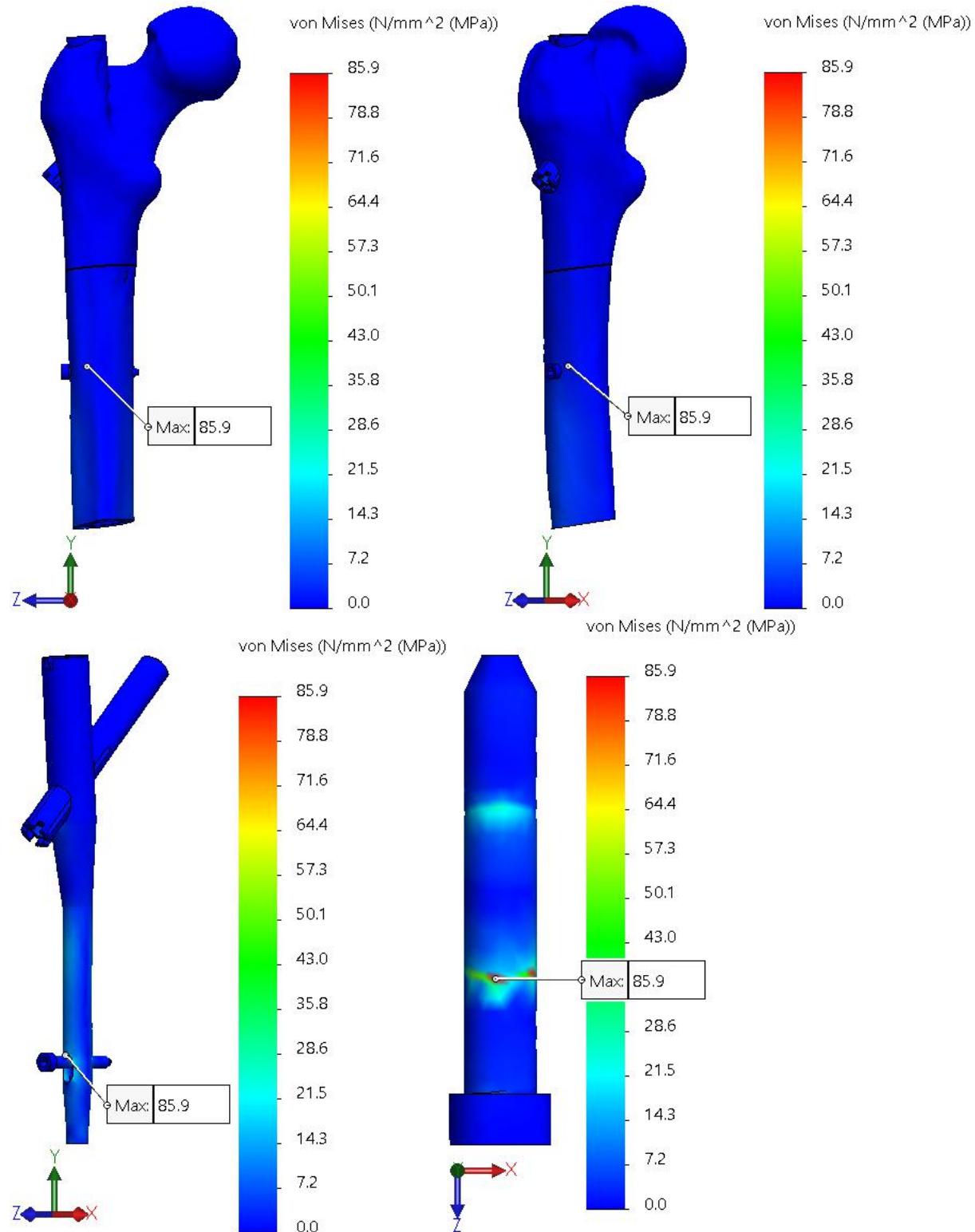
Force: 500 N



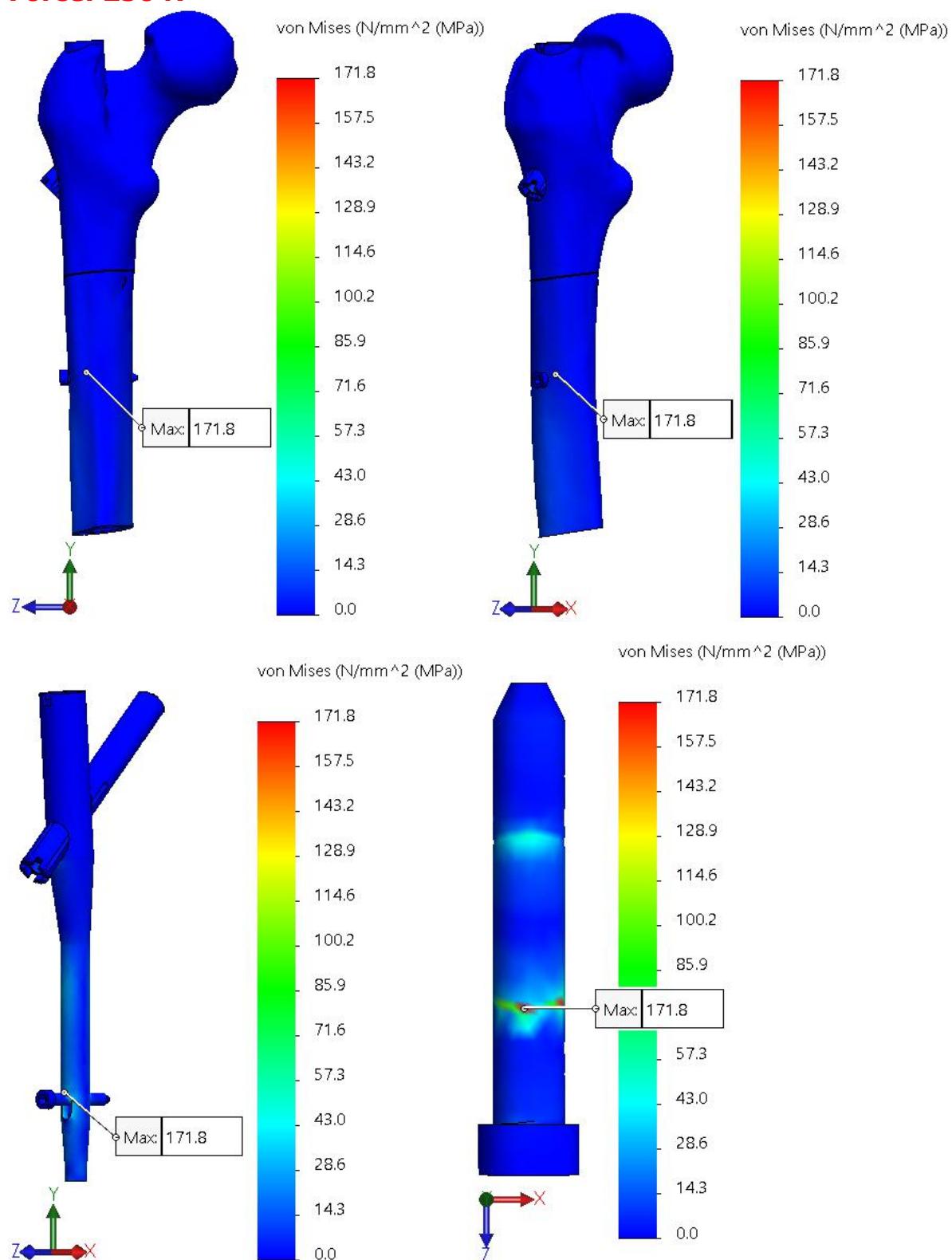


PFNA (location 5: 2.5 cm below LT)

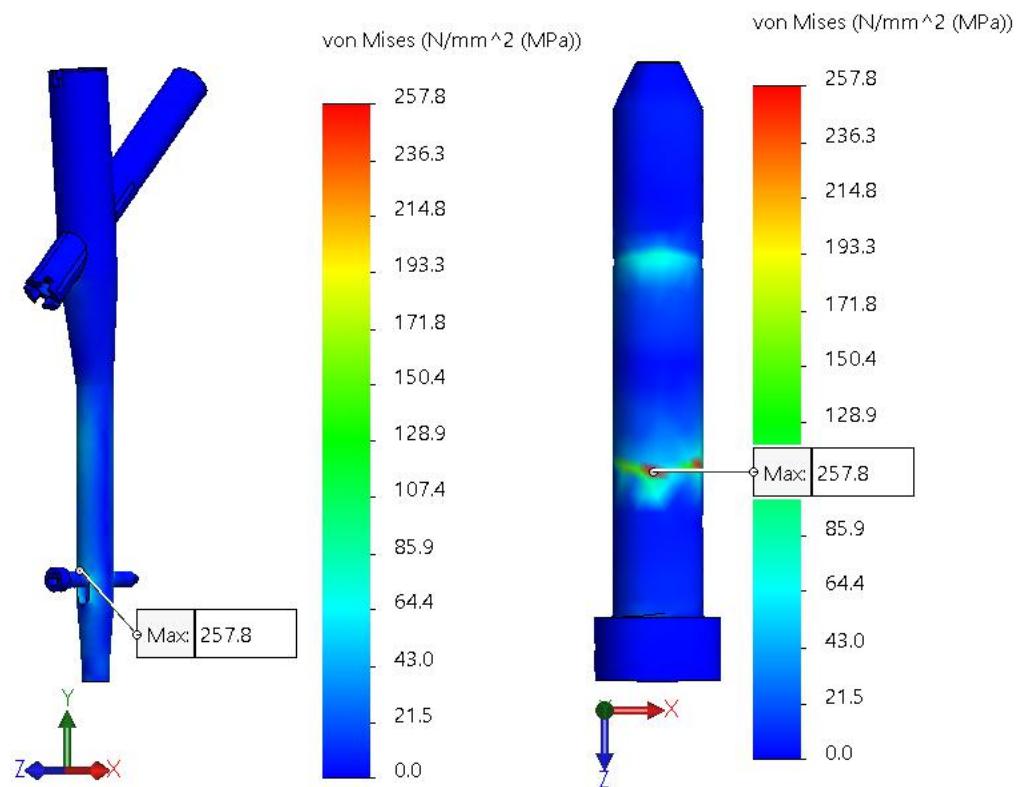
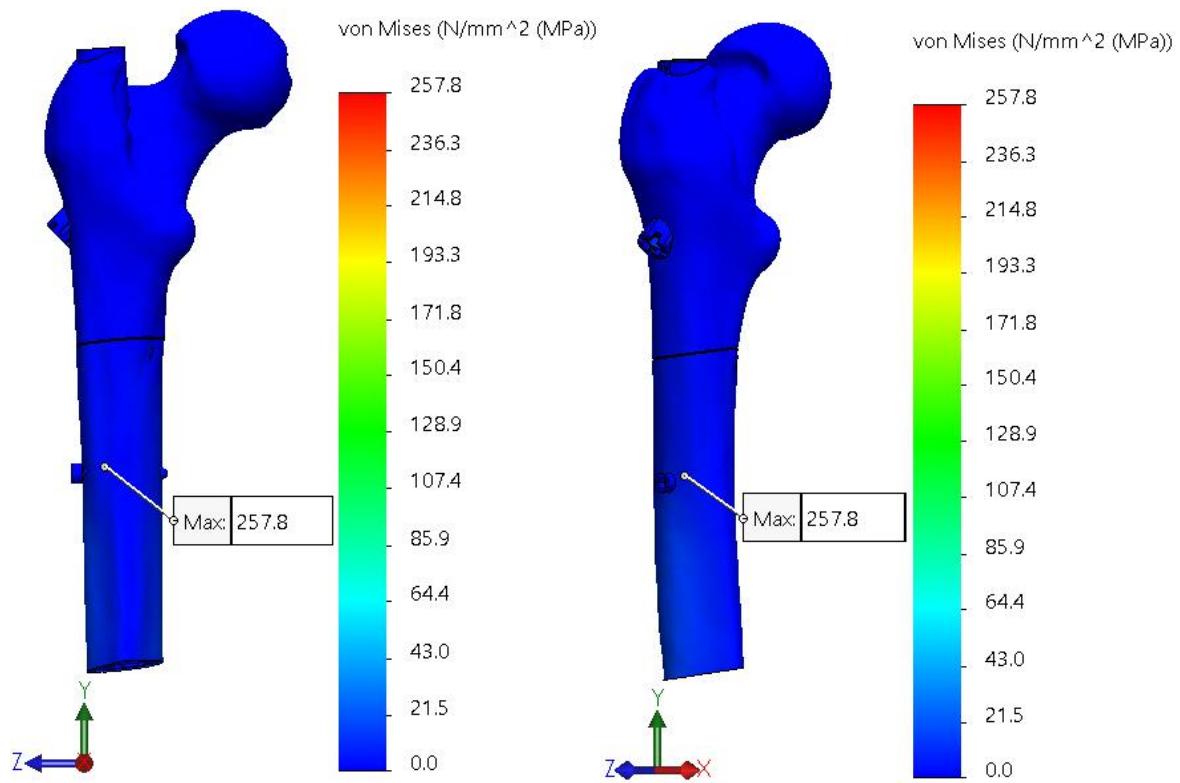
Force: 125 N



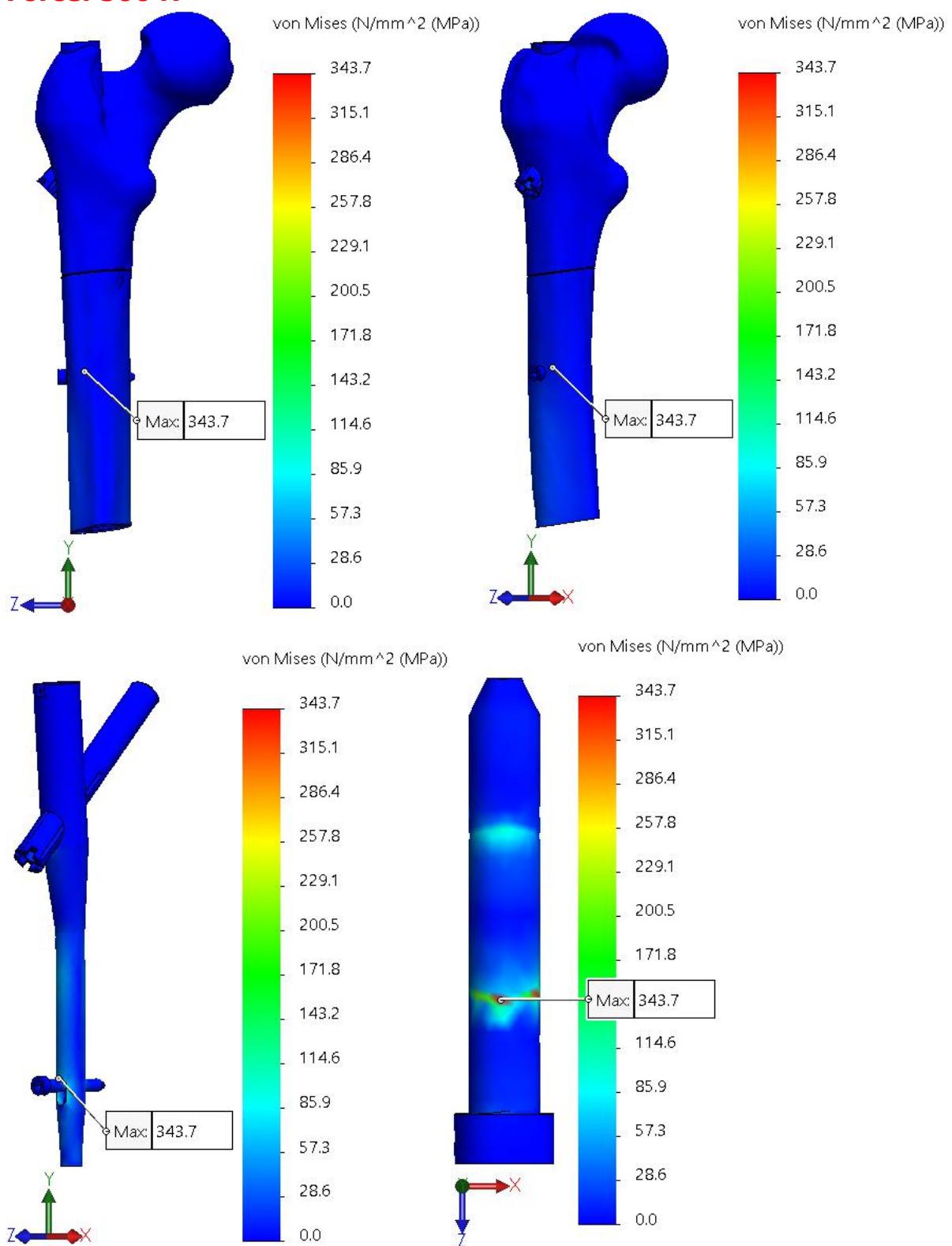
Force: 250 N

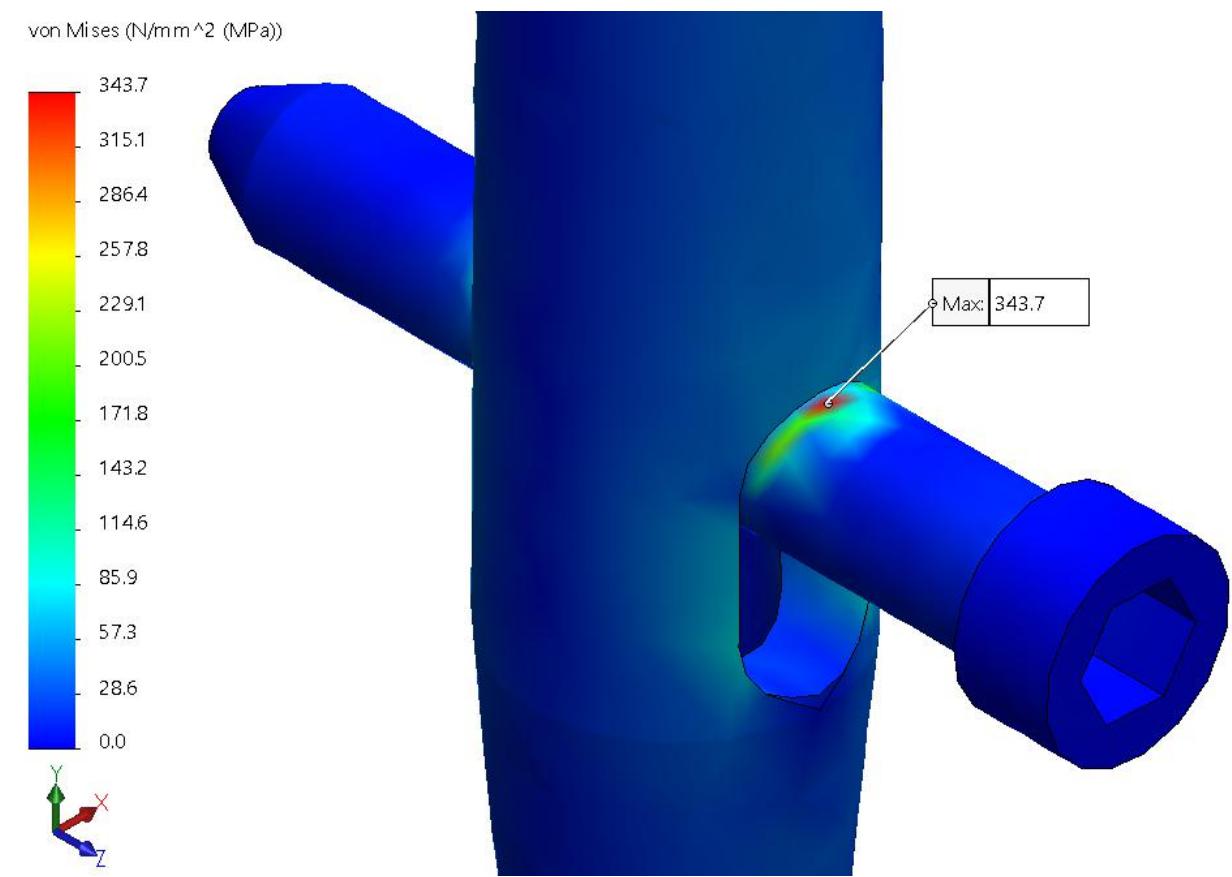
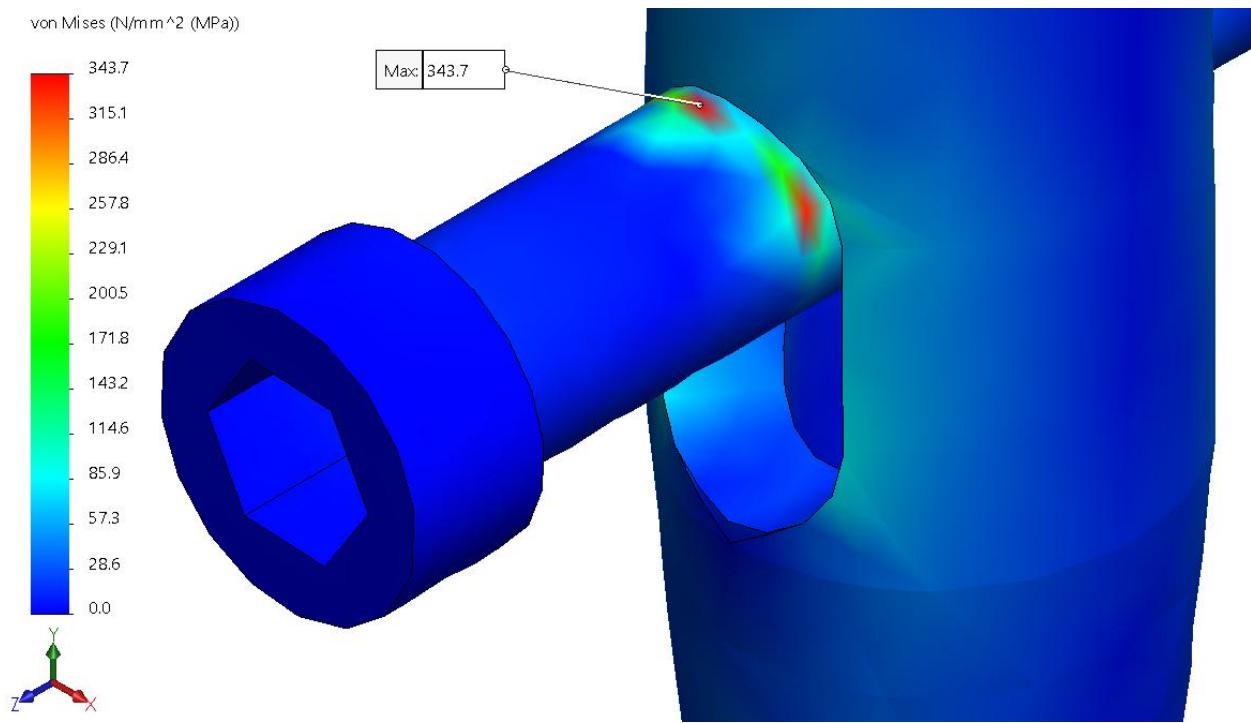


Force: 375 N



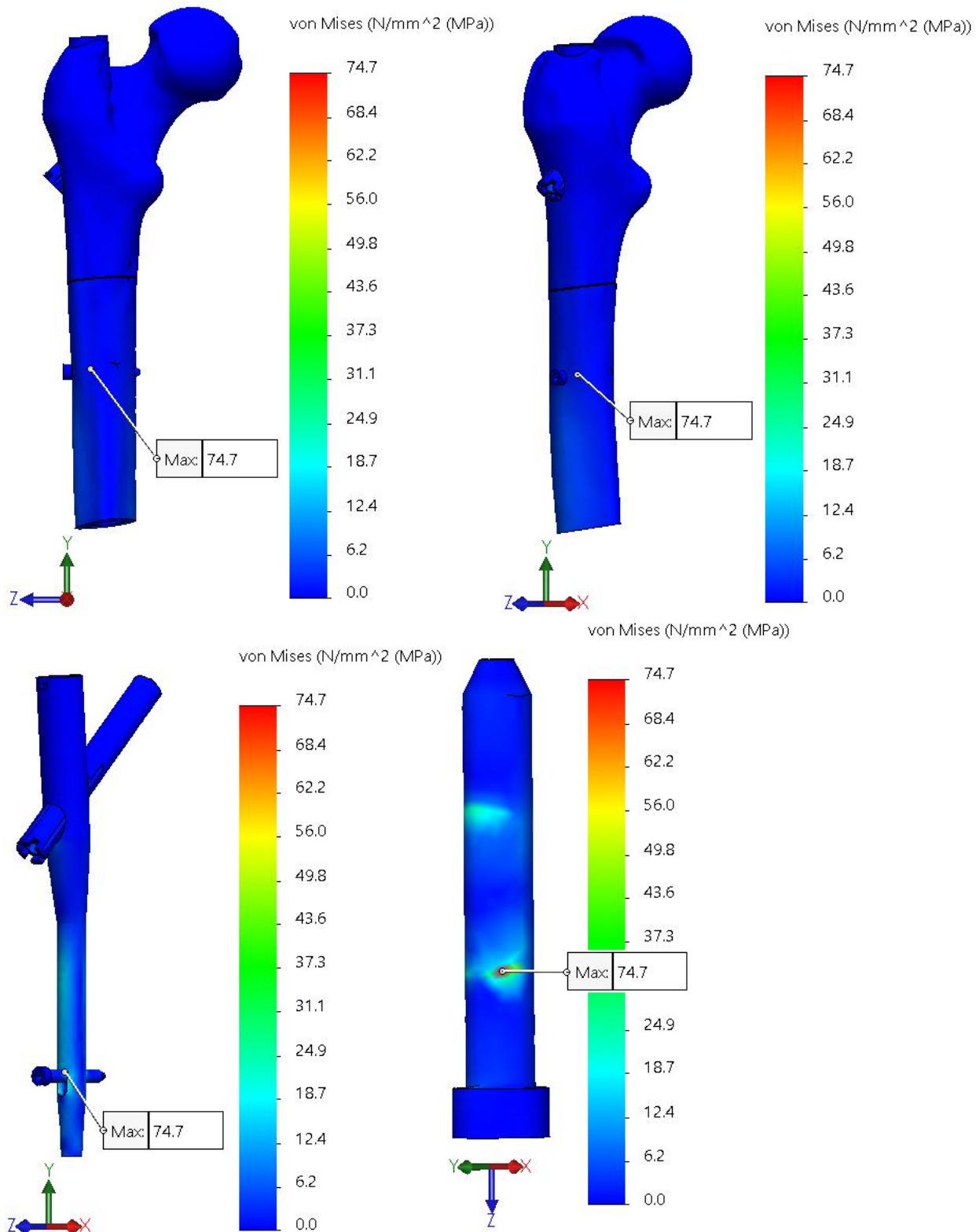
Force: 500 N



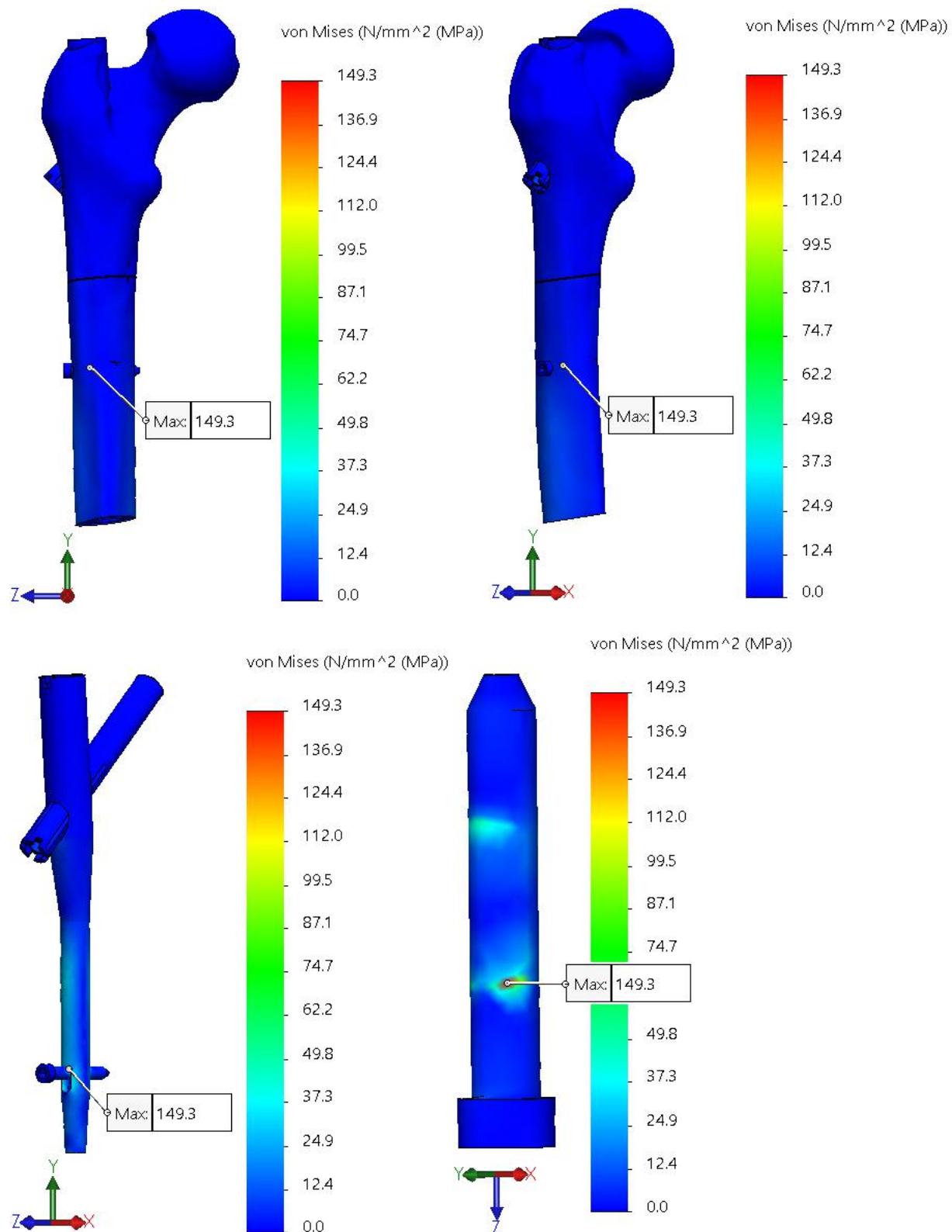


PFNA (location 6: 3 cm below LT)

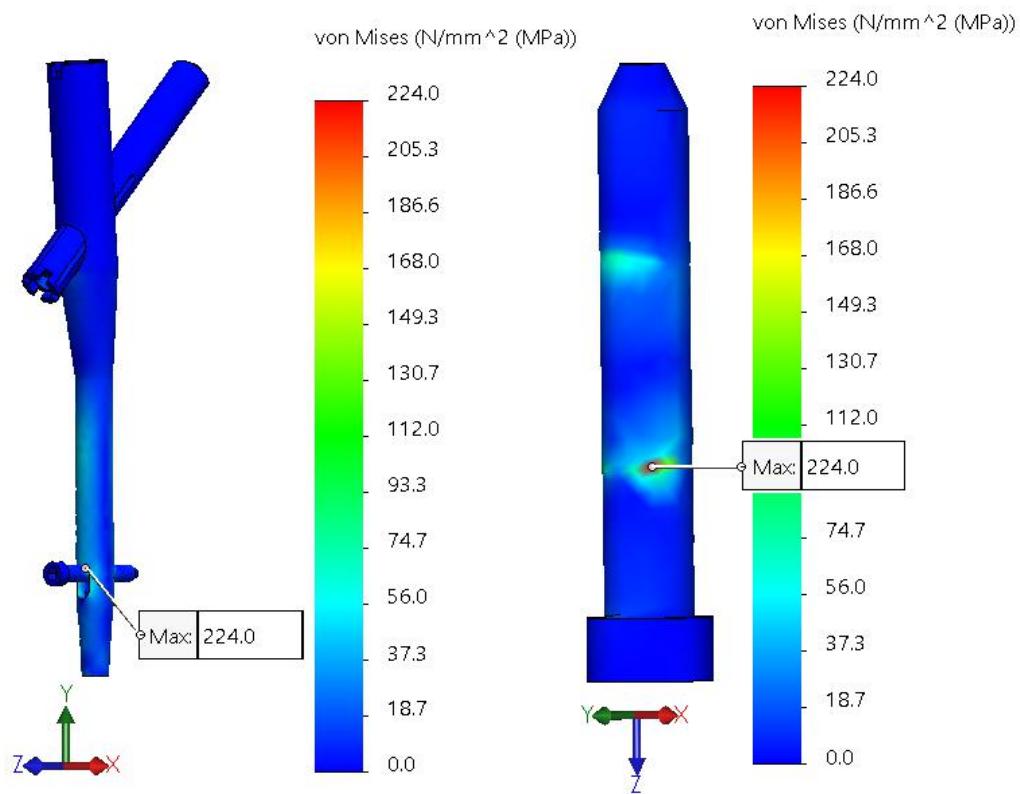
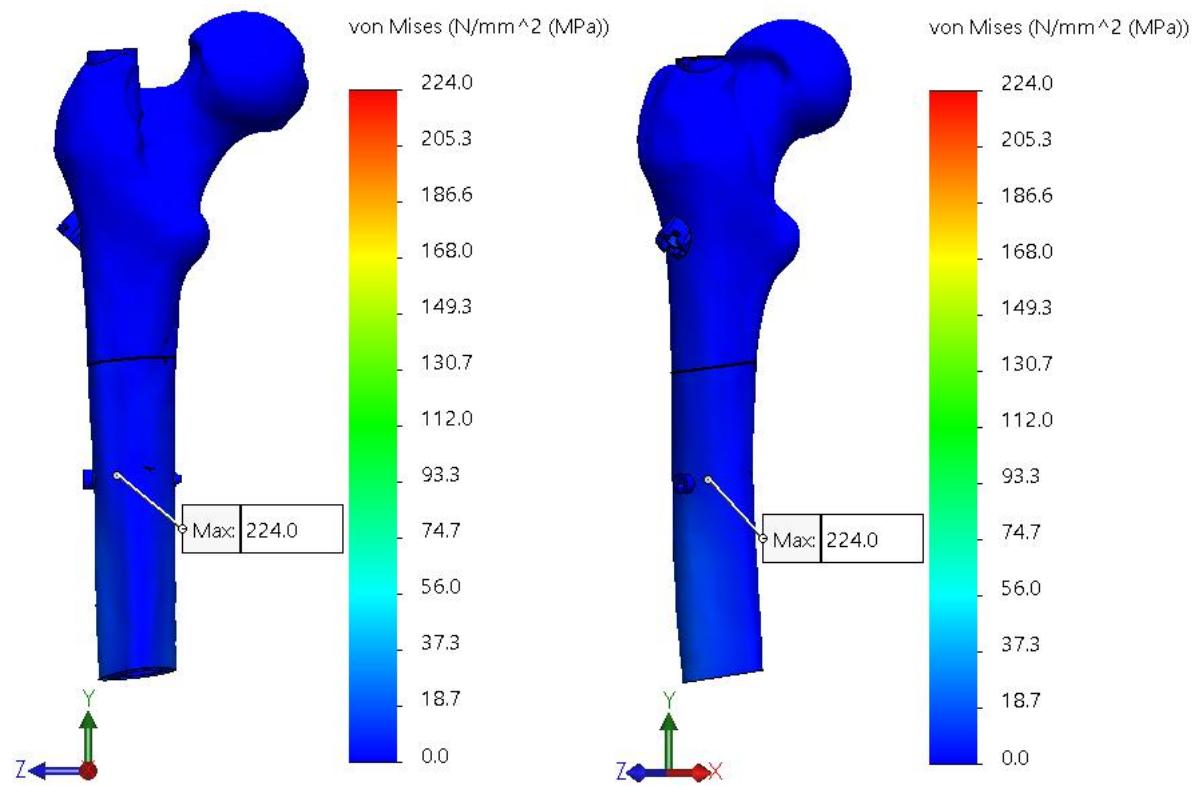
Force: 125 N



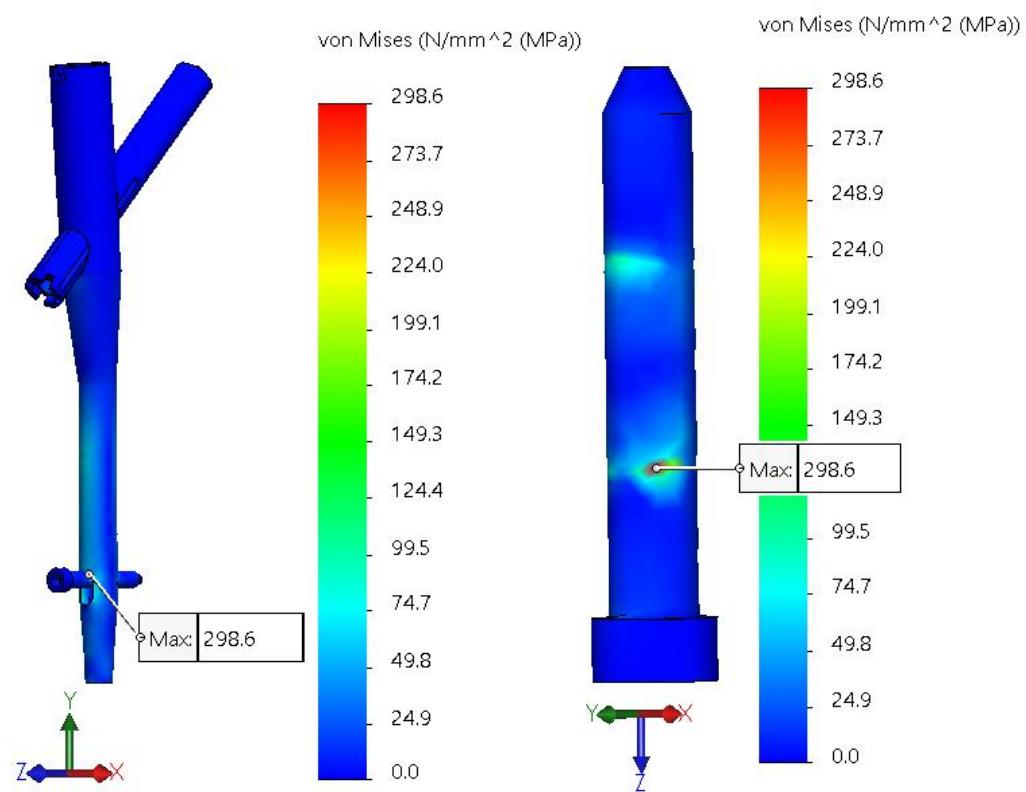
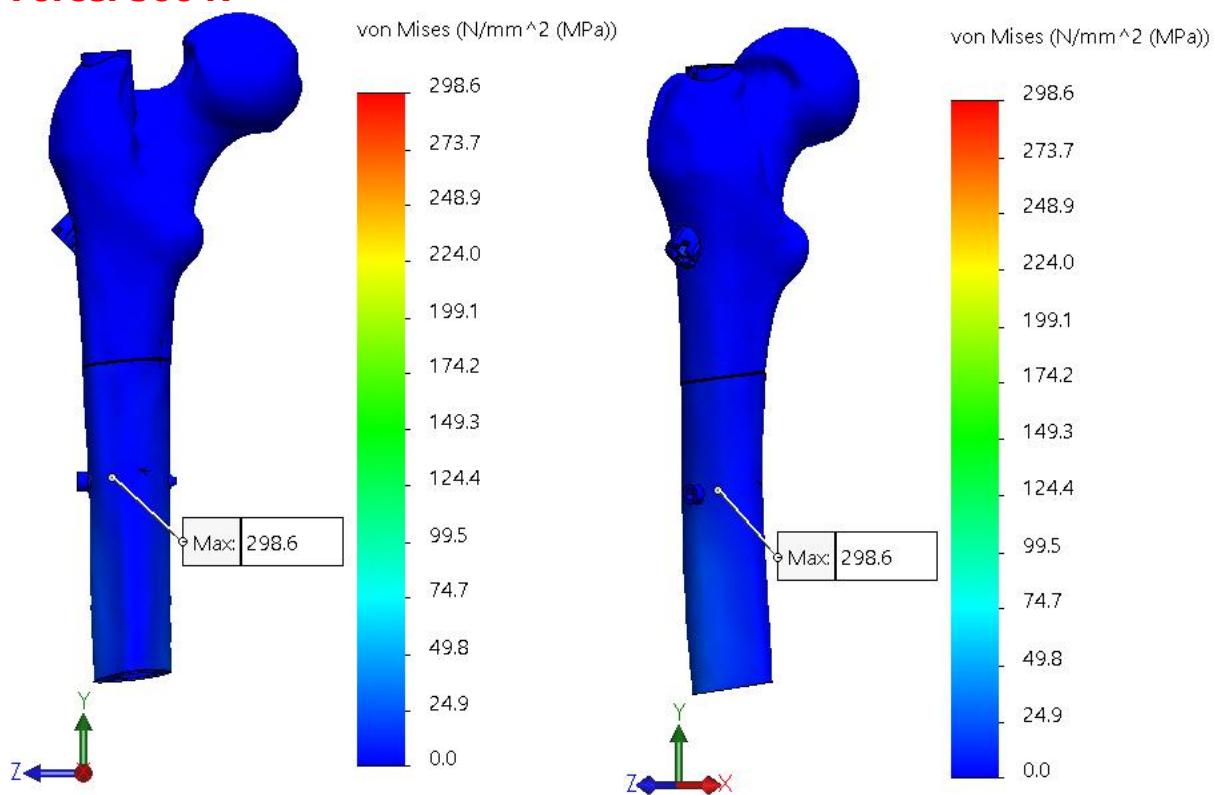
Force: 250 N

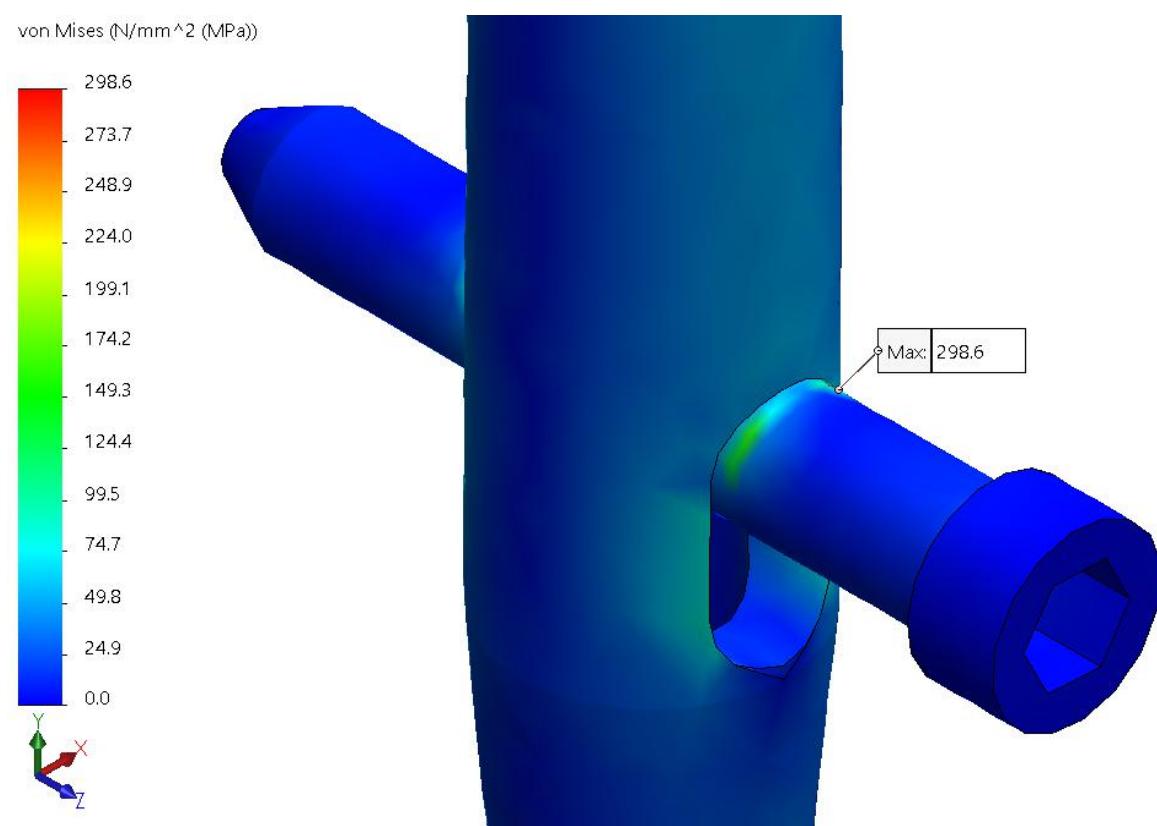
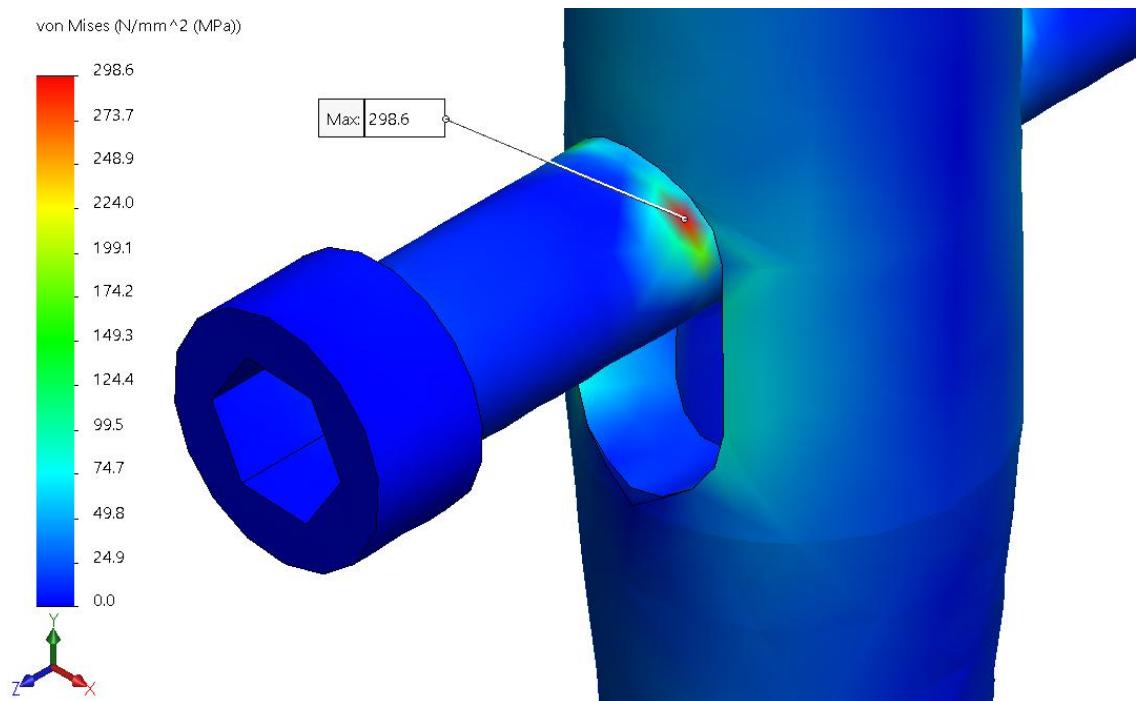


Force: 375 N



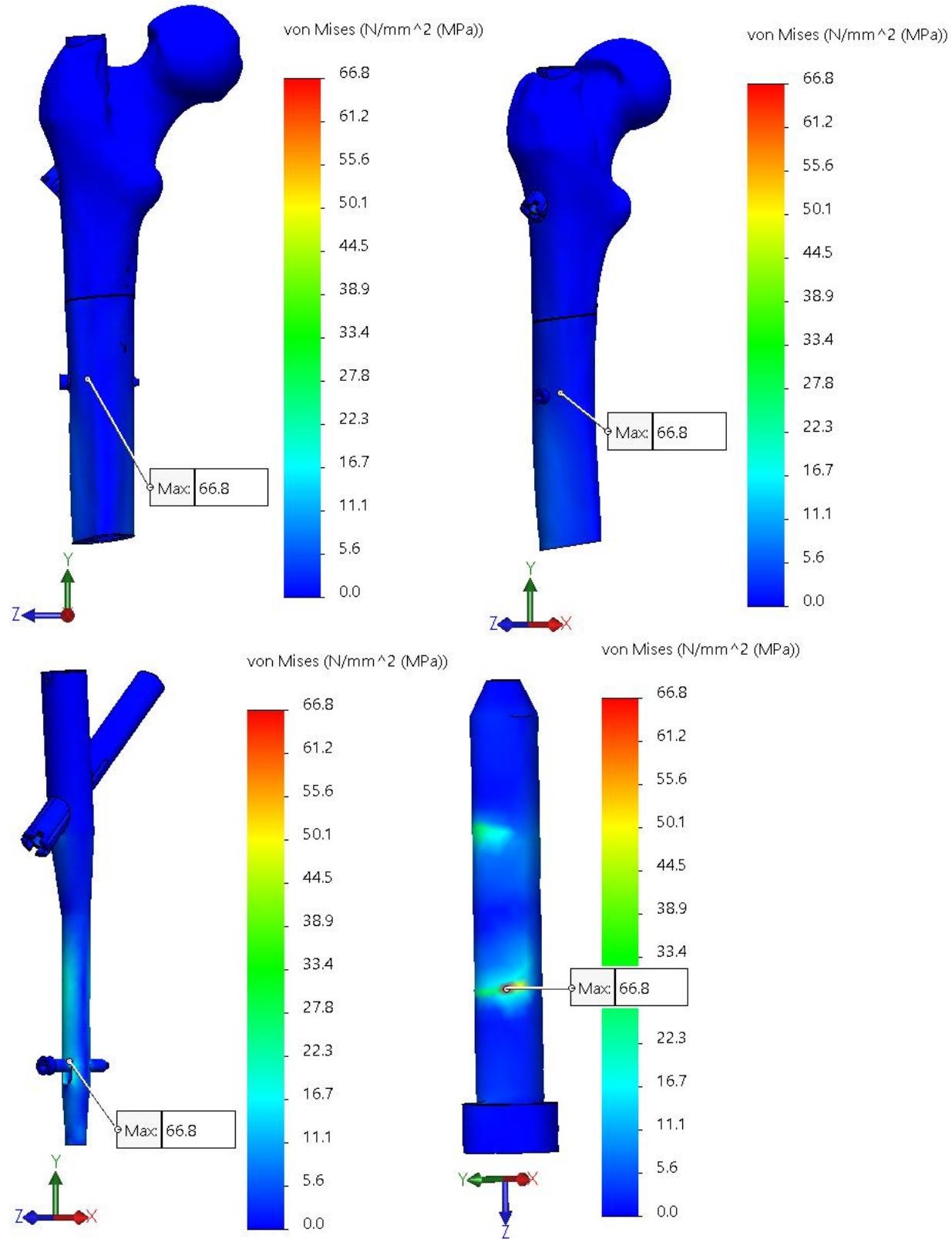
Force: 500 N



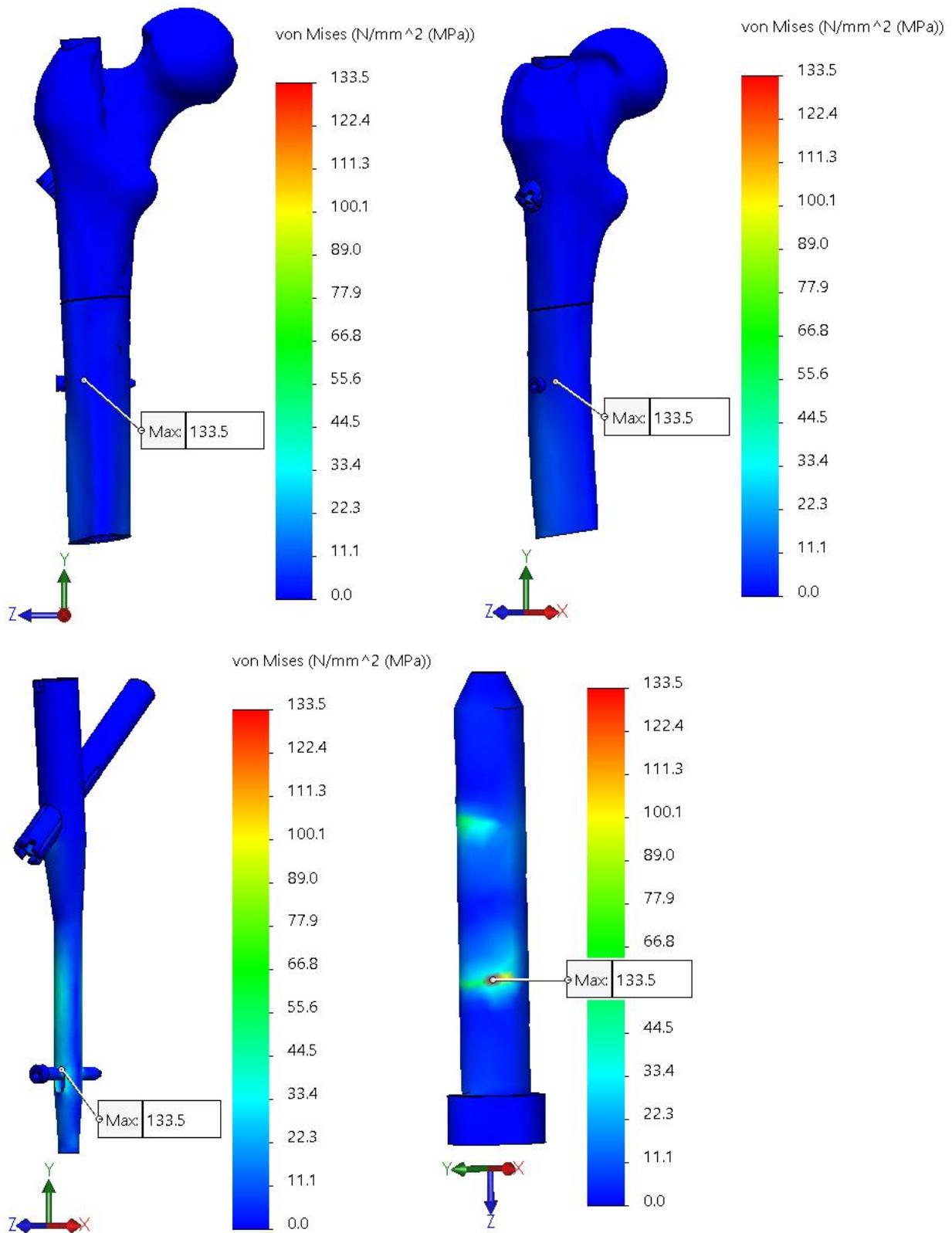


PFNA (location 7: 3.5 cm below LT)

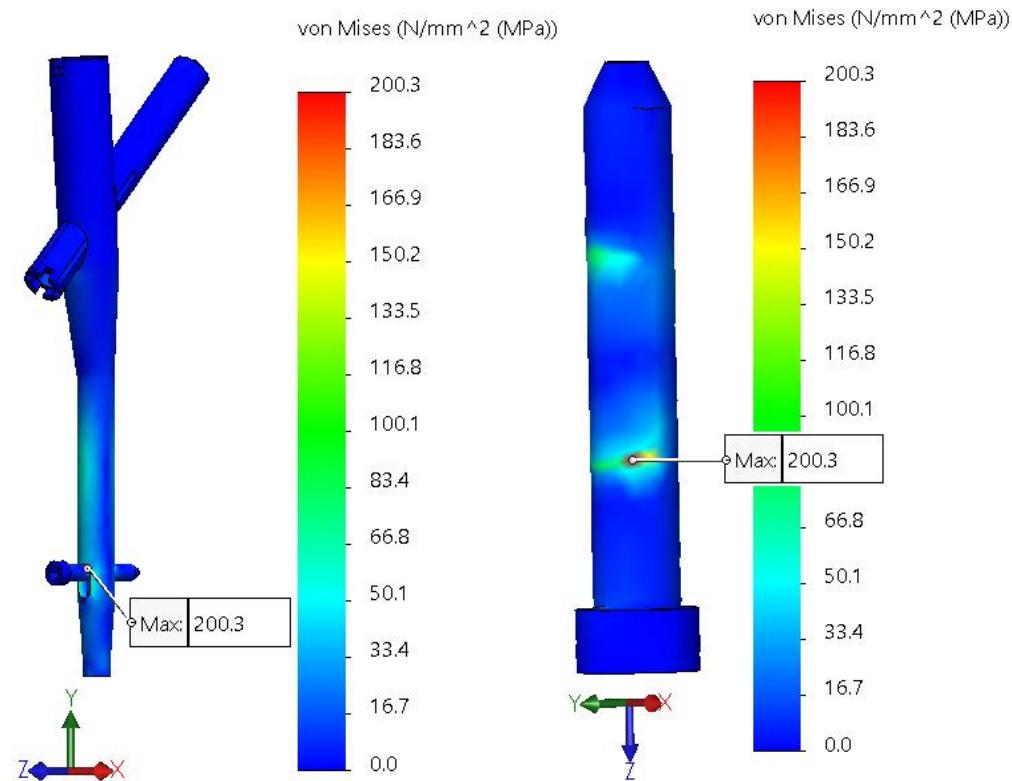
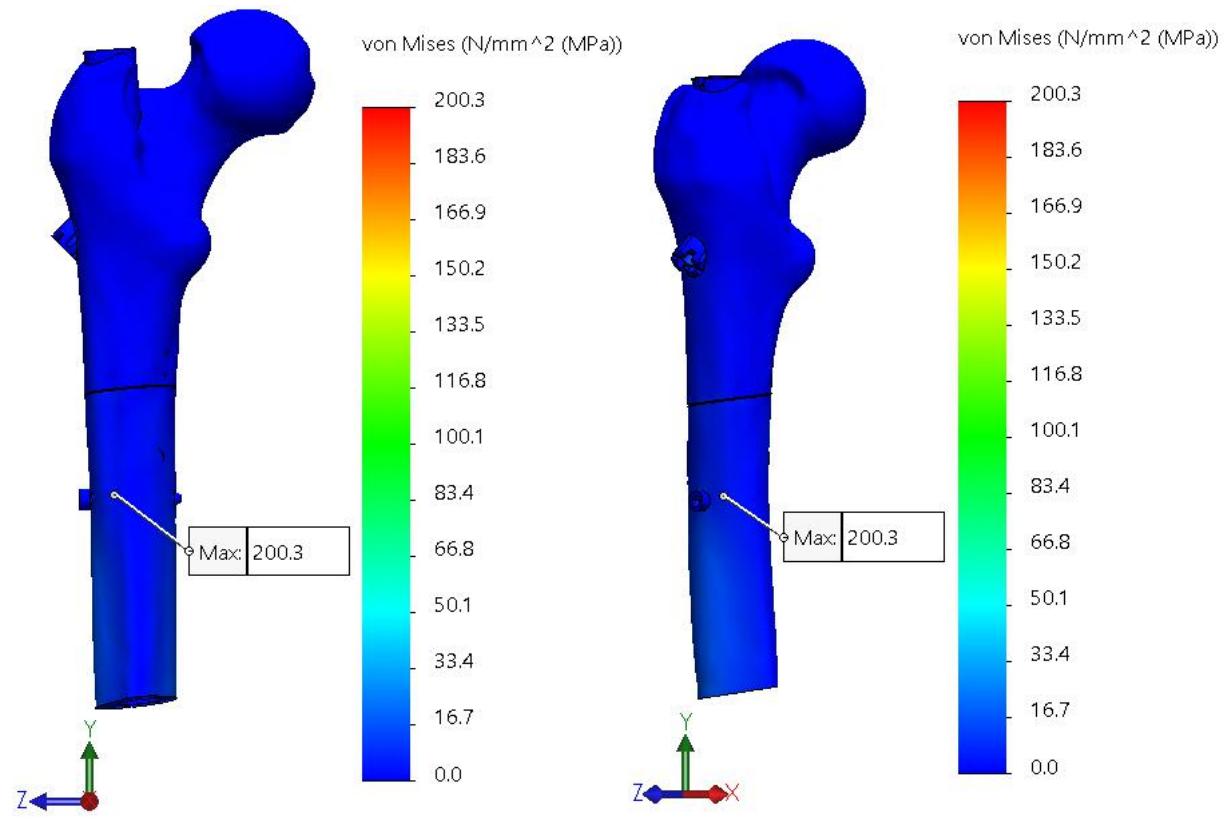
Force: 125 N



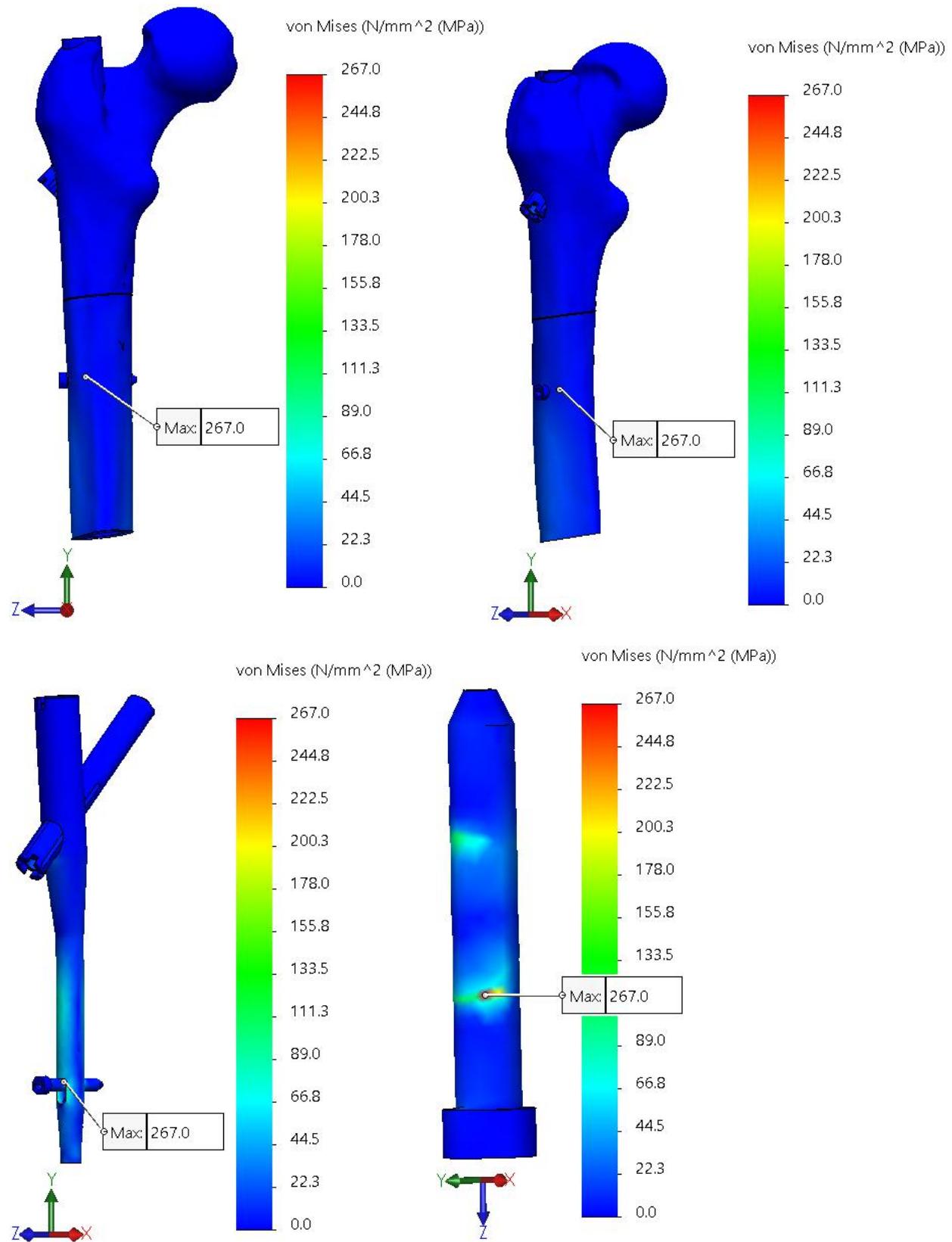
Force: 250 N



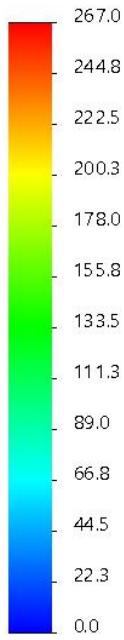
Force: 375 N



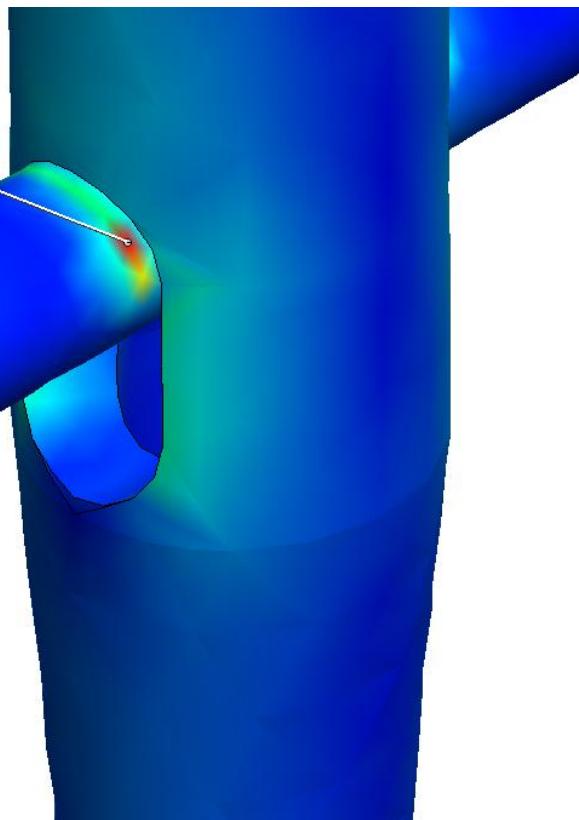
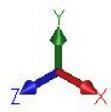
Force: 500 N



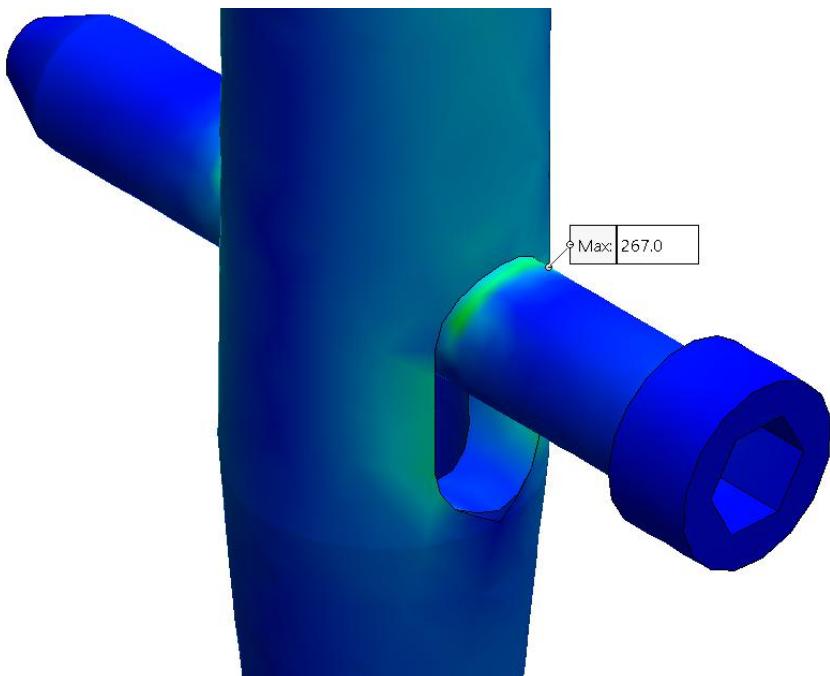
von Mises (N/mm² (MPa))



Max: 267.0

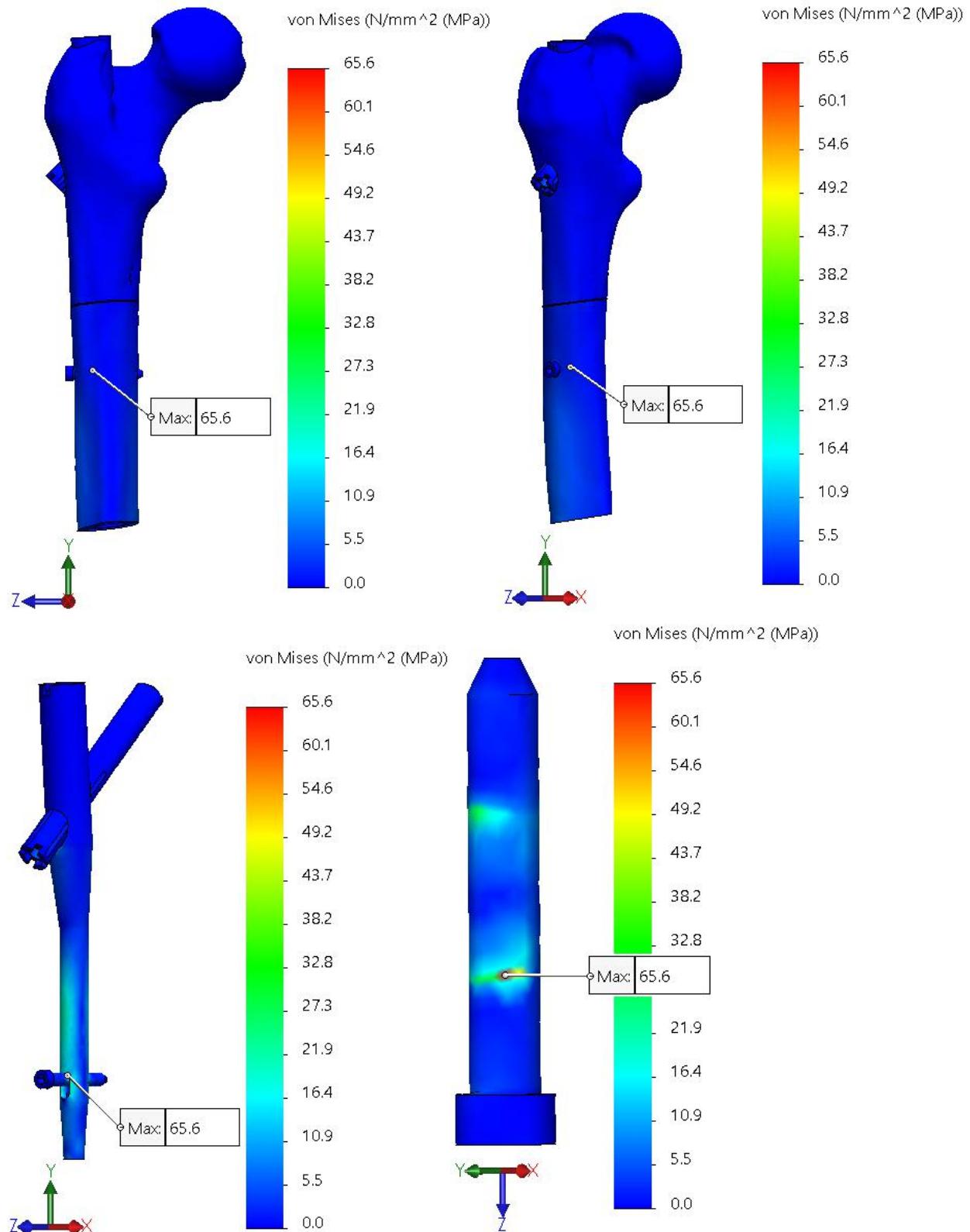


Max: 267.0

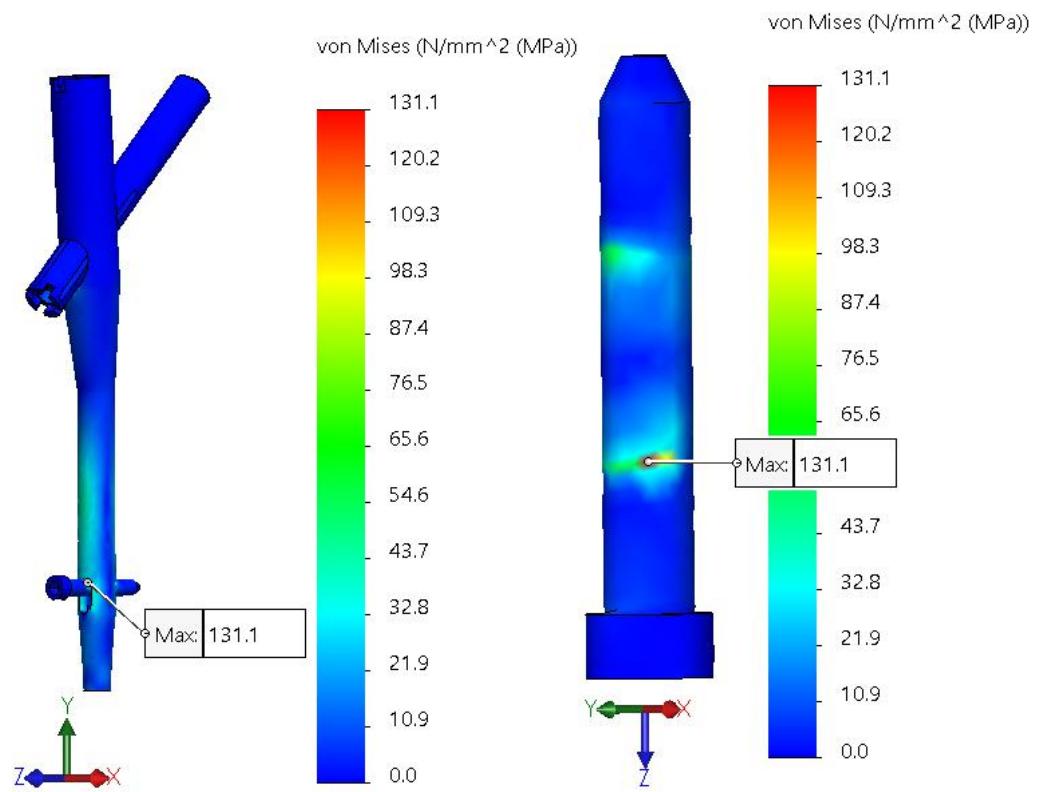
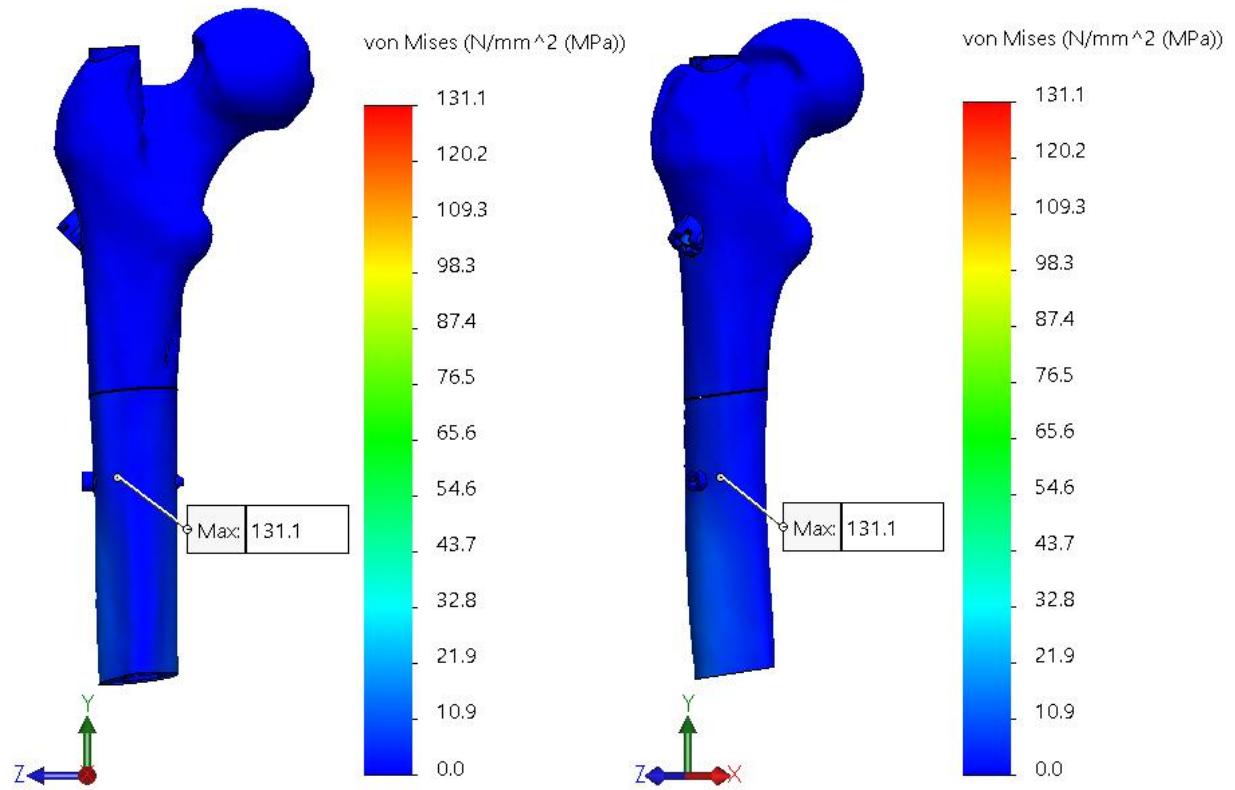


PFNA (location 8: 4 cm below LT)

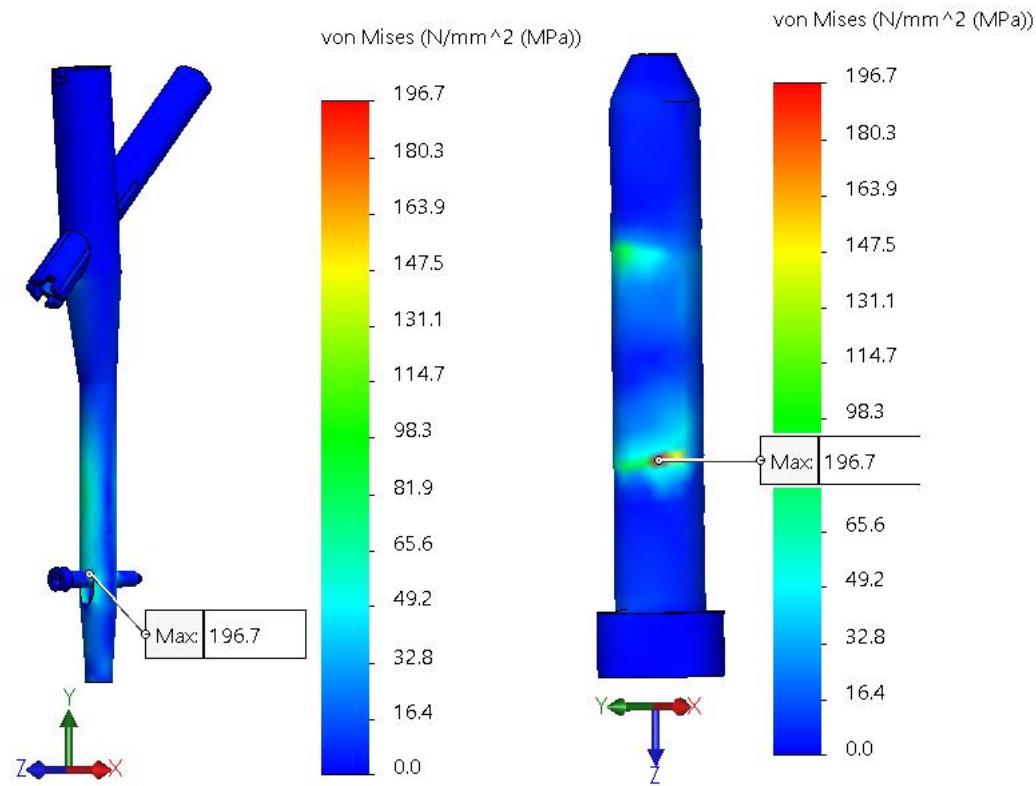
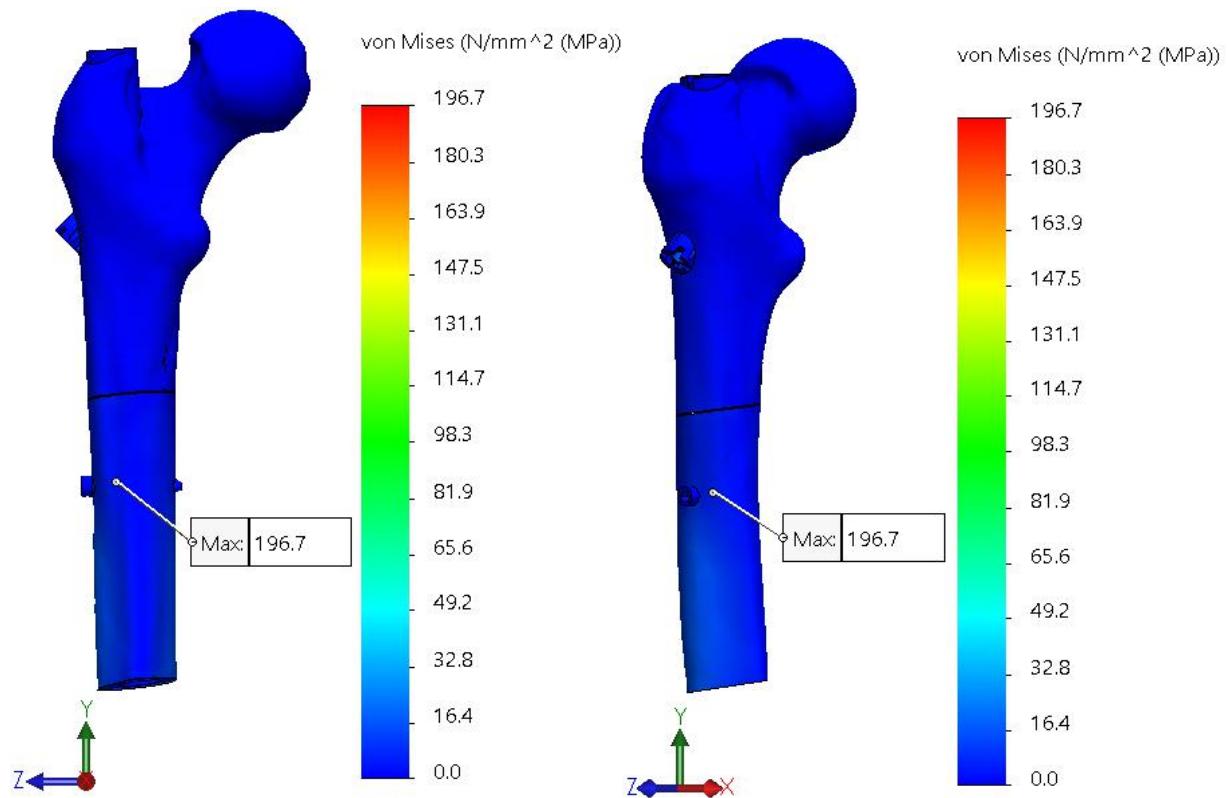
Force: 125 N



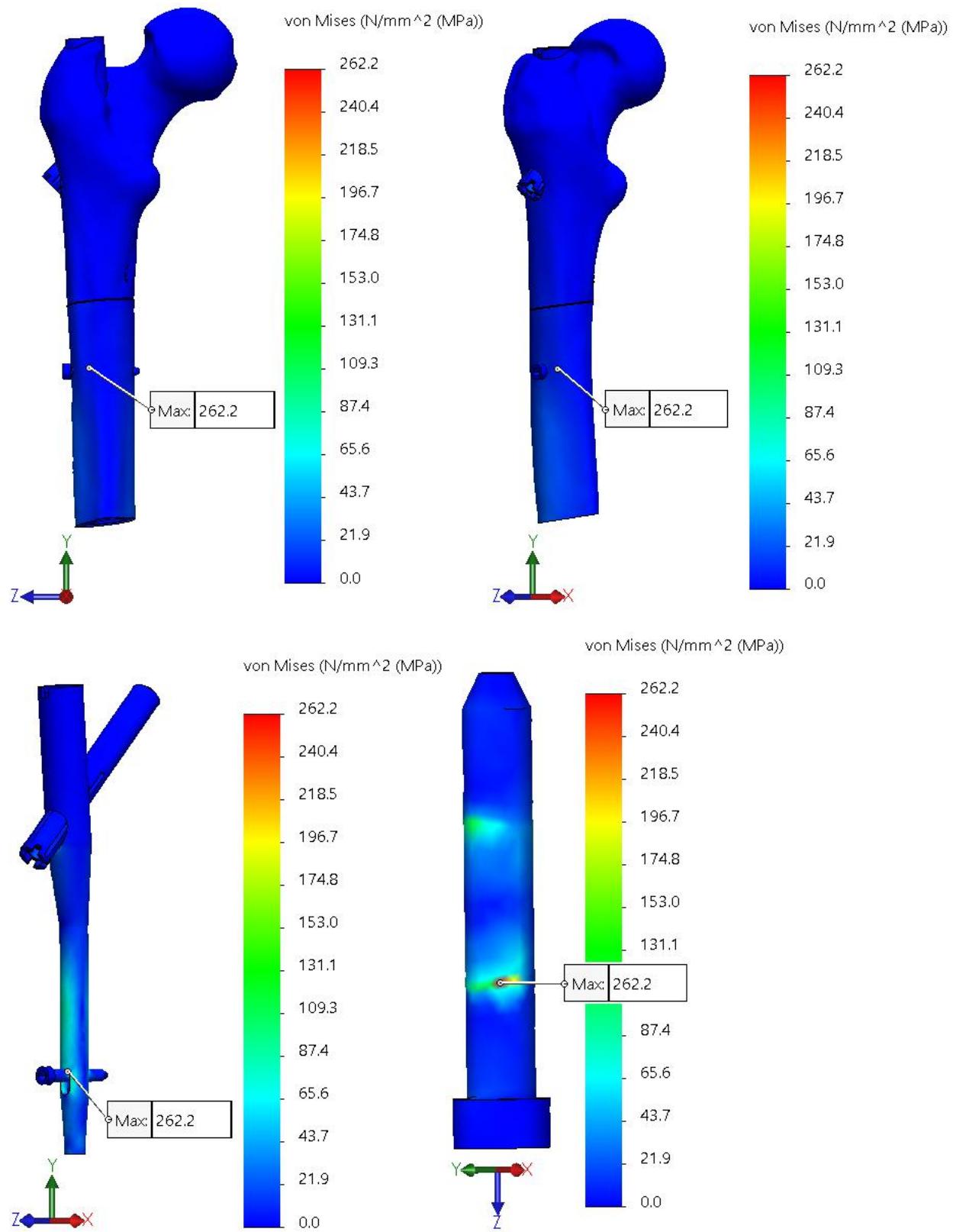
Force: 250 N

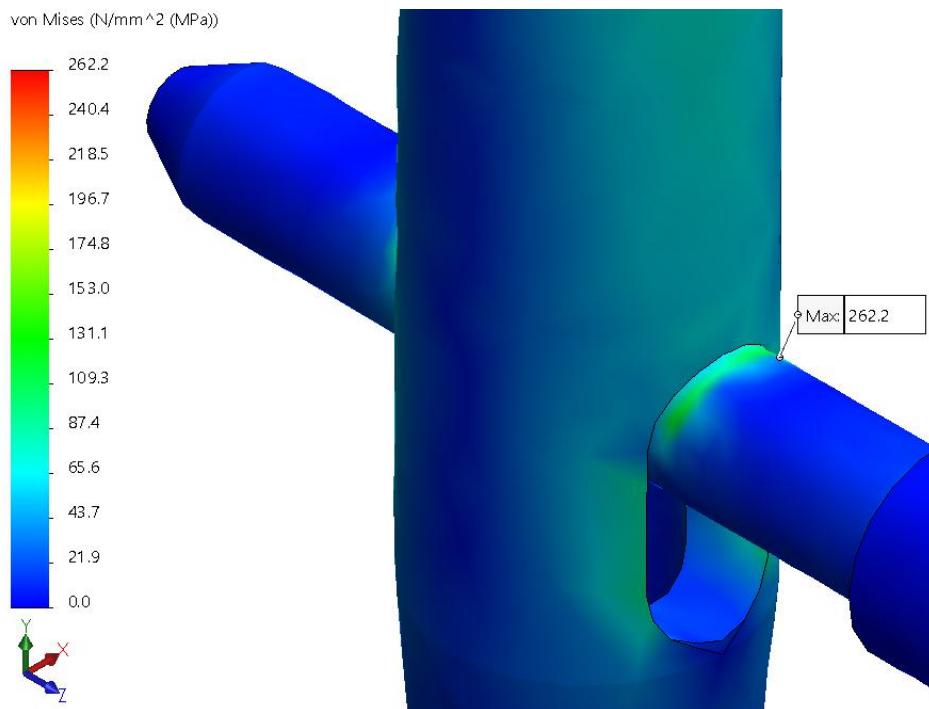
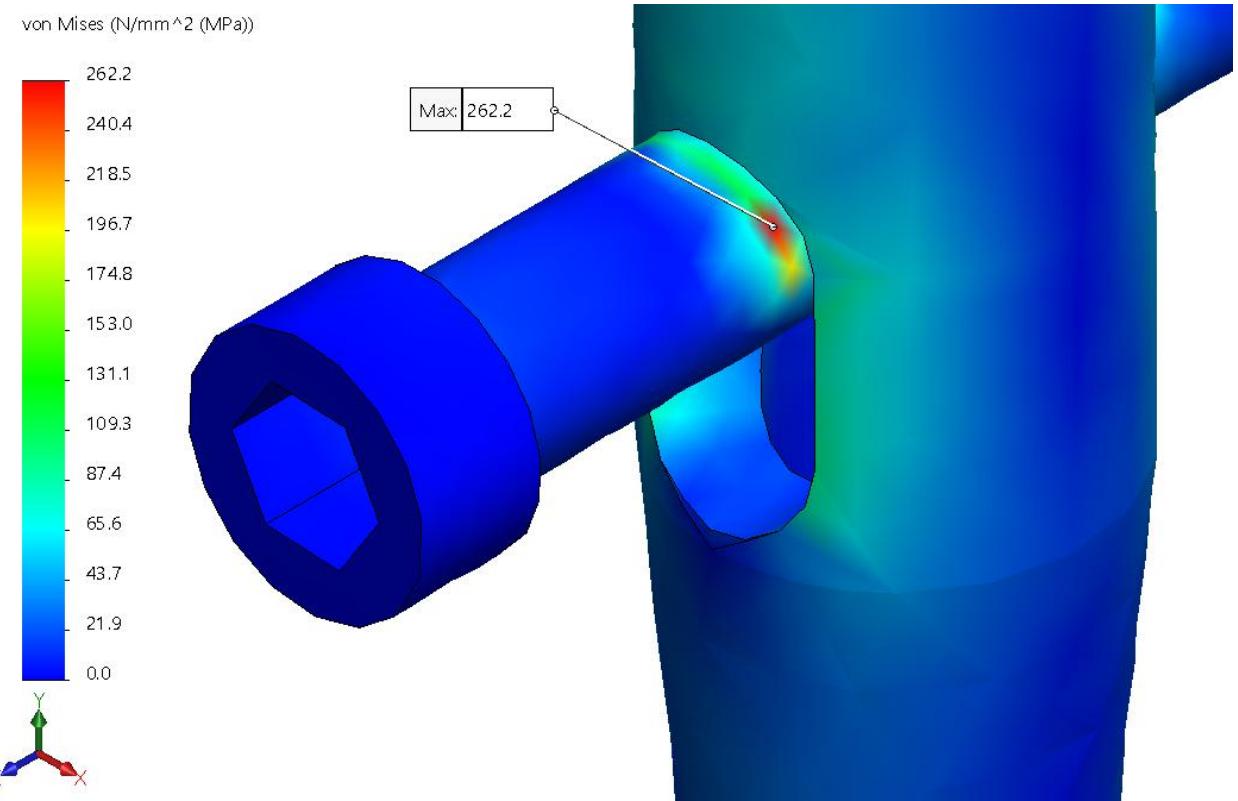


Force: 375 N



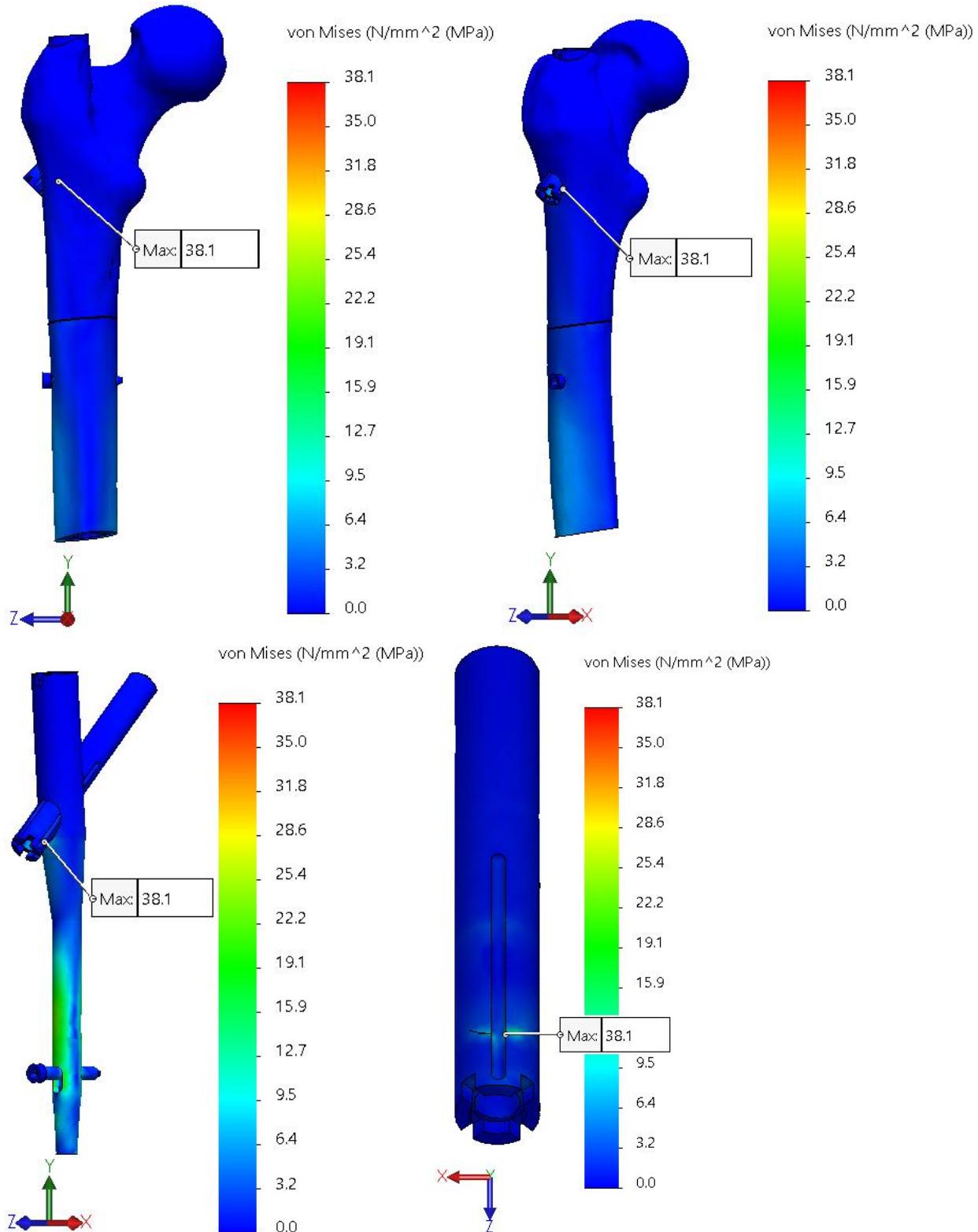
Force: 500 N



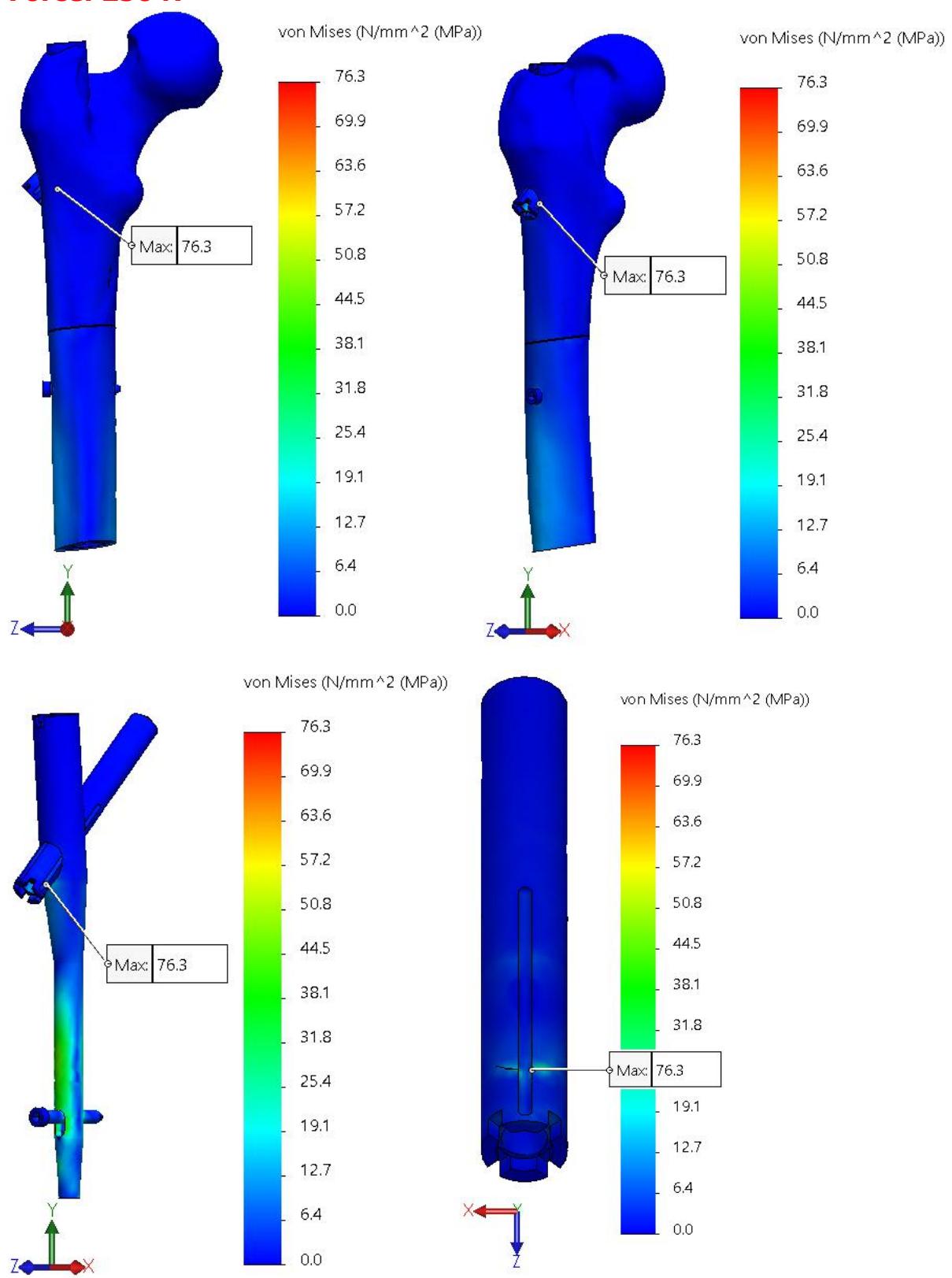


PFNA (location 9: 4.5 cm below LT)

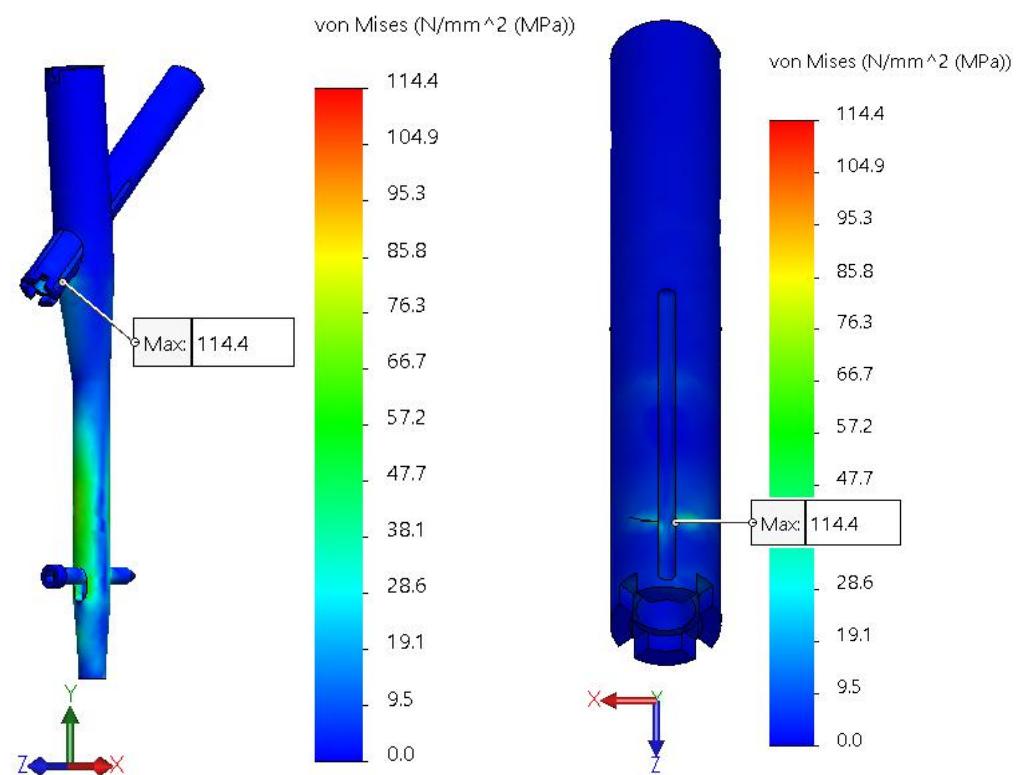
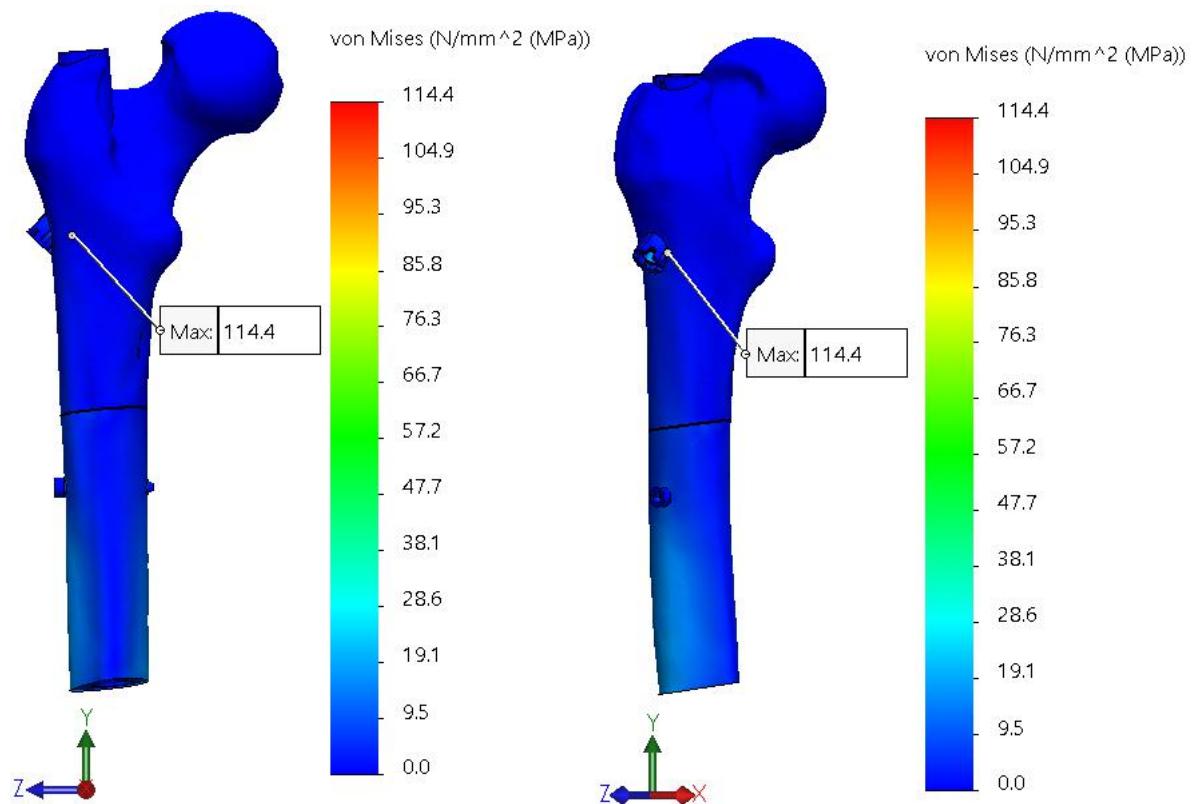
Force: 125 N



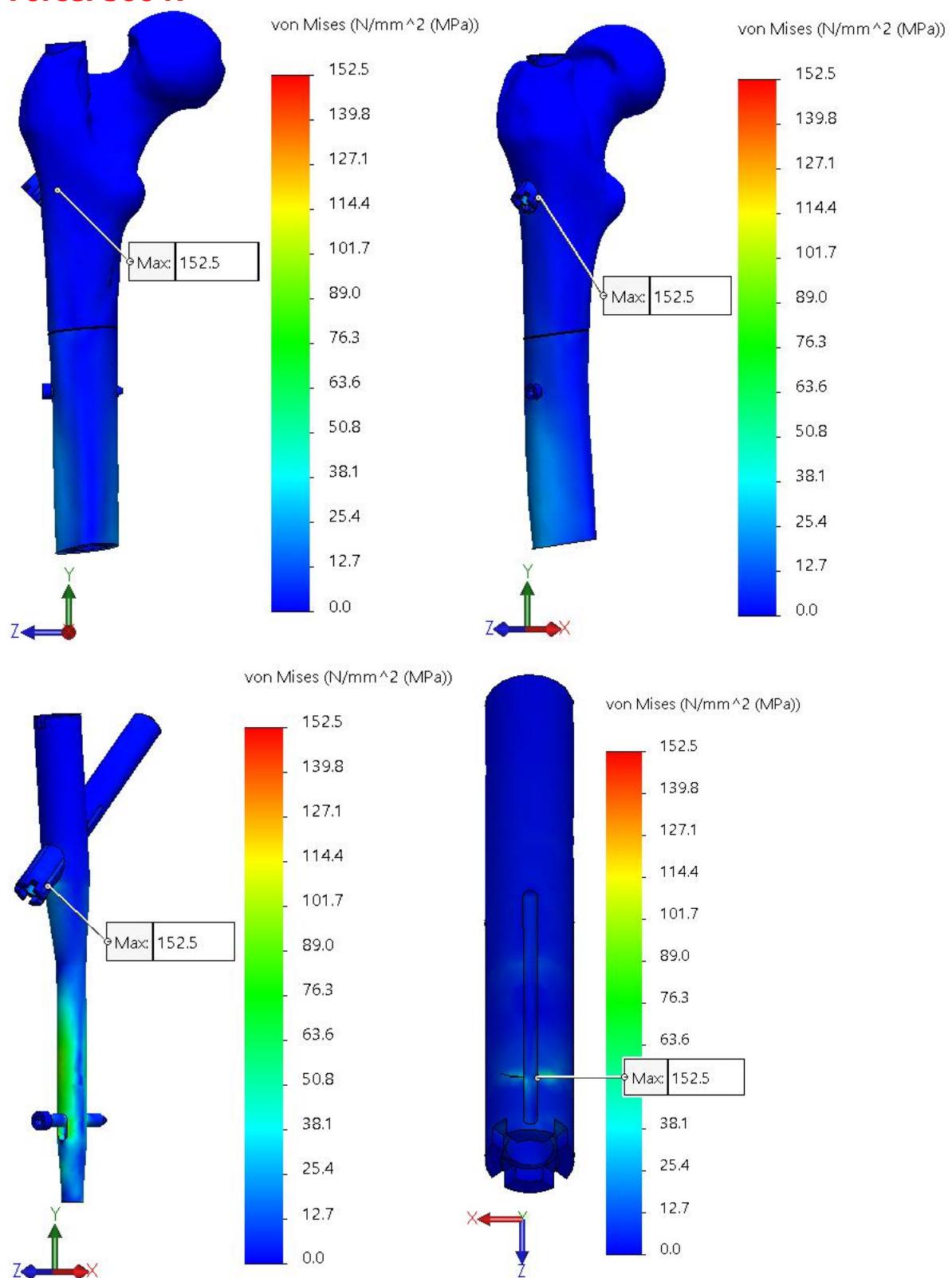
Force: 250 N

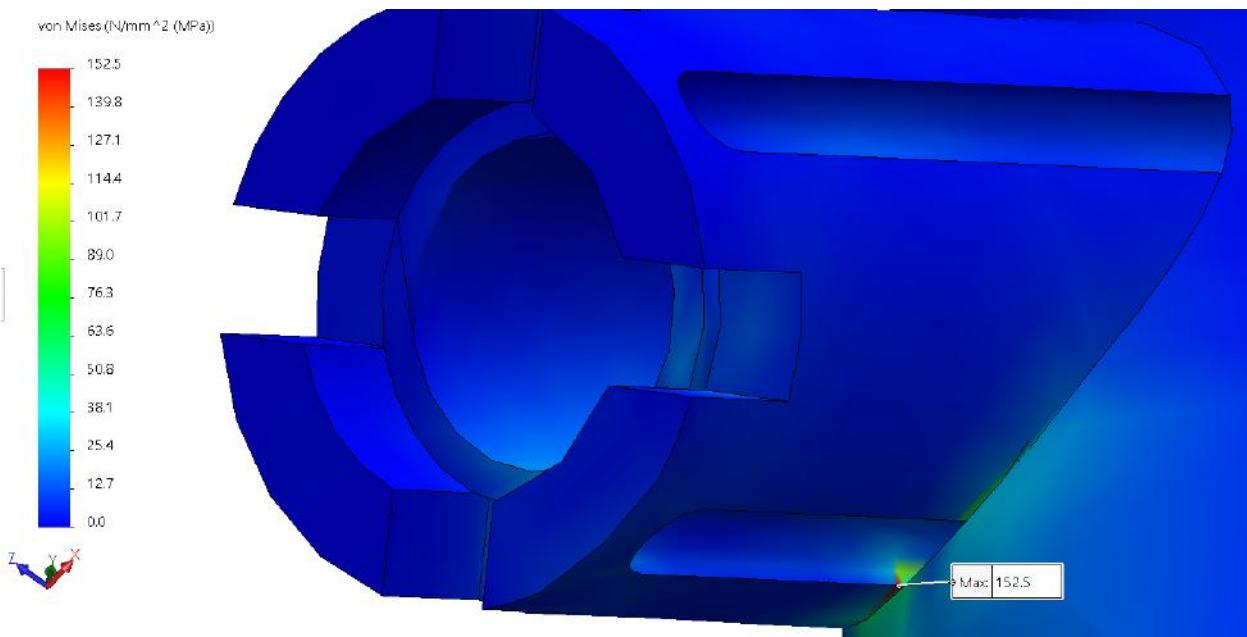
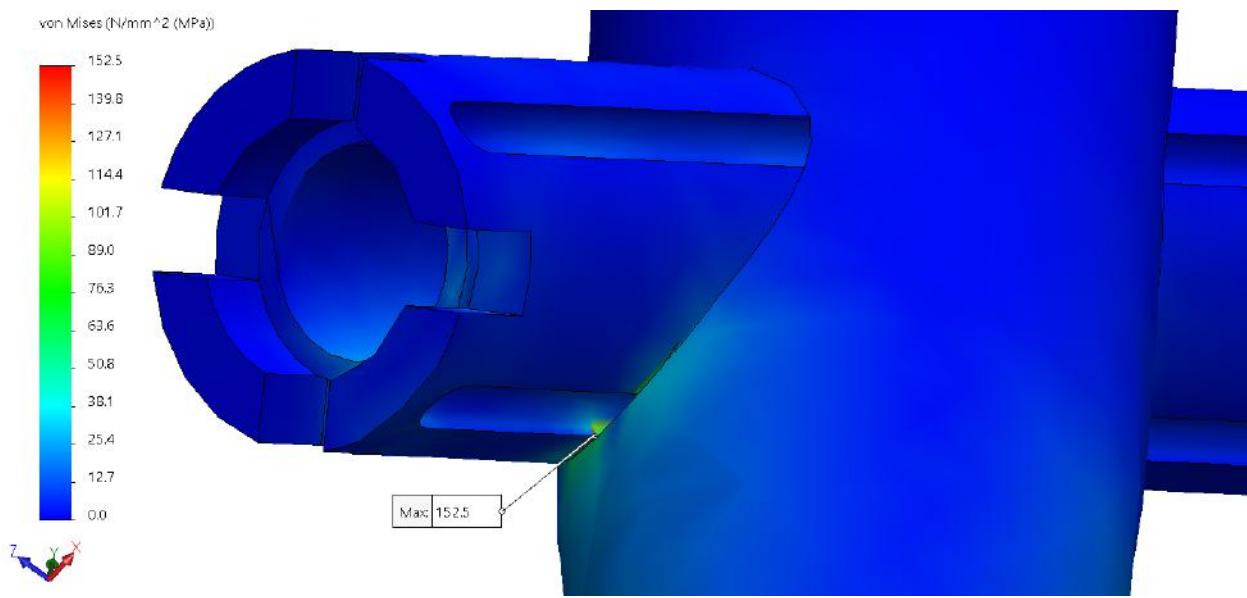


Force: 375 N



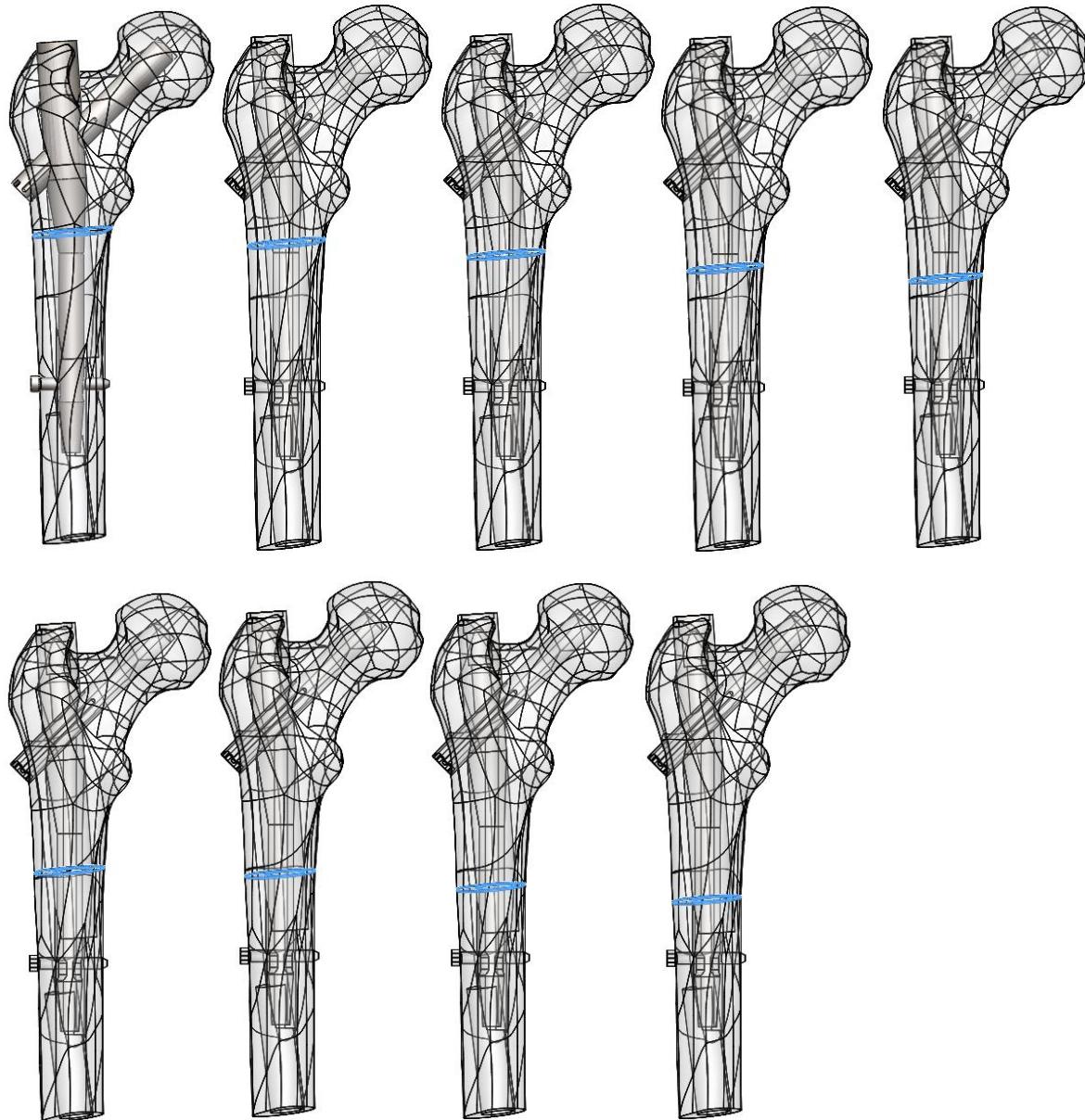
Force: 500 N



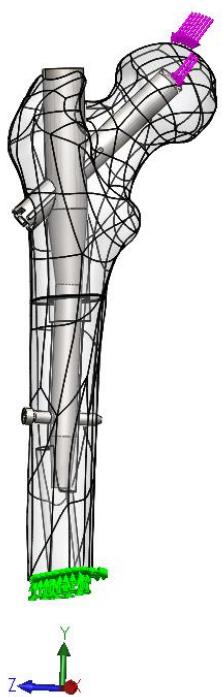


PFNA Simulation FEM Set-Up

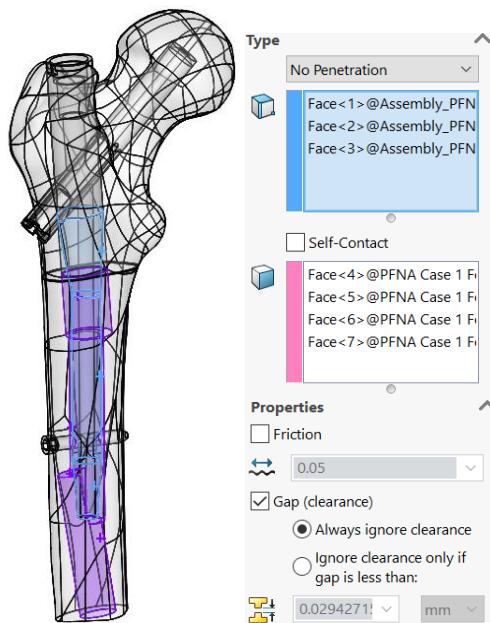
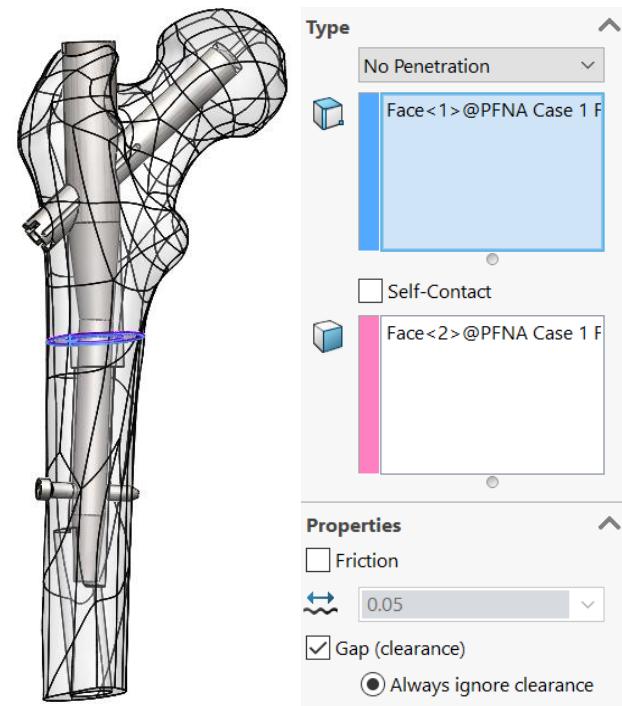
Fracture height / location



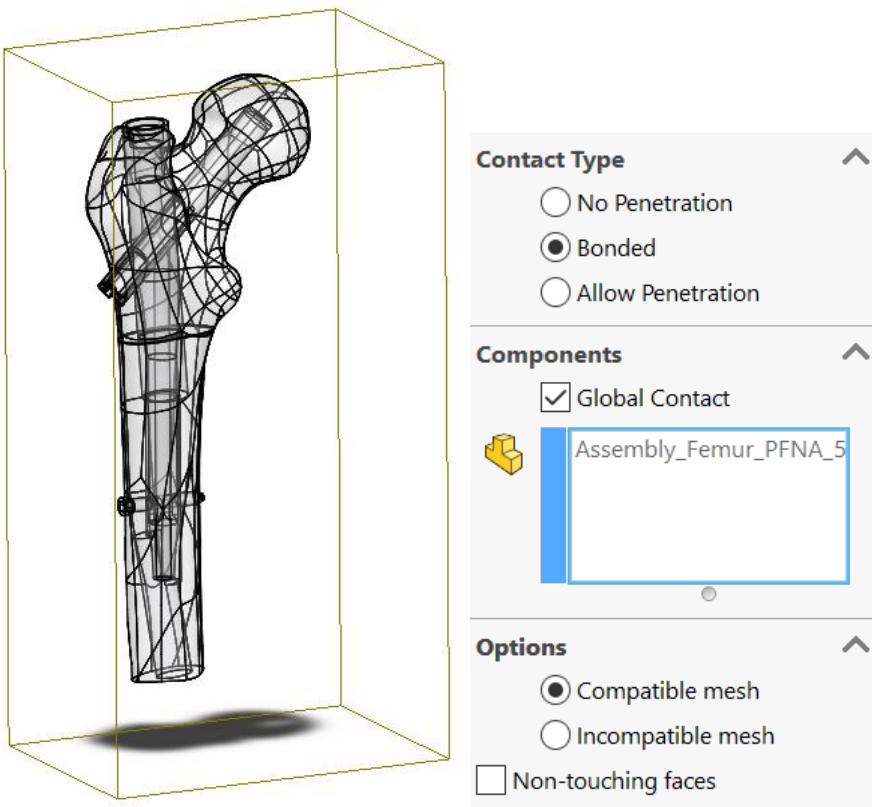
Force & Fixture



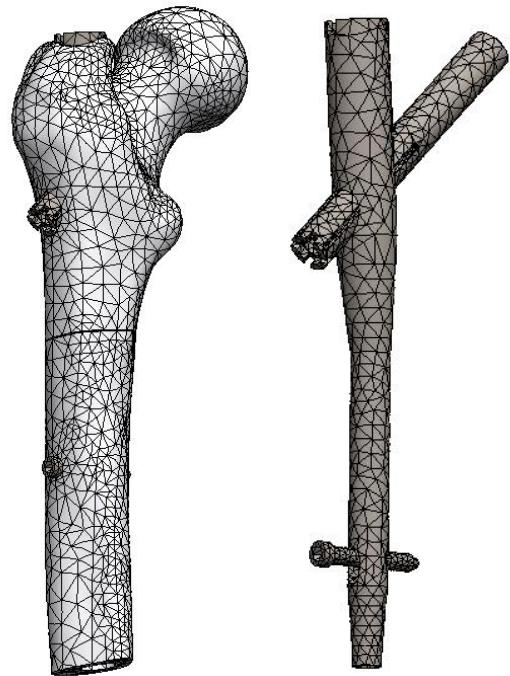
Connection Contact-Set



Global-Contact



Mesh



Mesh Parameters

- Standard mesh
- Curvature-based mesh
- Blended curvature-based mesh

mm

2.30mm

8

1.6

Advanced

Jacobian points

Draft Quality Mesh

Remesh failed parts with incompatible mesh

Material

Femur

Material properties

Materials in the default library can not be edited. You must first copy the material to a custom library to edit it.

Model Type: Linear Elastic Isotropic Save model type in library

Units: SI - N/mm² (MPa)

Category: Assembly_Femur_DHS

Name: Bone

Default failure criterion: Max von Mises Stress

Description: Bone

Source:

Sustainability: Undefined

Property	Value	Units
Elastic Modulus	14500	N/mm ²
Poisson's Ratio	0.3	N/A
Shear Modulus	3280	N/mm ²
Mass Density	1180	kg/m ³
Tensile Strength	150	N/mm ²
Compressive Strength		N/mm ²
Yield Strength	150	N/mm ²

DHS & PFNA

Material properties

Materials in the default library can not be edited. You must first copy the material to a custom library to edit it.

Model Type: Plasticity - von Mises Save model type in library

Units: SI - N/mm² (MPa)

Category: Steel

Name: Alloy Steel (SS)

Default failure criterion: Max von Mises Stress

Description:

Source:

Sustainability: Defined

Property	Value	Units
Elastic Modulus	210000.0005	N/mm ²
Poisson's Ratio	0.28	N/A
Tensile Strength	723.825617	N/mm ²
Yield Strength	620.4219978	N/mm ²
Tangent Modulus		N/mm ²
Thermal Expansion Coefficient	1.3e-05	/K
Mass Density	7700.000118	kg/m ³
Hardening Factor	0.85	N/A