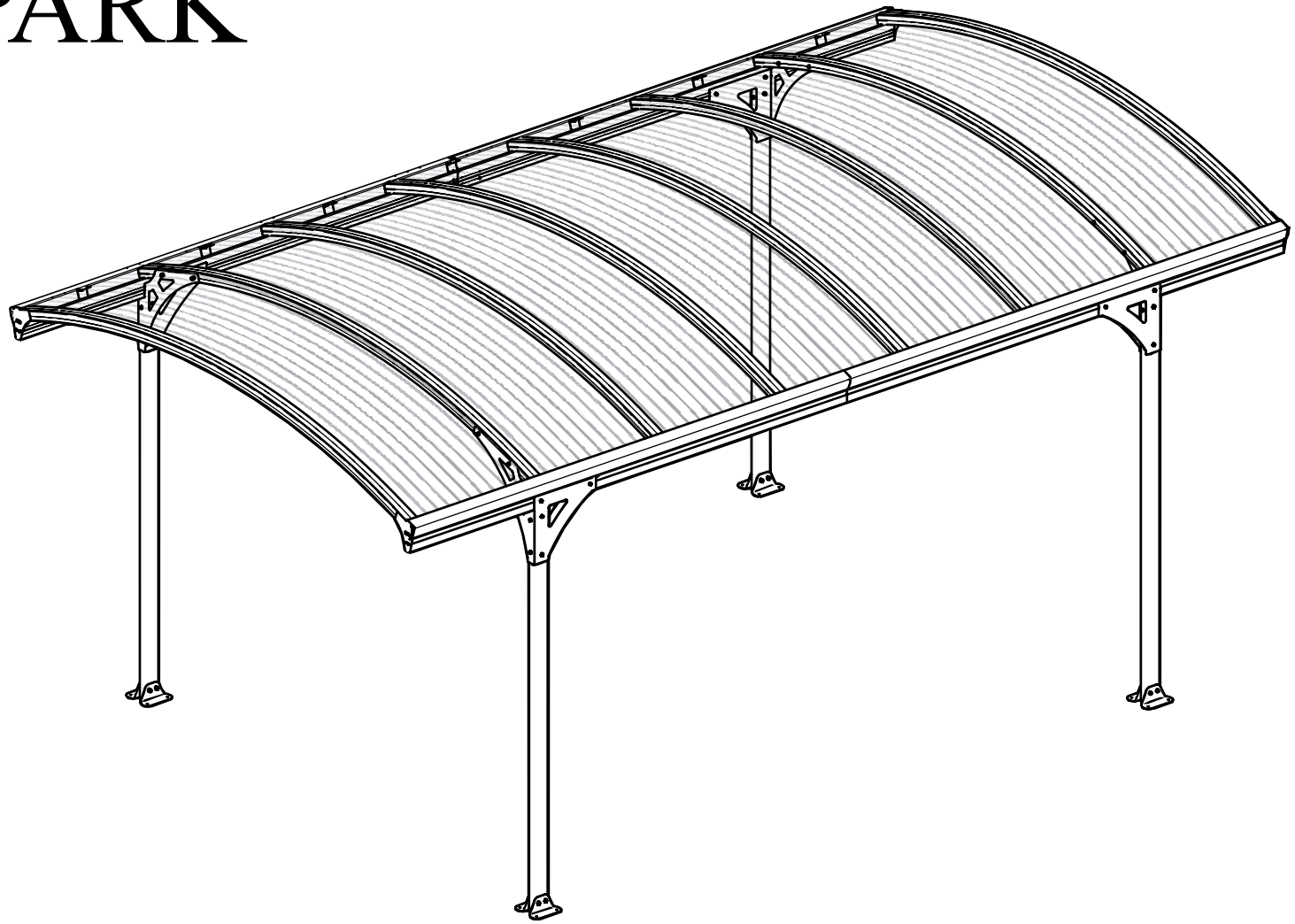
VITORIA - CAR PARK



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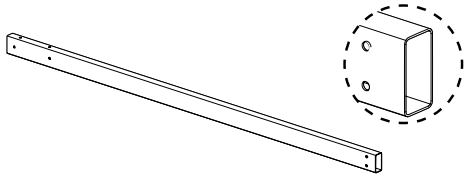
7568		4
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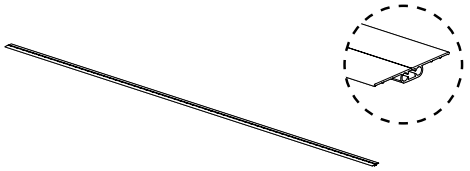
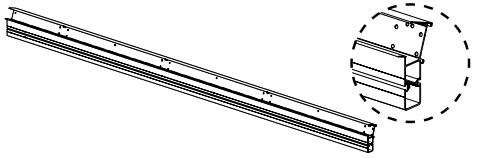
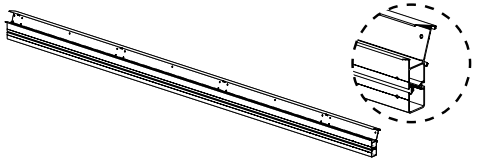
7571		8
7572		2
7573		2

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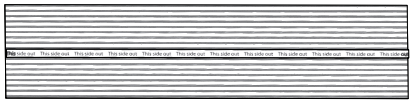
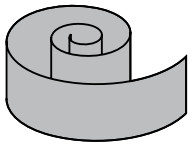
7577		7
7578		2

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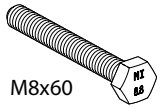
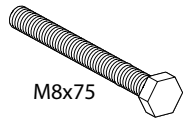
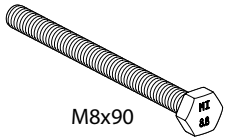
4042	 M8x60	16 (+1)
7567	 M8x75	8 (+1)
7579	 M8x90	8 (+1)

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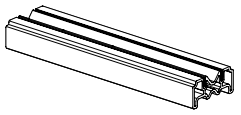
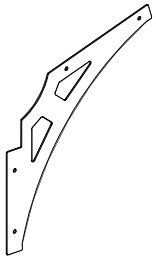
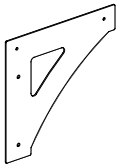
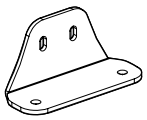
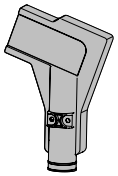
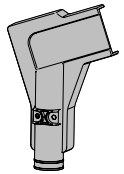
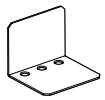
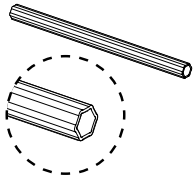
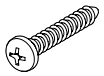
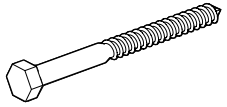
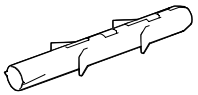
414	 M8	32 (+3)
433		80 (+5)
466		16 (+2)

7506		2
7574		4
7575		8
212		8

7710		2
7711		2
7580		14
T001		1

411		32 (+3)
450		96 (+9)
447		24 (+2)
4000		16 (+1)
4010		16 (+1)
5000		48

MATERIAL LIST -

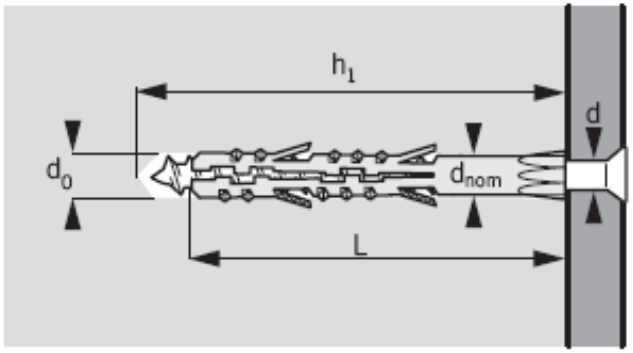
SKU	Description	Material
96066	NUT SILVER COATING FLANCH M6-AI466	Steel with zinc iron plating + chrome III
96223	NUT SILVER COATING CAP M6-AI413	Steel with zinc iron plating + chrome III
96222	NUT SILVER COATING CAP M8-AI414	Steel with zinc iron plating + chrome III
95223	BOLT PATENT HEXAGON HEAD 5/16X90-AI 4000	Steel with zinc iron plating + chrome III
95423	BOLT SILVER COATING A10X1 1/4-AI 450	Steel with zinc iron plating + chrome III
95250	BOLT SILVER COATING AB 10X5/8-AI 447	Steel with zinc iron plating + chrome III
95240	BOLT SILVER CO' SQUARE HEAD M6X10-AI 411	Steel with zinc iron plating + chrome III
97159	BOLT HEXAGON HEAD M8X60	Steel with zinc iron plating + chrome III
9001170	BOLT SILVER COATING M8X80-AI7567	Steel with zinc iron plating + chrome III
9001189	BOLT SILVER COATING M8X90-AI7579	Steel with zinc iron plating + chrome III
96544	WASHER SILVER COAT' 5/16-21X1.2 -AI433	Steel with zinc iron plating + chrome III
9002250	END BEAM PP RIGHT VICTORIA GREY-AI7710	PP
9002251	END BEAM PP LEFT VICTORIA GREY-AI7711	PP
95071	BULK PP 10X80 MM-AI 4010	PP
95222	COVER PP GREY FOR PATENT BOLT-AI P5000	PP
9001181	PANEL TW BRONZE 20% 2910X675X6MM-AI7577	PC
9001182	COVER PVC LAT BEAM GREY 5050MM-AI7578	PVC
9001177	JOINT TIN POST/UPPER BEAM GREY MR-AI7574	G.Steel
9001179	JOINT TIN POST/LAT BEAM GREY MR-AI7575	G.Steel
96655	JOINT ST BASE-POST GREY-AI212	G.Steel
9001174	PR AL UPPER COVER GREY MK 2910MM-AI7571	A 6063 T5
9001171	PR AL POST STR GRY MK40X80X2000MM-AI7568	A 6063 T5
9001172	PR AL MAIN ROLLED GREY MK 2868MM-AI7569	A 6063 T5
9001190	PR AL MAIN FOR ROLLED 2916MM-AI7569	A 6063 T5
9001173	PR AL MAIN ROL PERFO GRY MK2868MM-AI7570	A 6063 T5
9001191	PR AL MAIN FOR ROLLED PERF 2916MM-AI7570	A 6063 T5
9001175	PR AL LATER BEAM RG GREY MK2491MM-AI7572	A 6063 T5
9001176	PR AL LATER BEAM LT GREY MK2491MM-AI7573	A 6063 T5

Type	Load Capacities							
	N_{rec}	V_{rec}	N_{rec}	V_{rec}	N_{rec}	V_{rec}	N_{rec}	V_{rec}
Expandet Super with long expansion	Aerated concrete PP4		Aerated concrete PP2		Leca 3 N/mm²		Hollow brick 22 N/mm²	
	Recommended tension load kN◆	Recommended shear load kN◆	Recommended tension load kN◆	Recommended shear load kN◆	Recommended tension load kN◈	Recommended shear load kN◈	Recommended tension load kN◇	Recommended shear load kN◇
6x55	0,23	0,45	0,08	0,16	-	-	0,20	0,20
8x65	0,49	0,64	0,23	0,32	0,45	0,50	0,60	0,68
10x80	0,65	0,75	0,28	0,40	0,85	0,65	1,10	0,91
12x95	0,90	1,04	0,52	0,61	1,20	0,80	1,30	1,15

◆ Recommended loads are valid for a single anchor in aerated concrete with an edge distance ≥100 mm, together with largest recommended screw:
PP2: Density 375 kg./mm³ with a compressive strength of 2 N/mm².
PP4: Density 535 kg./mm³ with a compressive strength of 4 N/mm².
Safety factor is included (≥3). 1 kN ≈ 100 kg.

◈ Recommended loads are valid for a single anchor in Leca, density 600 kg/mm³, with a compressive strength of 3 N/mm² and an edge distance ≥100 mm and only together with largest recommended screw.
Safety factor is included (≥3). 1 kN ≈ 100 kg.

◇ Recommended loads are valid for a single anchor in hollow brick with a compressive strength of min. 22 N/mm² and an edge distance ≥100 mm, and only together with largest recommended screw.
Safety factor is included (≥3). 1 kN ≈ 100 kg.



ALUMINUM Alloy:

%Alloy Properties

Si		*Fe*	*Cu*	*Mn*	*Mg*		*Zn*	*Cr*
Min	*Max*	*Max*	*Max*	*Max*	*Min*	*Max*	*Max*	*Max*
0.2	0.6	0.35	0.1	0.1	0.45	0.90	0.1	0.1

Mechanical Properties

$\frac{Kg}{mm^2}$ *Y.P*	$\frac{Kg}{mm^2}$ *U.T.S*	*Elongation %*
11	15	8

This material was tested and complies with EN 755-2 (*Mechanical Properties)*
and EN 573-3 (Chemical composition)

BOLTS+NUTS:

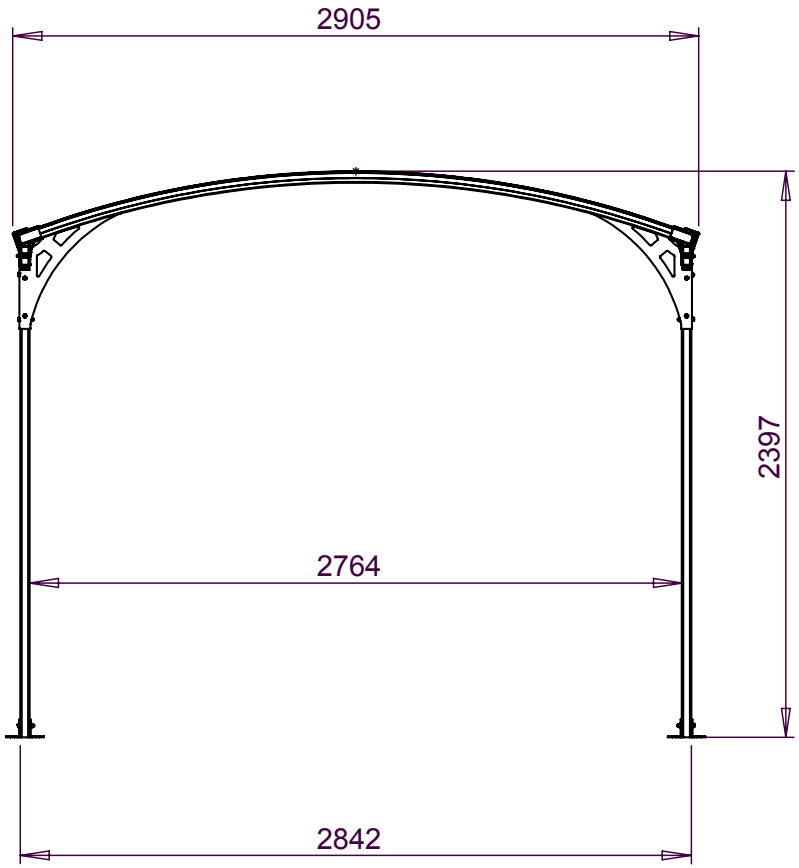
ALL BOLTS AND NUTS ARE MADE OF STEEL, ACCORDING TO DIN EN 20898-1 HASHNESS.4.6
BOLTS ARE PRODUCED ACCORDING TO DIN EN 20898-2 CLASS.5 and DIN EN 24033
NUTS ARE PRODUCED ACCORDING TO DIN EN 240017 / 24014.
M6 FLANGE IS PRODUCED ACCORDING TO DIN 6923.

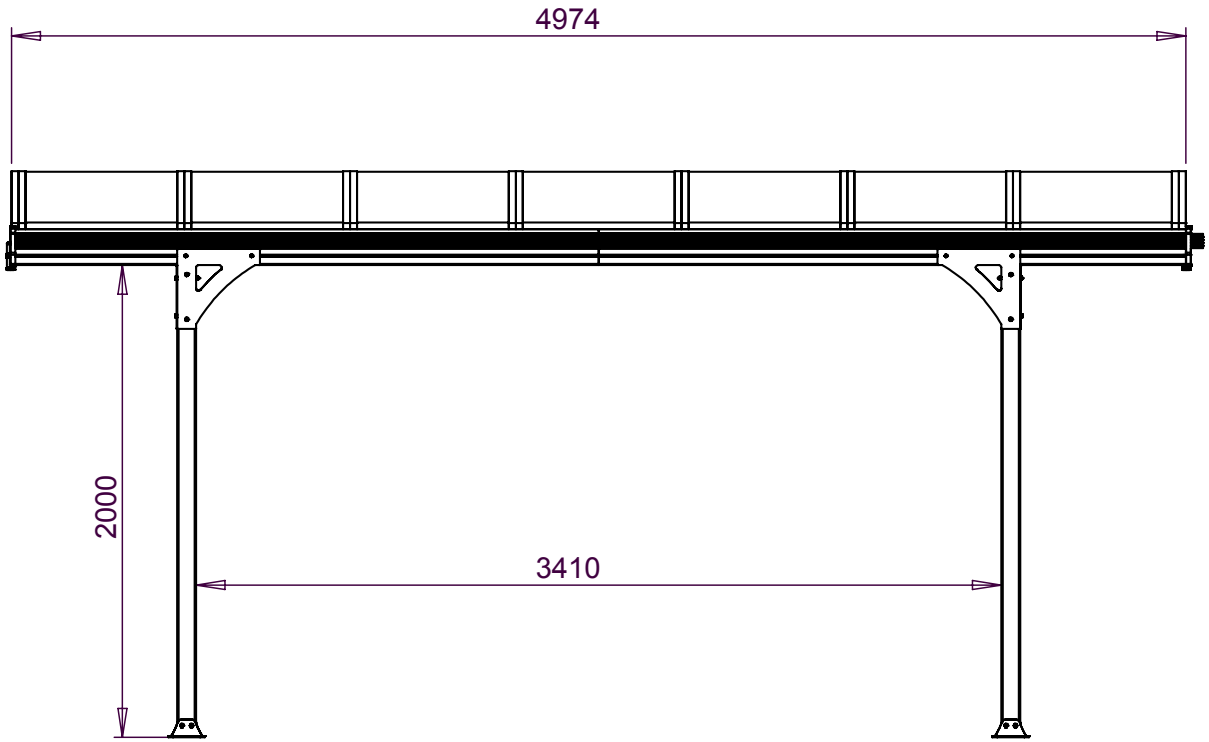
STEEL = ST37:

C $\leq$ 0.17%
P $\leq$ 0.050% S $\leq$ 0.050% N $\leq$ 0.009% Balance = Fe.

Density	7833.000 kg/m^3
Coef. of Thermal Exp.	.0000 /C
Thermal Conductivity	.032 kW/m-C
Specific Heat	481.000 J/kg-C
Modulus of Elasticity	199947953.000 kPa
Poisson's Ratio	.290
Yield Stress	240000kPa
Ultimate Stress	400000kPa
Elongation %	.000

VITORIA - general dimensions

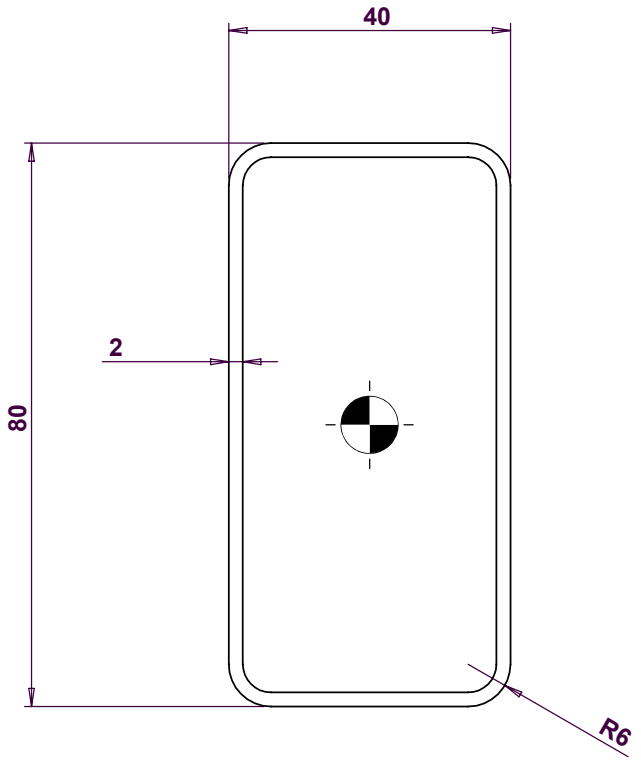




SKU	RAL	Description	Color Thich
9001173	7012	GRAY	80-60MIC

moment of inertia "x-x" (cm)	12.4
moment of inertia "y-y" (cm)	36.3

Tolerance Table	
typ wall thich	
DIM	-/+
bounding circle	D<100
0-3	0.15
bounding circle100<D<200	
0-1.5	0.20
1.5-3	0.25
3-6	0.30
section dimentions	
bounding circle	D<100
0-10	0.25
10-25	0.30
25-50	0.5
50-100	0.7
bounding circle100<D<200	
0-10	0.30
10-25	0.40
25-50	0.60
50-100	0.90
100-150	1.1
150-200	1.3



SCALE 1:1

section

2000X80X40

SKU:	9001171		
HH:	7568		
FAMILY:	vitoria		

material	A-6063-T5	**version**	1
weight (gr)	2409.21	**date of update**	19/11/2013
TWT	2	**reson for change**	

manufacturer sku 1- EX-040176

manufacturer sku 2- -

		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	matan_b		

location: P:\pa lib\RND-SW\vitoria\מפרטים\A-9001171-HH-7568-ENGLISH

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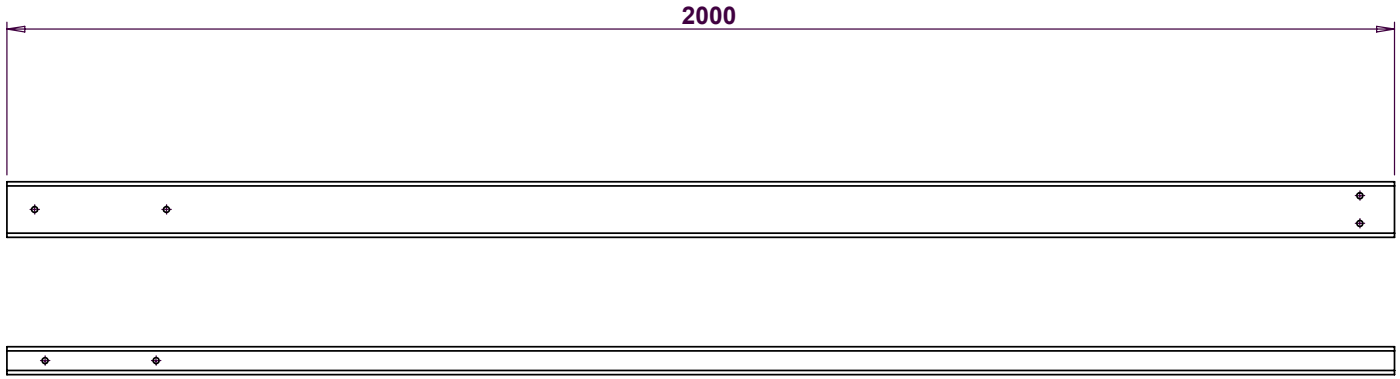
Tel.04-8486920



processing

2000X80X40				SKU: 9001171	HH: 7568		FAMILY: vitoria	
material	A-6063-T5	**version**	1	manufacturer sku 1- EX-040176			date	signature
weight (gr)	2409.21	**date of update**	19/11/2013		**QA M**	Guy_s		
TWT	2	**reson for change**		manufacturer sku 2- -	**R&D M**	Geva_k		
					DREWER	matan_b		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\A-9001171-HH-7568-ENGLISH			

tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

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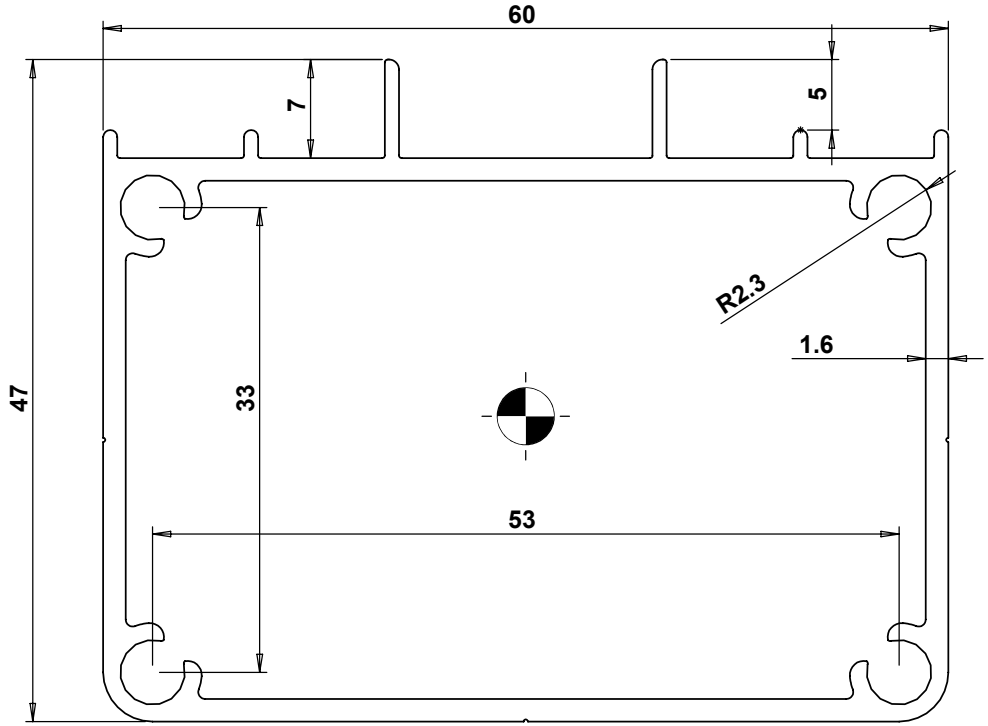
Misgav 20174
Tel.04-8486920

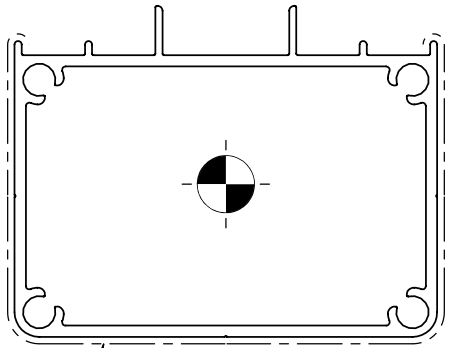
PALRAM

SKU	RAL	Description	Color Thich
9001172	7012	GRAY	80-60MIC

moment of inertia "x-x" (cm)	9.7
moment of inertia "y-y" (cm)	17.3

Tolerance Table	
typ wall thich	
DIM	-/+
bounding circle	D<100
0-3	0.15
bounding circle100<D<200	
0-1.5	0.20
1.5-3	0.25
3-6	0.30
section dimentions	
bounding circle	D<100
0-10	0.25
10-25	0.30
25-50	0.5
50-100	0.7
bounding circle100<D<200	
0-10	0.30
10-25	0.40
25-50	0.60
50-100	0.90
100-150	1.1
150-200	1.3





SCALE 1:1
section

PR AL MAIN ROLLED GREY MK 2868MM-AI7569				SKU: 9001190	HH: 7569		FAMILY: vitoria	
material	A-6063-T5	**version**	1	manufacturer sku 1- EX 040257			date	signature
weight (gr)	2741	**date of update**	19/11/2013		**QA M**	Guy_s		
TWT	1.6	**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	matan_b		
				location: P:\pa lib\RND-SW\vitoria\מפרטים\A-9001172-HH-7569-english				

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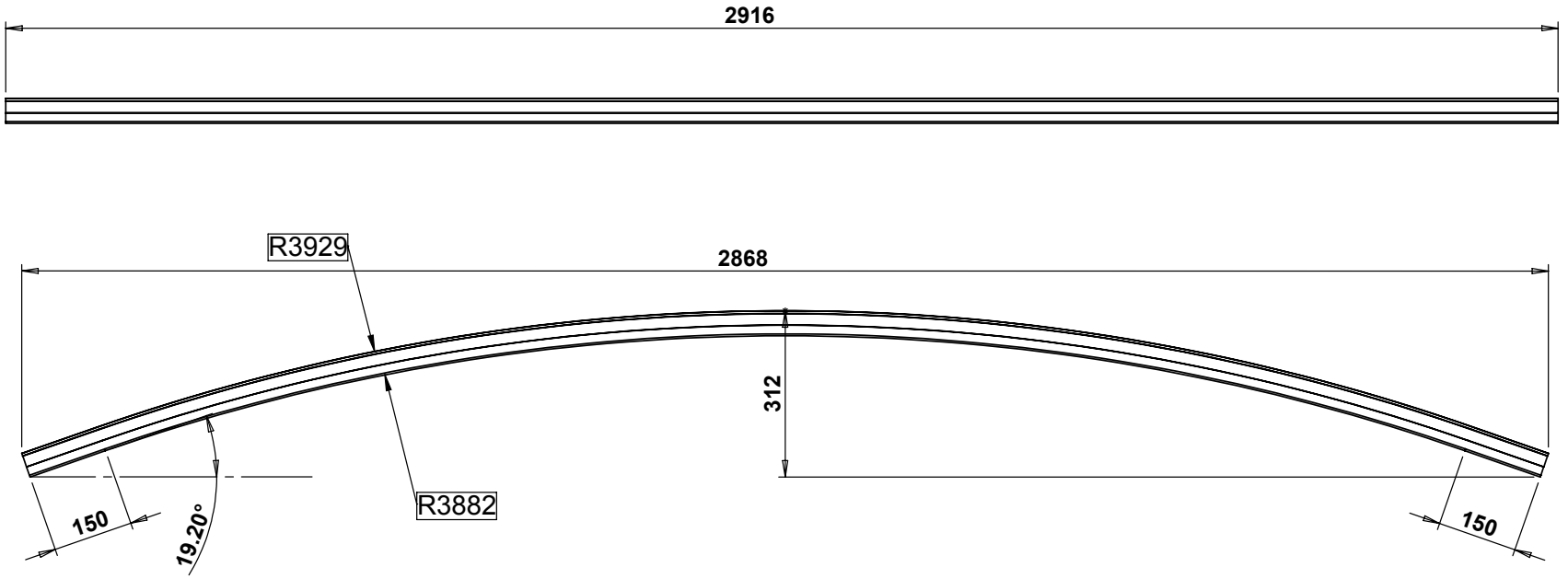
Tel.04-8486920

lenght before rolling - 2916 mm



processing

PR AL MAIN ROLLED GREY MK 2868MM-AI7569				SKU: 9001172	HH: 7569		FAMILY: vitoria	
material	A-6063-T5	version	1	manufacturer sku 1-			date	signature
weight (gr)	2742	date of update	19/11/2013		QA M	Guy_s		
TWT	1.6	reson for change		manufacturer sku 2-	R&D M	Geva_k		
					DREWER	matan_b		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\A-9001172-HH-7569-english			

tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

Palram Applications
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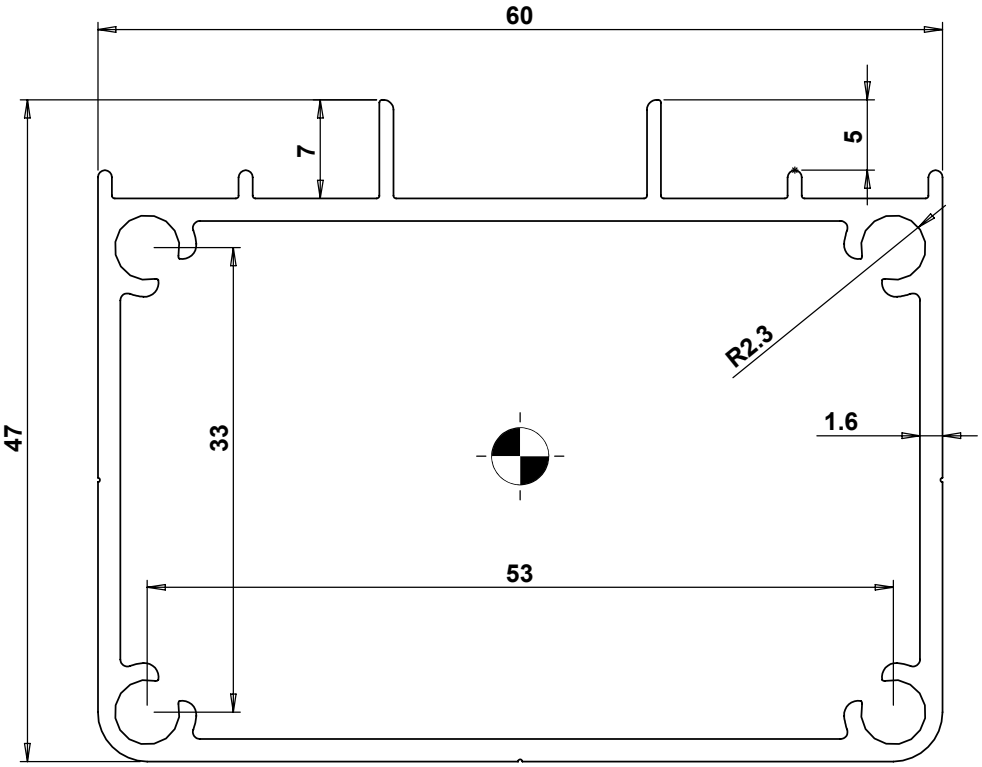
Misgav 20174
Tel.04-8486920

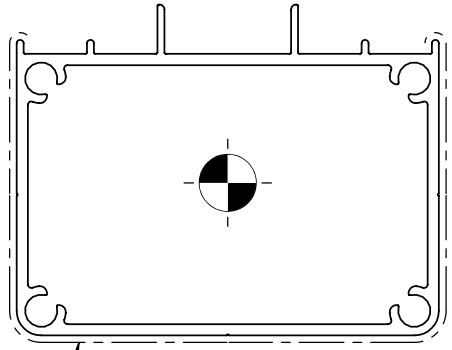
PALRAM

SKU	RAL	Description	Color Thich
9001173	7012	GRAY	80-60MIC

moment of inertia "x-x" (cm)	9.7
moment of inertia "y-y" (cm)	17.3

Tolerance Table	
typ wall thich	
DIM	-/+
bounding circle	D<100
0-3	0.15
bounding circle100<D<200	
0-1.5	0.20
1.5-3	0.25
3-6	0.30
section dimentions	
bounding circle	D<100
0-10	0.25
10-25	0.30
25-50	0.5
50-100	0.7
bounding circle100<D<200	
0-10	0.30
10-25	0.40
25-50	0.60
50-100	0.90
100-150	1.1
150-200	1.3





Exposed Surface

SCALE 1:1
section

PR AL MAIN ROL PERFO GRY MK2868MM-AI7570				SKU: 9001191	HH: 7570		FAMILY: vitoria	
material	A-6063-T5	**version**	1	manufacturer sku 1-			date	signature
weight (gr)	2739	**date of update**	19/11/2013	EX 040257	**QA M**	Guy_s		
TWT	1.6	**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	matan_b		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\A-9001173-HH-7570-ENGLISH			

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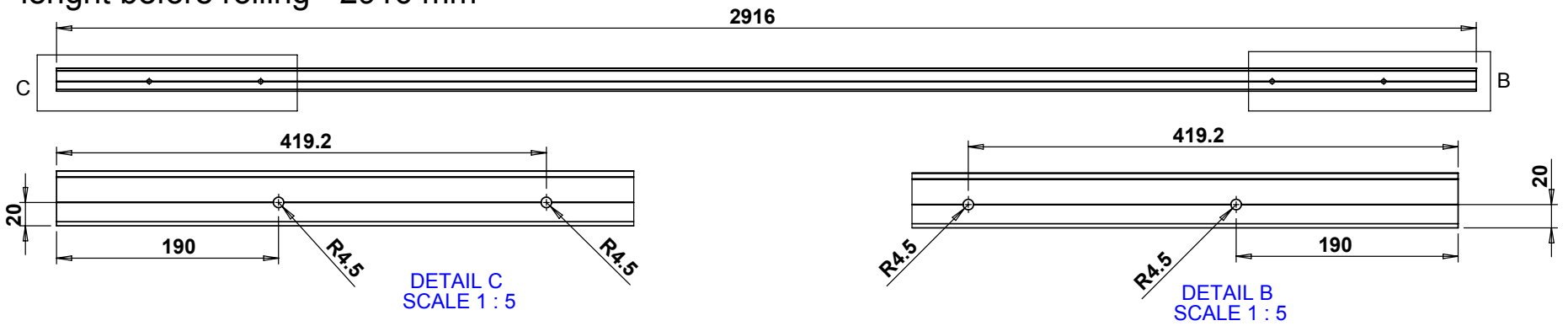
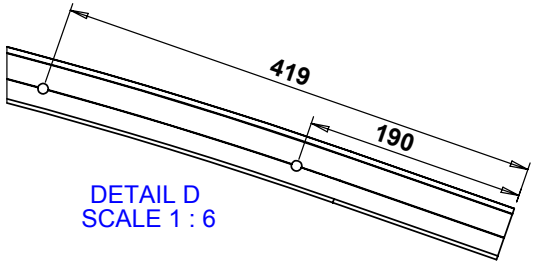
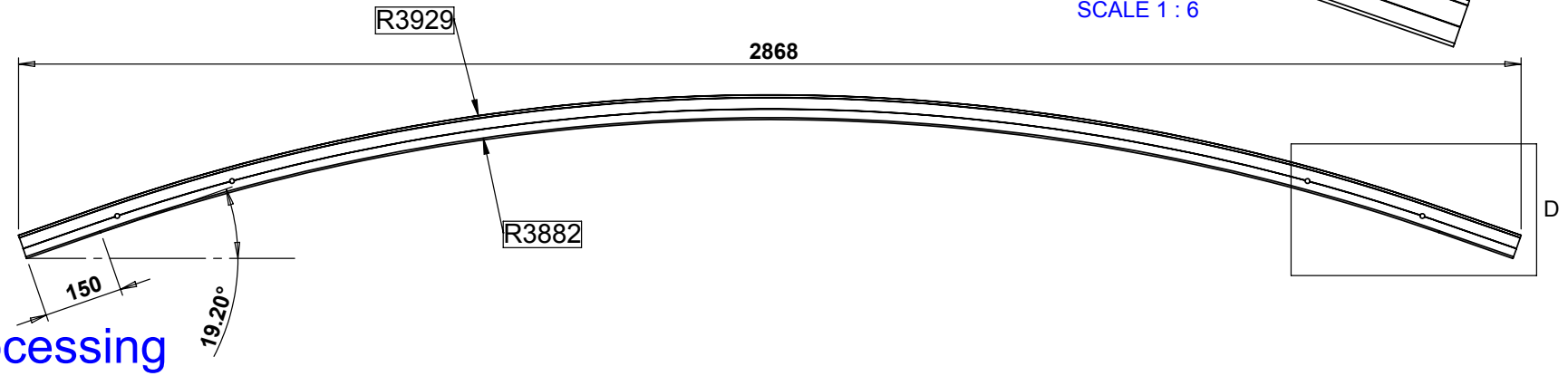
Industrial Park
Misgav 20174
Tel.04-8486920

lenght before rolling - 2916 mm







processing

PR AL MAIN ROL PERFO GRY MK2868MM-AI7570				**SKU:** 9001173	**HH:** 7570		**FAMILY:** vitoria	
material	A-6063-T5	**version**	1	manufacturer sku 1-			date	signature
weight (gr)	2740	**date of update**	19/11/2013		**QA M**	Guy_s		
TWT		**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	matan_b		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\A-9001173-HH-7570-ENGLISH			

tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

Palram Applications
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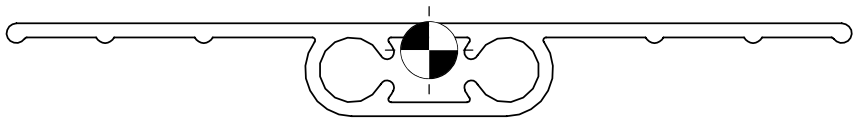
Tel.04-8486920

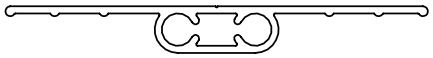
PALRAM

SKU	RAL	Description	Color Thich
9001173	7012	GRAY	80-60MIC

moment of inertia "x-x" (cm)	0.04
moment of inertia "y-y" (cm)	2.0

Tolerance Table	
typ wall thich	
DIM	-/+
bounding circle	D<100
0-3	0.15
bounding circle100<D<200	
0-1.5	0.20
1.5-3	0.25
3-6	0.30
section dimentions	
bounding circle	D<100
0-10	0.25
10-25	0.30
25-50	0.5
50-100	0.7
bounding circle100<D<200	
0-10	0.30
10-25	0.40
25-50	0.60
50-100	0.90
100-150	1.1
150-200	1.3





SCALE 1:1
section

				SKU: 9001174	HH: 7571		FAMILY: vitoria	
material	A-6063-T5	**version**	1	manufacturer sku 1-			date	signature
weight (gr)	746	**date of update**	19/11/2013		**QA M**	Guy_s		
TWT	1	**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	matan_b		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\A-9001174-HH-7571-ENGLISH			

Palram Applications
Industrial Park
Misgav 20174
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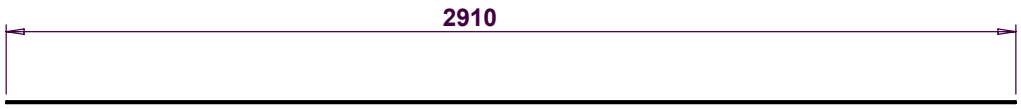


processing

				SKU: 9001174	**HH:** 7571		**FAMILY:** vitoria		
material	A-6063-T5	**version**	1	manufacturer sku 1-			date	signature	
weight (gr)	746	**date of update**	19/11/2013		**QA M**	Guy_s			
TWT	1	**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k			
					DREWER	matan_b			
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\A-9001174-HH-7571-ENGLISH				

tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

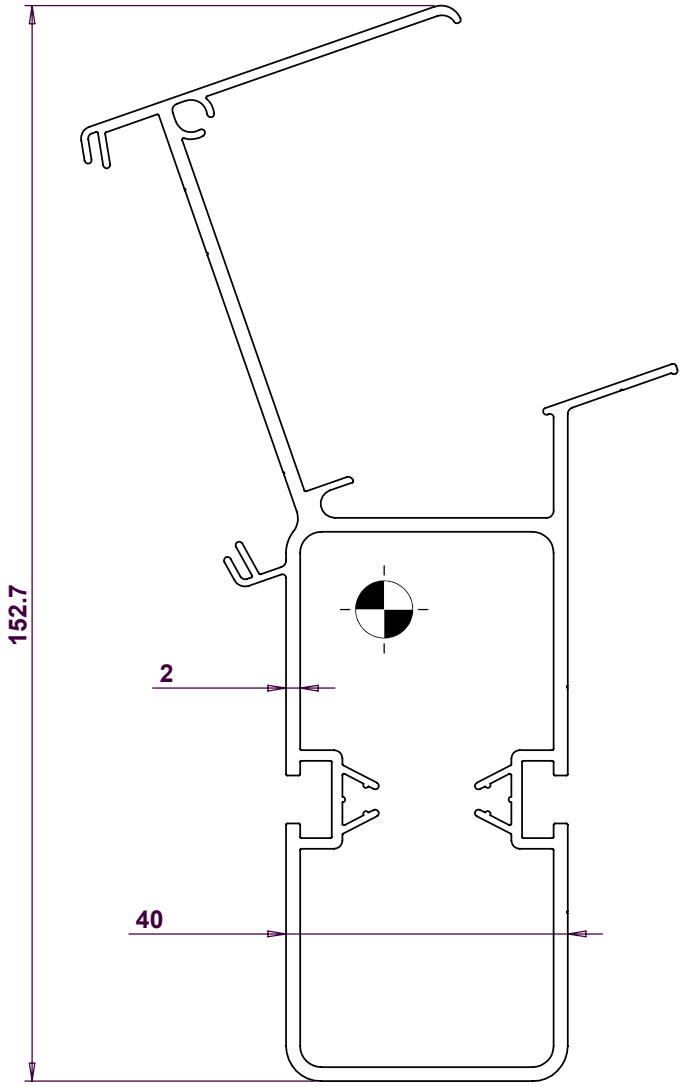
Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

PALRAM

SKU	RAL	Description	Color Thich
9001172	7012	GRAY	80-60MIC

moment of inertia "x-x" (cm)	157.7
moment of inertia "y-y" (cm)	32.4

Tolerance Table	
typ wall thich	
DIM	-/+
bounding circle	D<100
0-3	0.15
bounding circle100<D<200	
0-1.5	0.20
1.5-3	0.25
3-6	0.30
section dimentions	
bounding circle	D<100
0-10	0.25
10-25	0.30
25-50	0.5
50-100	0.7
bounding circle100<D<200	
0-10	0.30
10-25	0.40
25-50	0.60
50-100	0.90
100-150	1.1
150-200	1.3



SCALE 1:1
section

PR AL MAIN ROLLED GREY MK 2868MM-AI7569

SKU: 9001176

HH: 7573

FAMILY: vitoria

material	A-6063-T5	**version**	1
weight (gr)	5520	**date of update**	19/11/2013
TWT	2	**reson for change**	

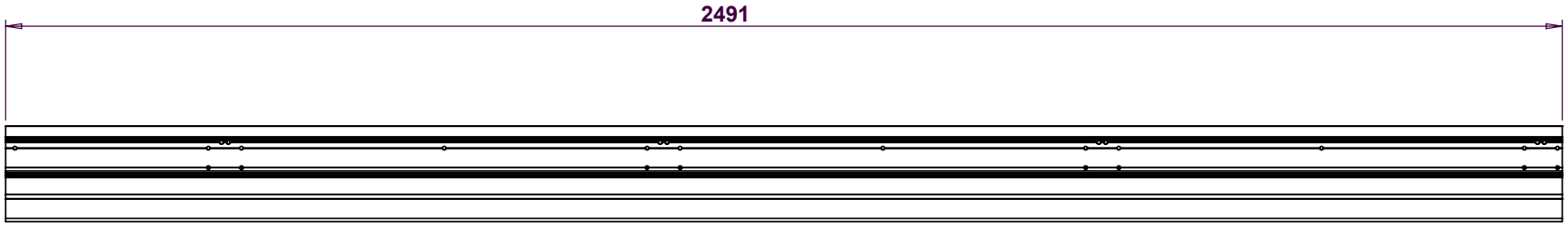
manufacturer sku 1- EX 040259

manufacturer sku 2-

		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	matan_b		

location: P:\pa lib\RND-SW\vitoria\מפרטים\A-9001176-HH-7573-english

Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

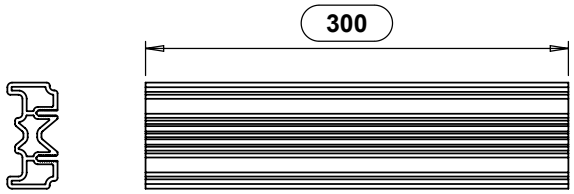


processing

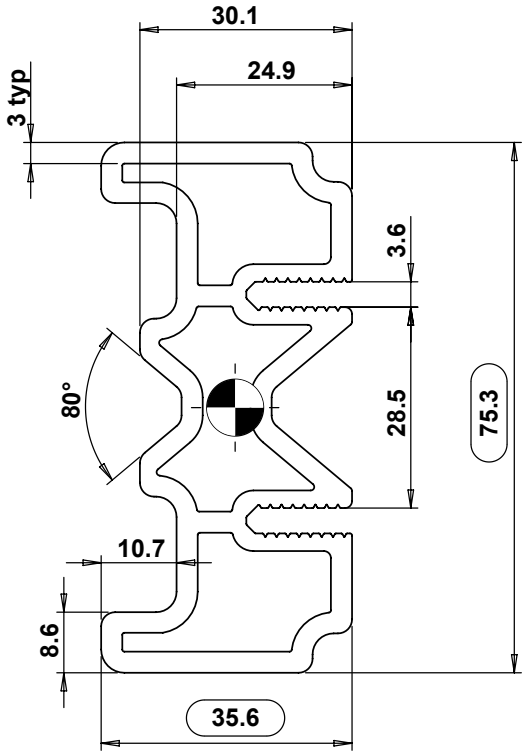
PR AL MAIN ROLLED GREY MK 2868MM-AI7569				SKU: 9001176	HH: 7573		FAMILY: vitoria	
material	A-6063-T5	**version**	1	manufacturer sku 1- EX 040259			date	signature
weight (gr)	5520	**date of update**	19/11/2013		**QA M**	Guy_s		
TWT	26	**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	matan_b		
				location: P:\pa lib\RND-SW\vitoria\מפרטים\A-9001176-HH-7573-english				

tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920



Tolerance Table	
typ wall thich	
DIM	-/+
bounding circle	D<100
0-3	0.15
bounding circle100<D<200	
0-1.5	0.20
1.5-3	0.25
3-6	0.30
section dimentions	
bounding circle	D<100
0-10	0.25
10-25	0.30
25-50	0.5
50-100	0.7
bounding circle100<D<200	
0-10	0.30
10-25	0.40
25-50	0.60
50-100	0.90
100-150	1.1
150-200	1.3

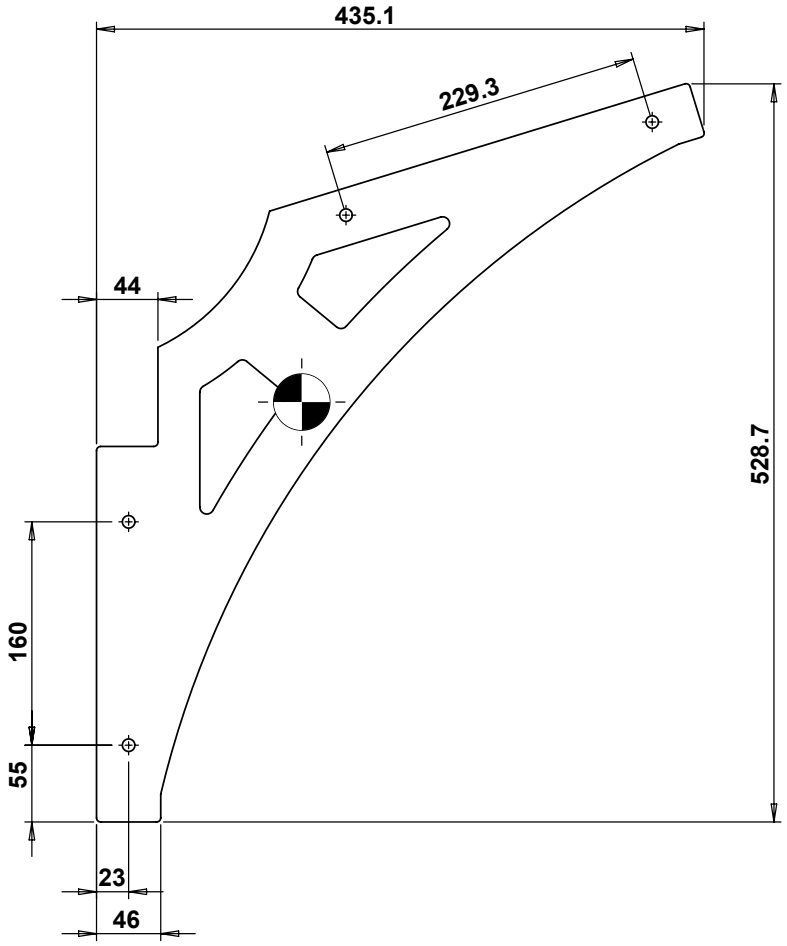


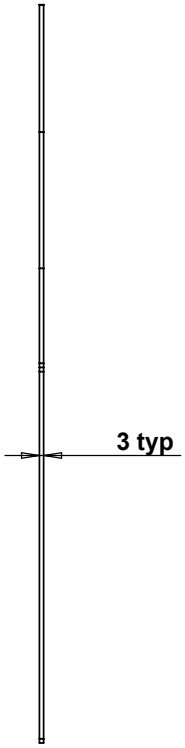
SCALE 1:1
section

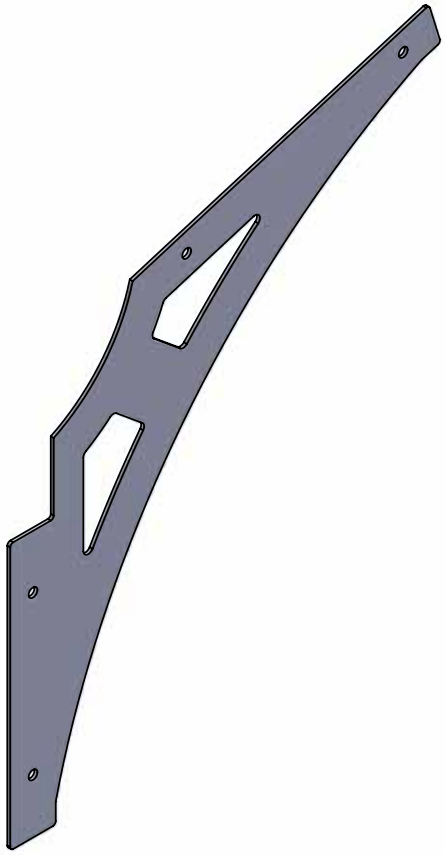
Ixx =8.9 CM^4
Iyy = 50.3 CM^4

ALUM INNER BEAM 300 MM				SKU: 9000883	HH: 7506		FAMILY: PRG	
material	A-6063-T5	**version**	1	manufacturer sku 1- EX40217			date	signature
weight (gr)	707.42	**date of update**	22/11/2013		**QA M**	Guy_s		
TWT	3	**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	carmel_d		
				location: C:\Users\carmel_d\Desktop\verona\A-9000883-HH-7506				

Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920







TIN CON UPPPER BEAM

material	G.Steel	**version**	1
weight (gr)	1310	**date of update**	21/11/2013
TWT	3	**reson for change**	

SKU: 9001177

HH: 7574

FAMILY: vitoria

manufacturer sku 1-

manufacturer sku 2-

		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	carmel_d		

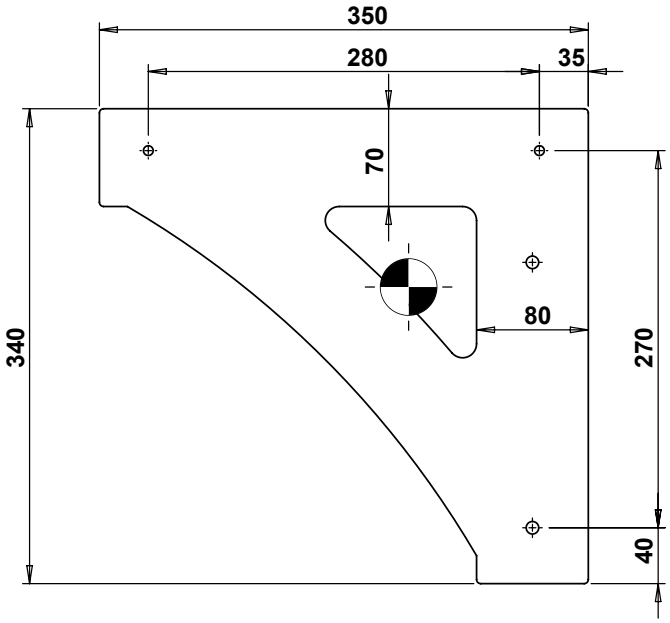
location: C:\Users\carmel_d\Desktop\vitiria\M-9001177 HH-7574-english

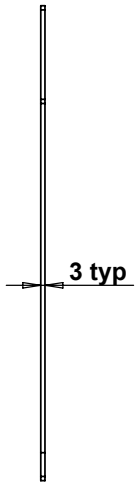
tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

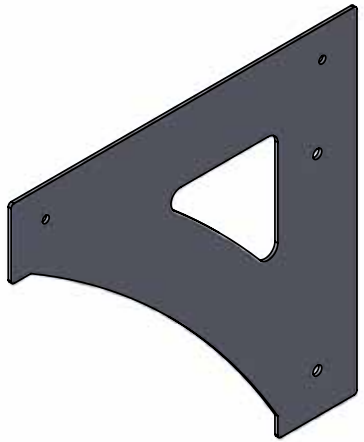
Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

PALRAM

SKU	RAL	Description	Color Thich
9000870	7012	GRAY	80-60MIC
98353	9016	WHITE	80-60MIC







TIN CON BEAM LEG

material	G.Steel	**version**	1
weight (gr)	1528.71	**date of update**	21/11/2013
TWT	3	**reson for change**	

SKU: 9001179

HH: 7575

FAMILY: vitoria

manufacturer sku 1-

manufacturer sku 2-

		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	carmel_d		

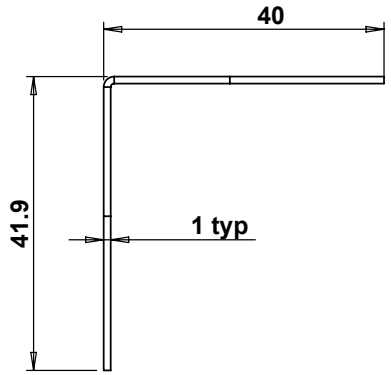
location: C:\Users\carmel_d\Desktop\vitiria\M-9001179 HH-7575

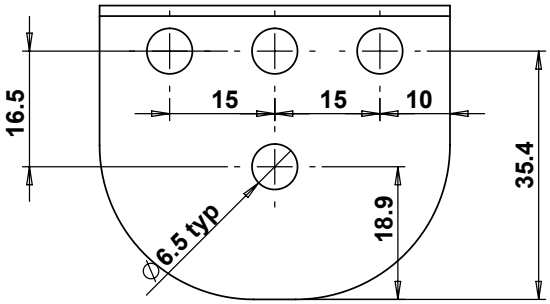
tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

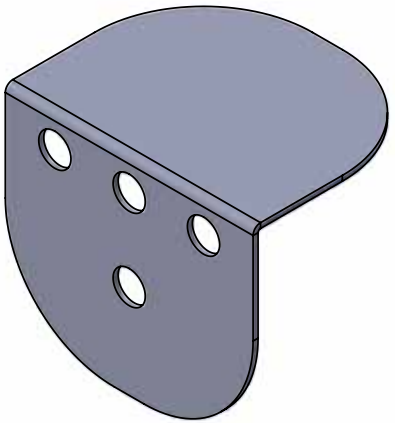
Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

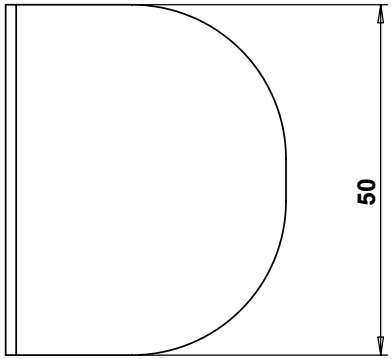
PALRAM

SKU	RAL	Description	Color Thich
9001196	7012	GRAY	80-60MIC
9002114	9016	WHITE	80-60MIC









SUPPORT TIN ROOF

SKU:	HH:	FAMILY:
9001196	7580	vitoria

material	G.Steel	**version**	1
weight (gr)	27	**date of update**	21/11/2013
TWT	1	**reson for change**	

manufacturer sku 1-

manufacturer sku 2-

		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	carmel_d		

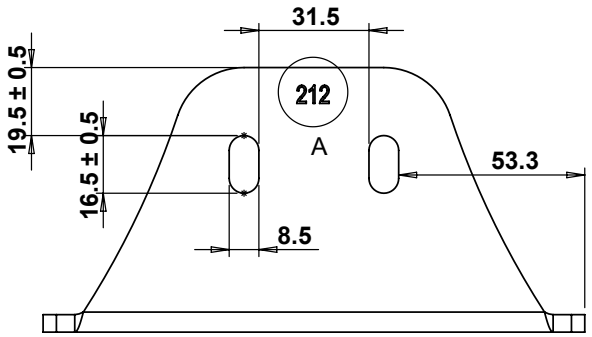
location: C:\Users\carmel_d\Desktop\verona\M-9001196-v2 HH-7580

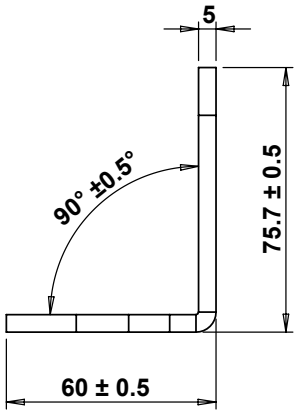
tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

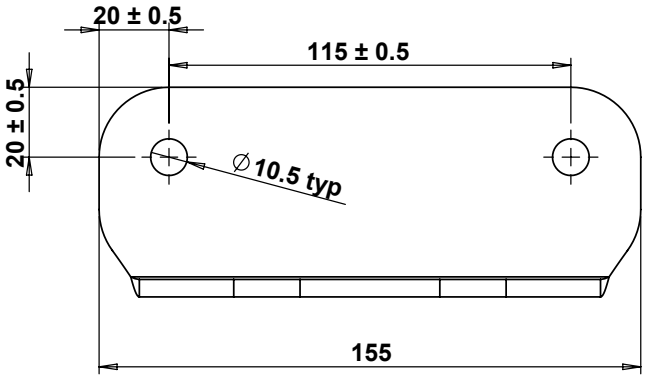
Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

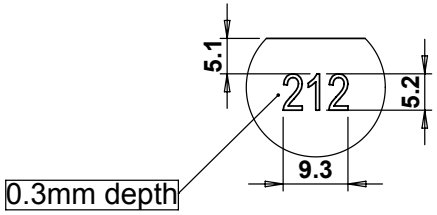
PALRAM

SKU	RAL	Description	Color Thich
96534	1001	yellow	80-60MIC
96655	7012	grey	80-60MIC
96600	9016	white	80-60MIC

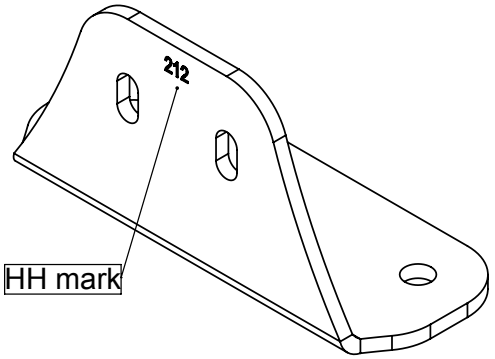








DETAIL A
SCALE 1 : 1



JOINT ST BASE-POST

material	G.Steel	**version**	4
weight (gr)	592.05	**date of update**	15/10/2013
TWT	5	**reson for change**	
coating type	yellow zinc		
coating thick	8-10 mic		

SKU: 96219

HH: 212

FAMILY: prg

manufacturer sku 1-

manufacturer sku 2-

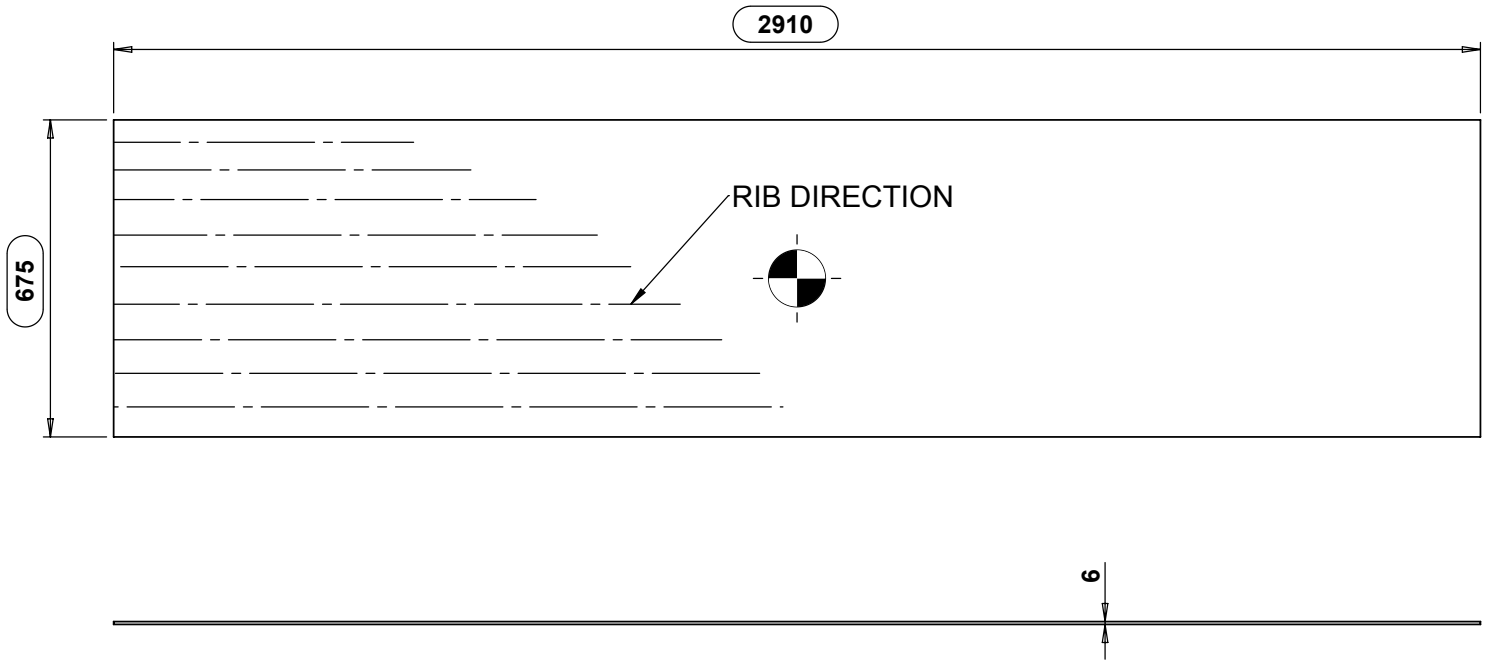
location: P:\pa lib\RND-SW\carmel\212\ML-96219-V5-english

		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	Carmel_d		

tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

PALRAM



MW sheet 6M

material Material <not specified>		**version**	1
weight (gr)	11786	**date of update**	21/11/2013
TWT	6	**reson for change**	

SKU: 9001181

HH: 7577

FAMILY: CP

manufacturer sku 1-

manufacturer sku 2-

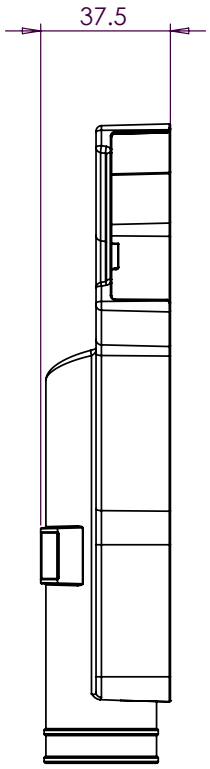
		date	signature
QA M	Guy_s		
R&D M	Geva_k		
DREWER	carmel_d		

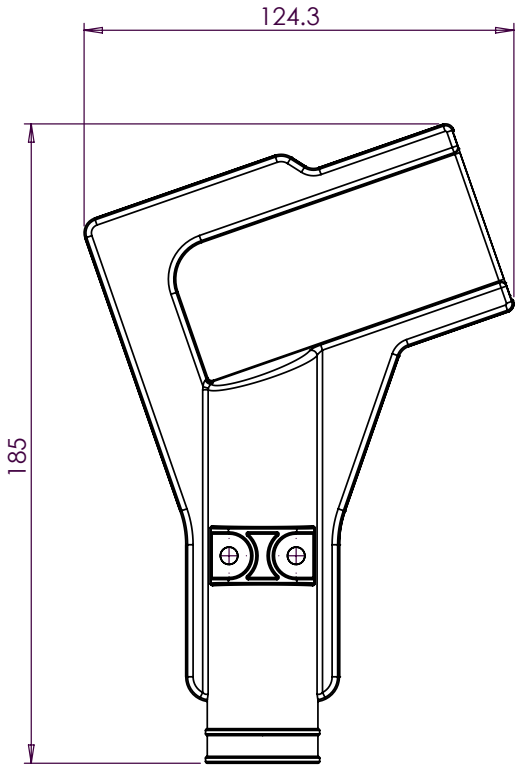
location: C:\Users\carmel_d\Desktop\verona\S-9001181 HH-7577 flat

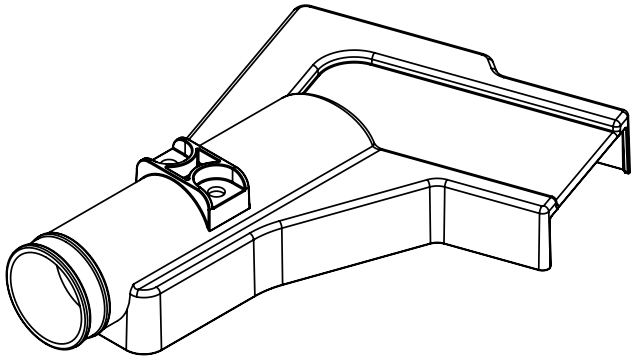
tolerance table	
DIM	+\-
1-100	0.5
100-1000	1
1000>	1.5
puncturing tolerance- 0.5±	

Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920

PALRAM

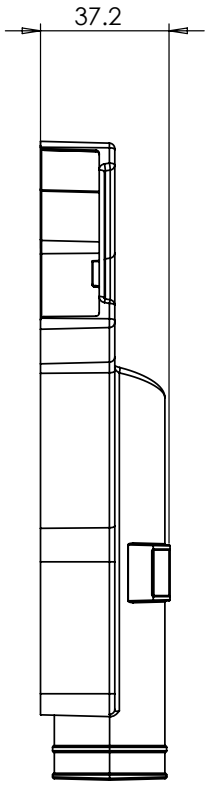


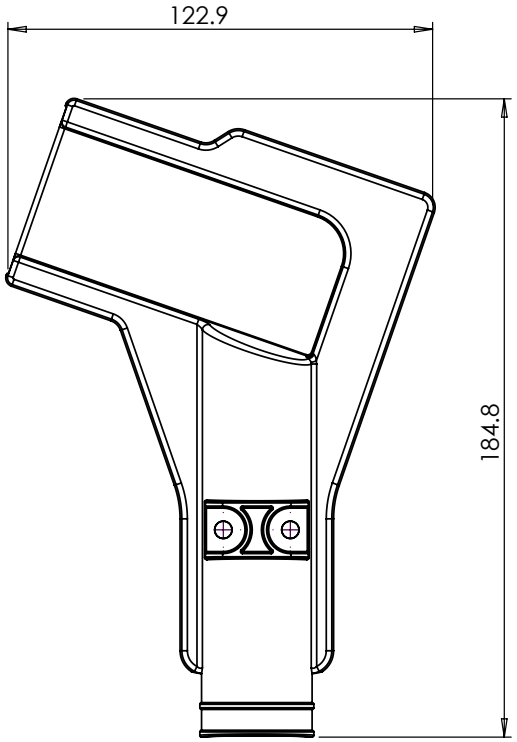


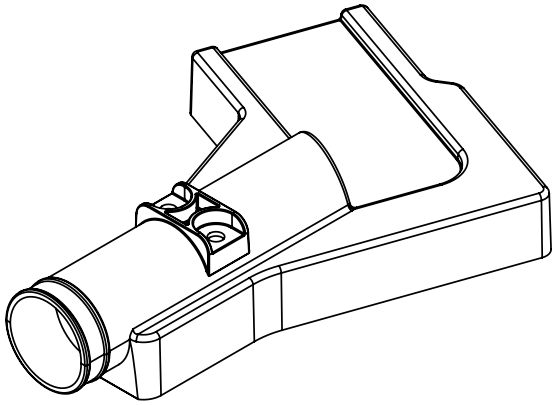


END BEAM PP LEFT VICTORIA GREY-AI7711				**SKU:** 9002251	**HH:** 7711		**FAMILY:** CP	
material	P.P	**version**	1	manufacturer sku 1-			date	signature
weight (gr)	32.99	**date of update**	21/01/2014		**QA M**	Guy_s		
TWT		**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	carmel_d		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\I-9002251 hh-7711-eng			

Palram Applications
Industrial Park
Misgav 20174
Tel.04-8486920







END BEAM PP RIGHT VICTORIA GREY-AI7710				**SKU:** 9002250	**HH:** 7710		**FAMILY:** CP	
material	P.P	**version**	1	manufacturer sku 1-			date	signature
weight (gr)	33	**date of update**	21/01/2014		**QA M**	Guy_s		
TWT		**reson for change**		manufacturer sku 2-	**R&D M**	Geva_k		
					DREWER	carmel_d		
				location:	P:\pa lib\RND-SW\vitoria\מפרטים\I-9002250 hh-7710-eng			

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Thermoplastic Sheets for Construction, Industry, Advertising and Agriculture

Quality Assurance Department

Internal document

The described tests are done to check the product's characteristics and may not suits to a specific standard's requirements.

Static Load Test Report

DATE: 18/06/2013
PRODUCT NAME: CAR PORT VITORIA 5000
DONE BY: Guy Silver , QC MANAGER
TEST DESCRIPTION:
1. Product was assembled as is without any special supports
2. Product was loaded up to 100 kg / m² for 72 hours
3. Product was examined with loaded weight and after unloading

PIC 1

PIC 2

PIC 3

PIC 4

Findings: No cracks or damages. No change in wall conections. Insignificant sagging of the panels and profiles

Conclusions: Car port VITORIA 5000 resists 100 kg / m² loading.

Stress Analysis – Vitoria

For: Palram

g.s.design

25/12/13

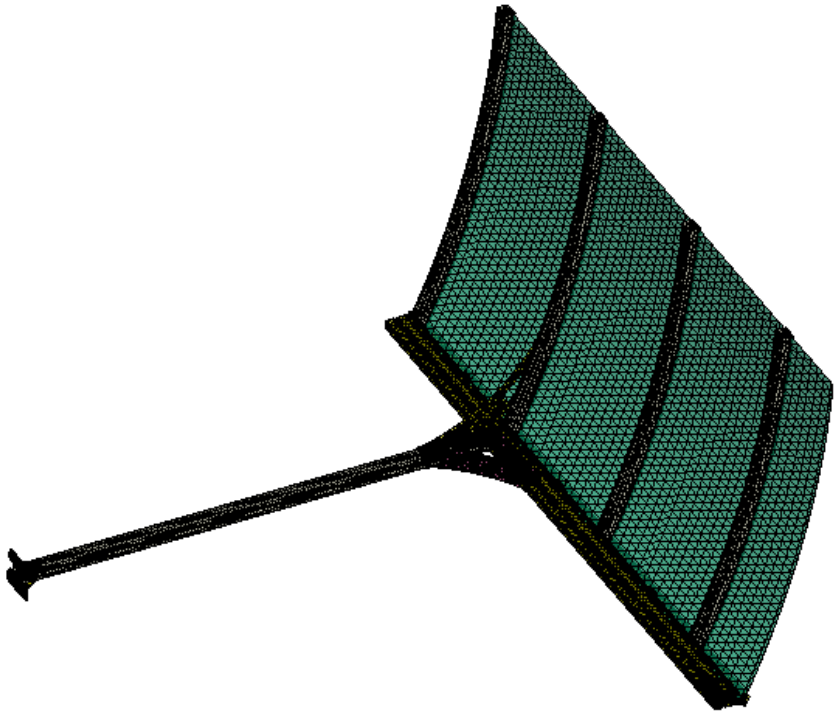
Goal

- To examine structure performance under snow load and wind load

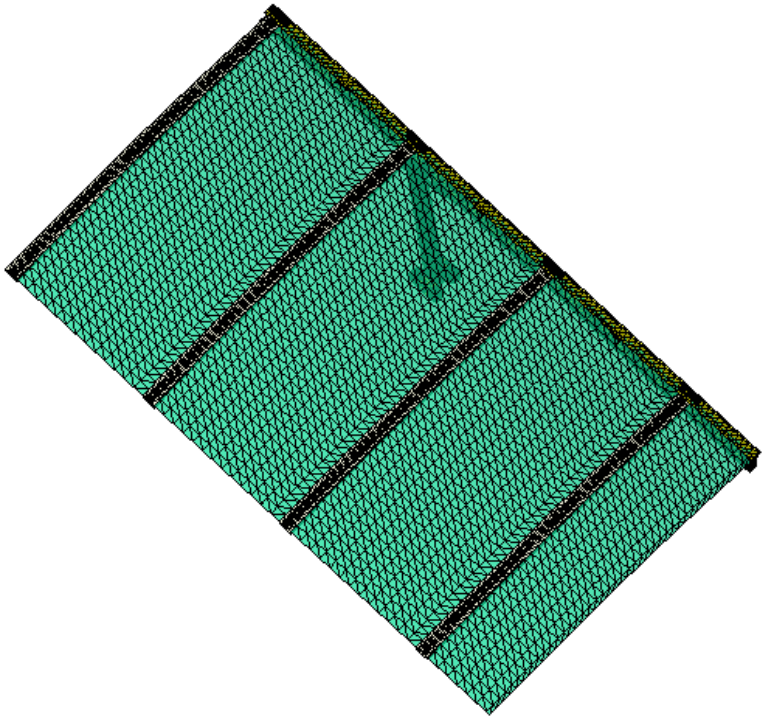
Summary

- Snow
  - The metal structure can withstand snow load of 100 kg/m^2 with the first part to fail being the aluminum column
  - The tile can withstand 100kg/m^2 assuming the tile can not slip out of the tile support beam grip
- Wind
  - The structure can withstand wind static load of up to 120Kg/Hr

Model

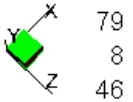

AUTODESK
SIMULATION MOLDFLOW
INSIGHT
Scale (2000 mm)
147
142
84

Model



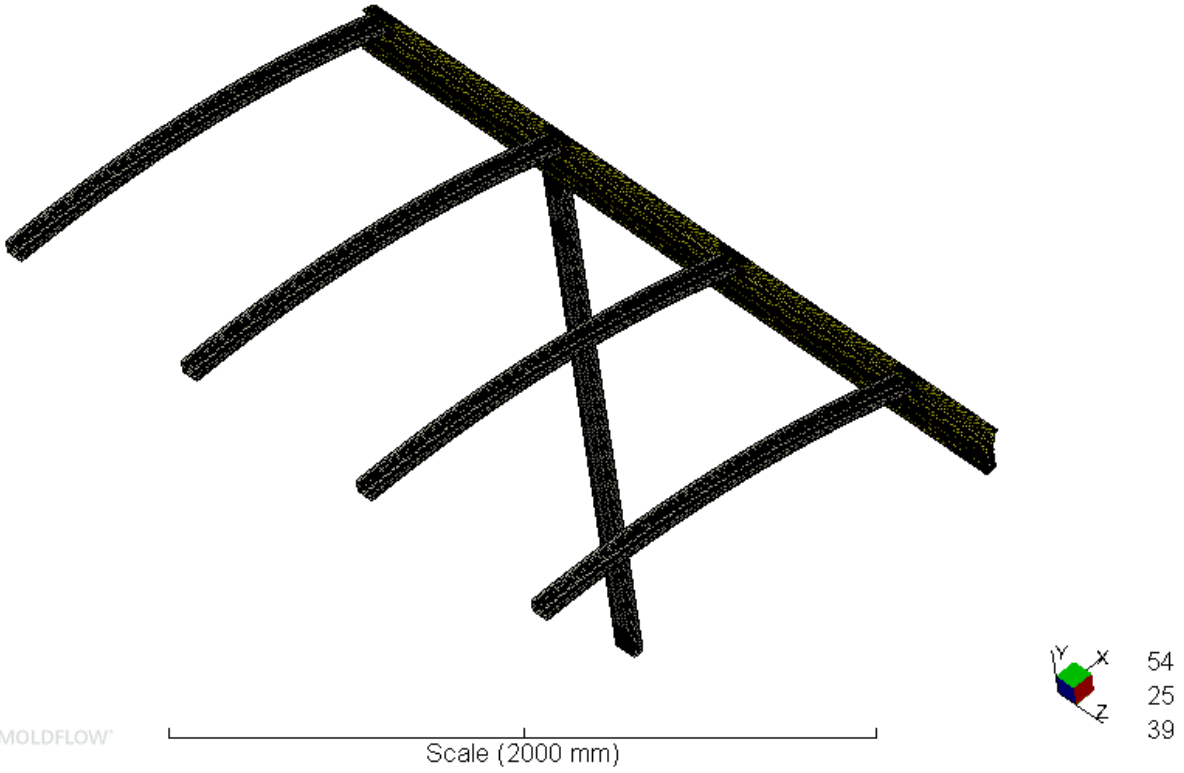
AUTODESK®
SIMULATION MOLDFLOW®
INSIGHT

Scale (2000 mm)



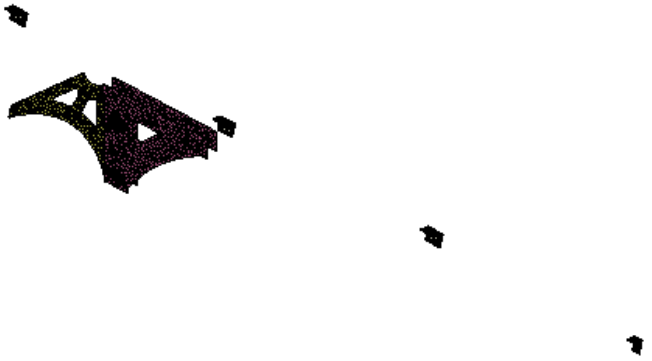
Model

- Aluminum parts



Model

- Steel parts



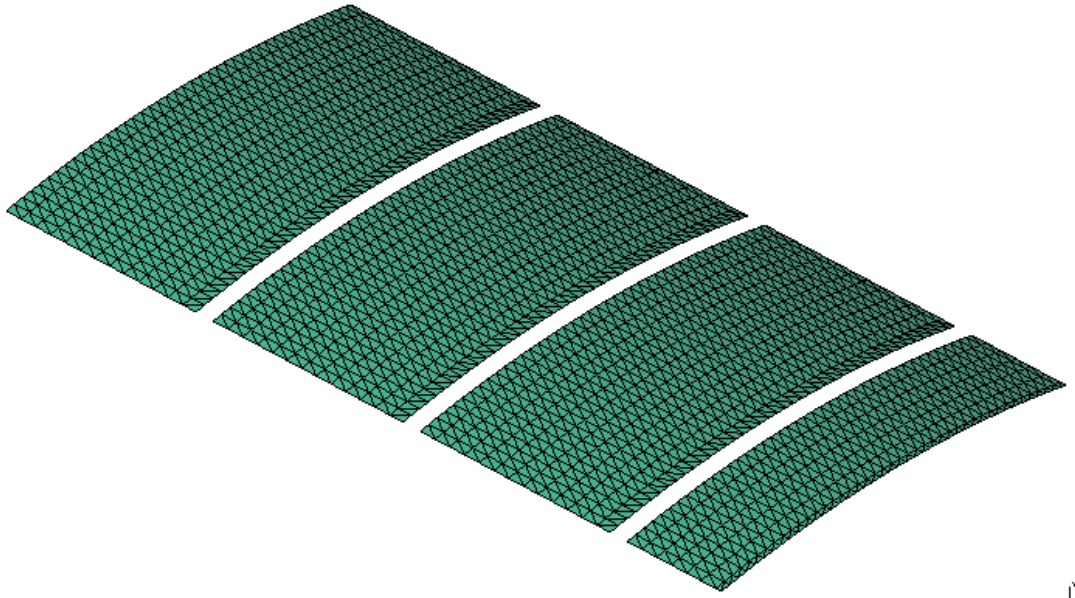
Scale (1000 mm)

54
35
39

AUTODESK
SIMULATION MOLDFLOW
INSIGHT

Model

- Tiles (single sheet approximation)

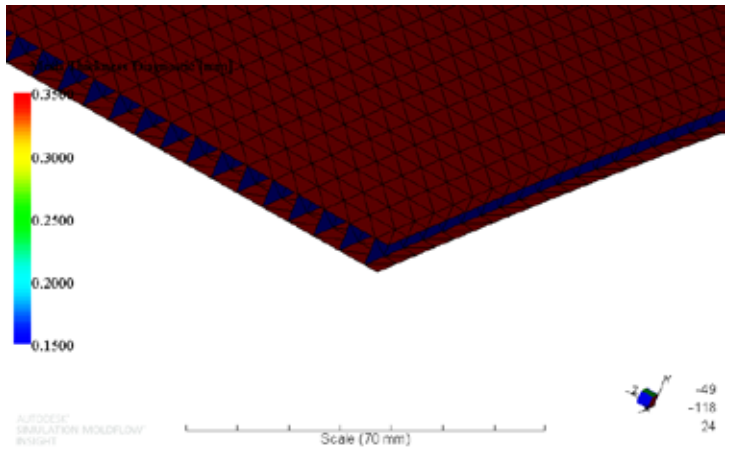


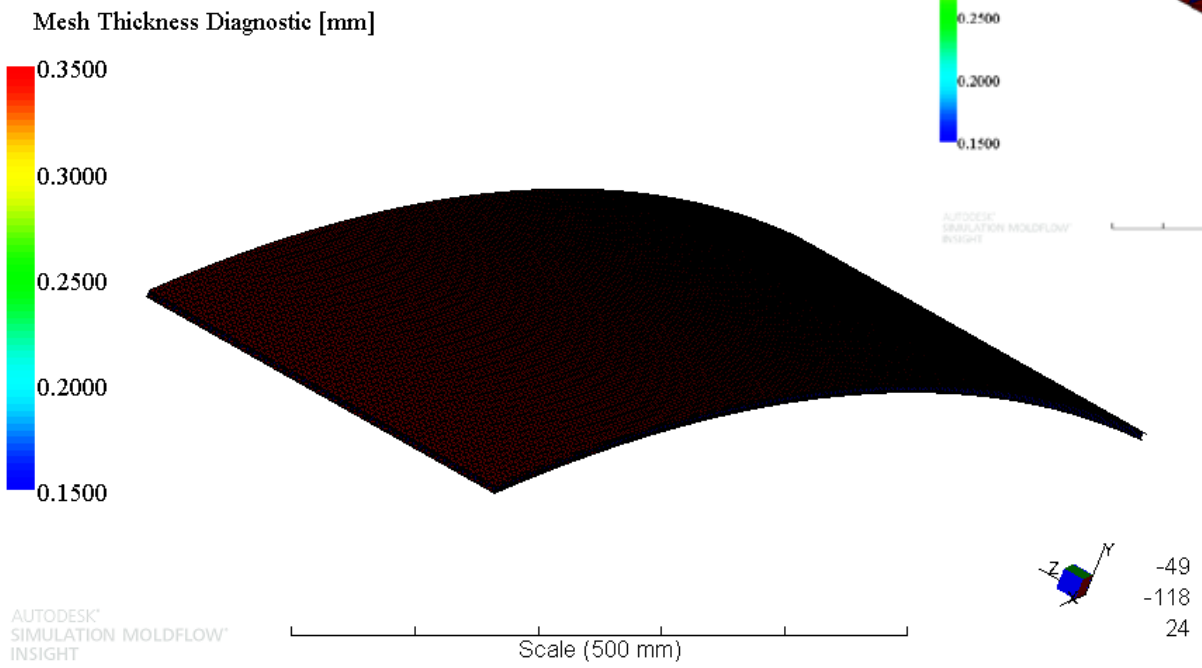
Materials

- PMMA (IMMIDIATE LOAD at 23°)
  - Elastic Modulus – 2400MPa
  - Yield Stress – 77Mpa
- Steel
  - Elastic Modulus – 200000MPa
  - Yield Stress – 250Mpa
- Aluminum
  - Elastic Modulus – 70000MPa
  - Yield Stress – 145Mpa

Tile

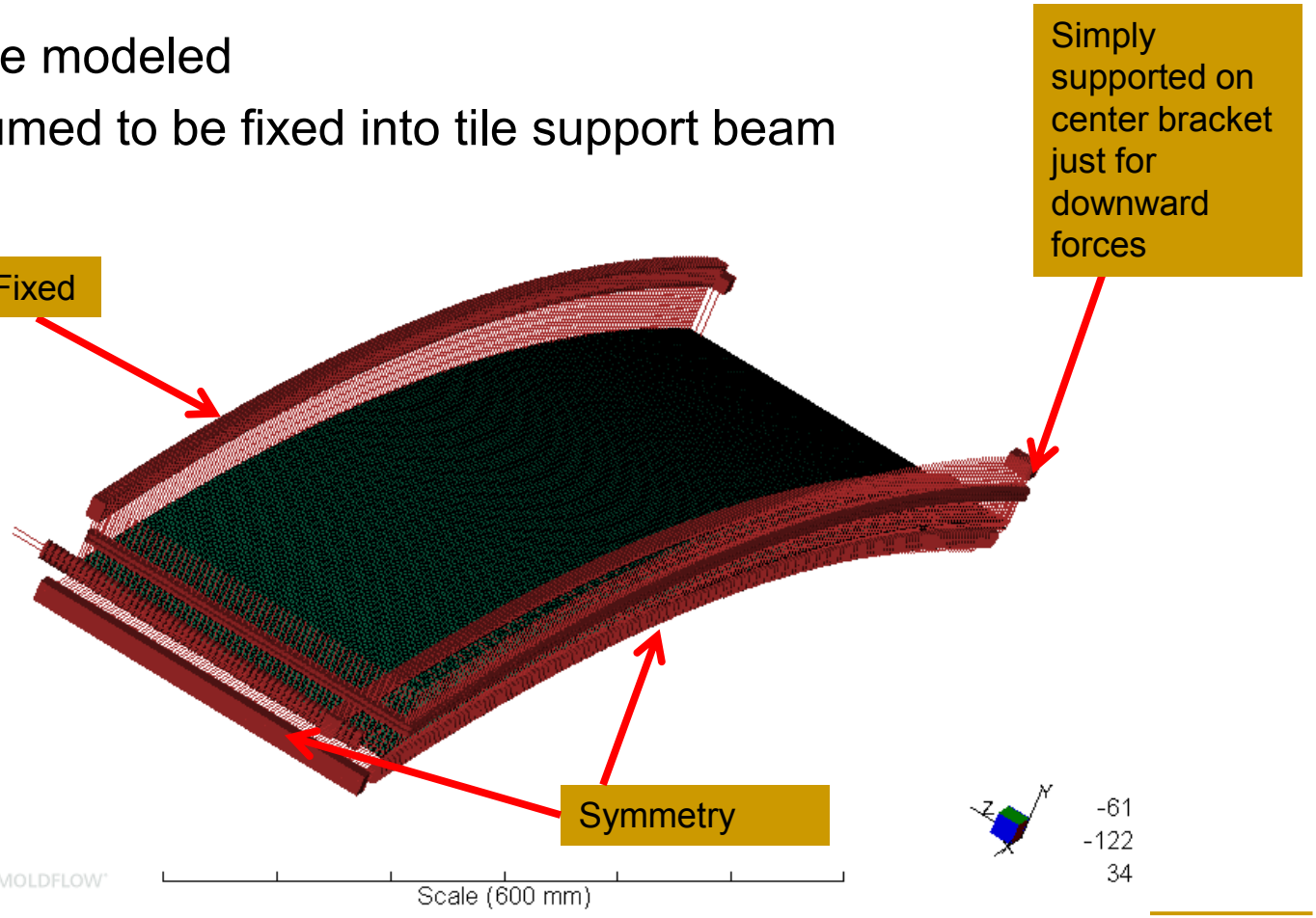
- Double sheet model





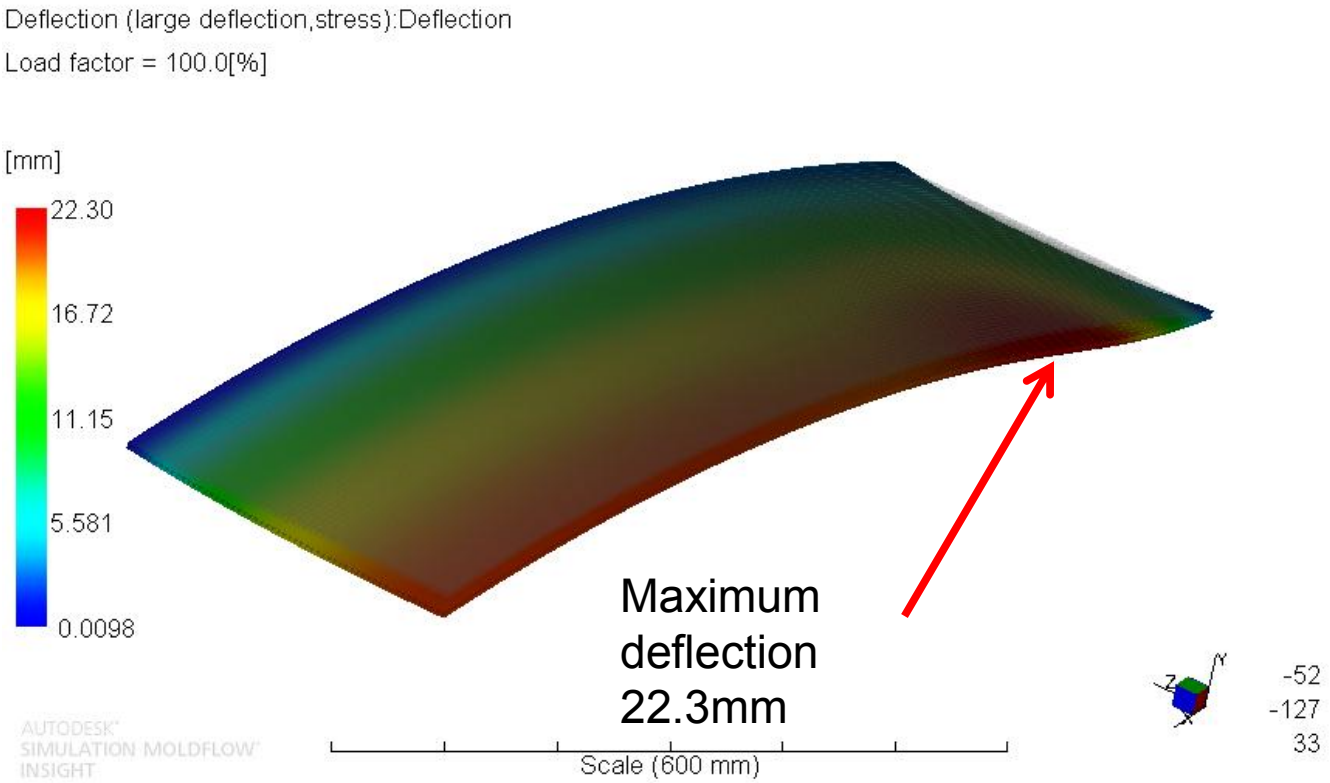
Tile

- Quarter tile modeled
- Tiles assumed to be fixed into tile support beam



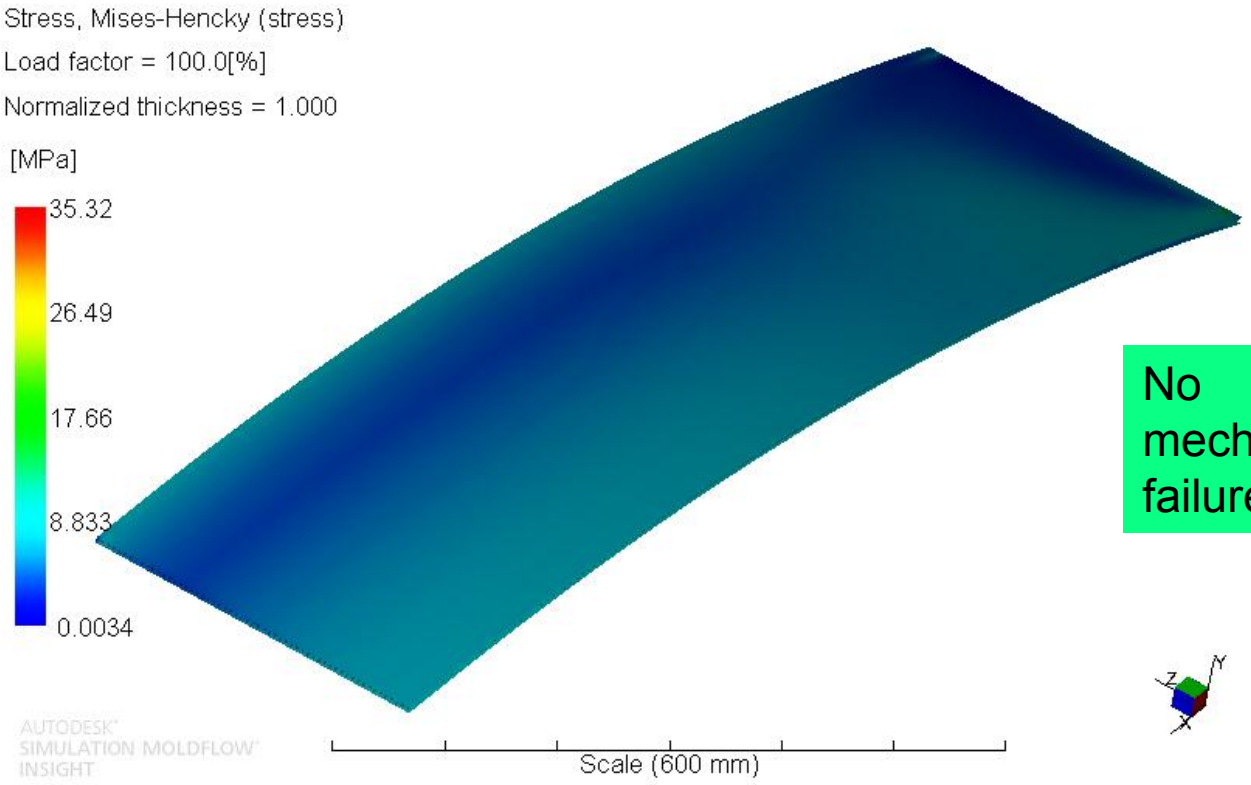
Snow Load

- No buckling under 100kg/m^2



Snow Load

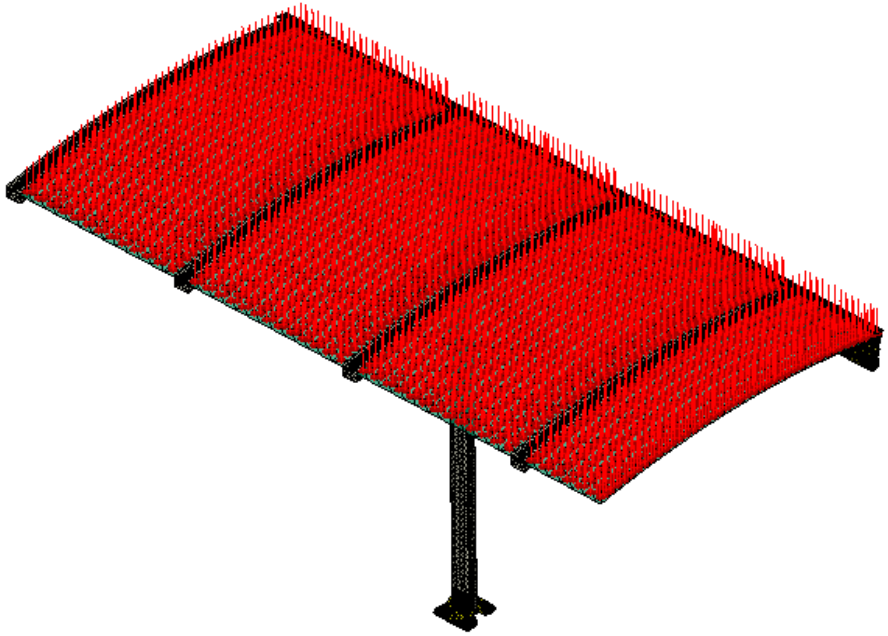
- Maximum stress under 100Kg.m^2 – 21.7Mpa

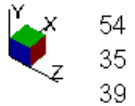


No mechanical failure

Load Case 1 – Up to 100Kg/M^2 on Roof

- Quarter model used





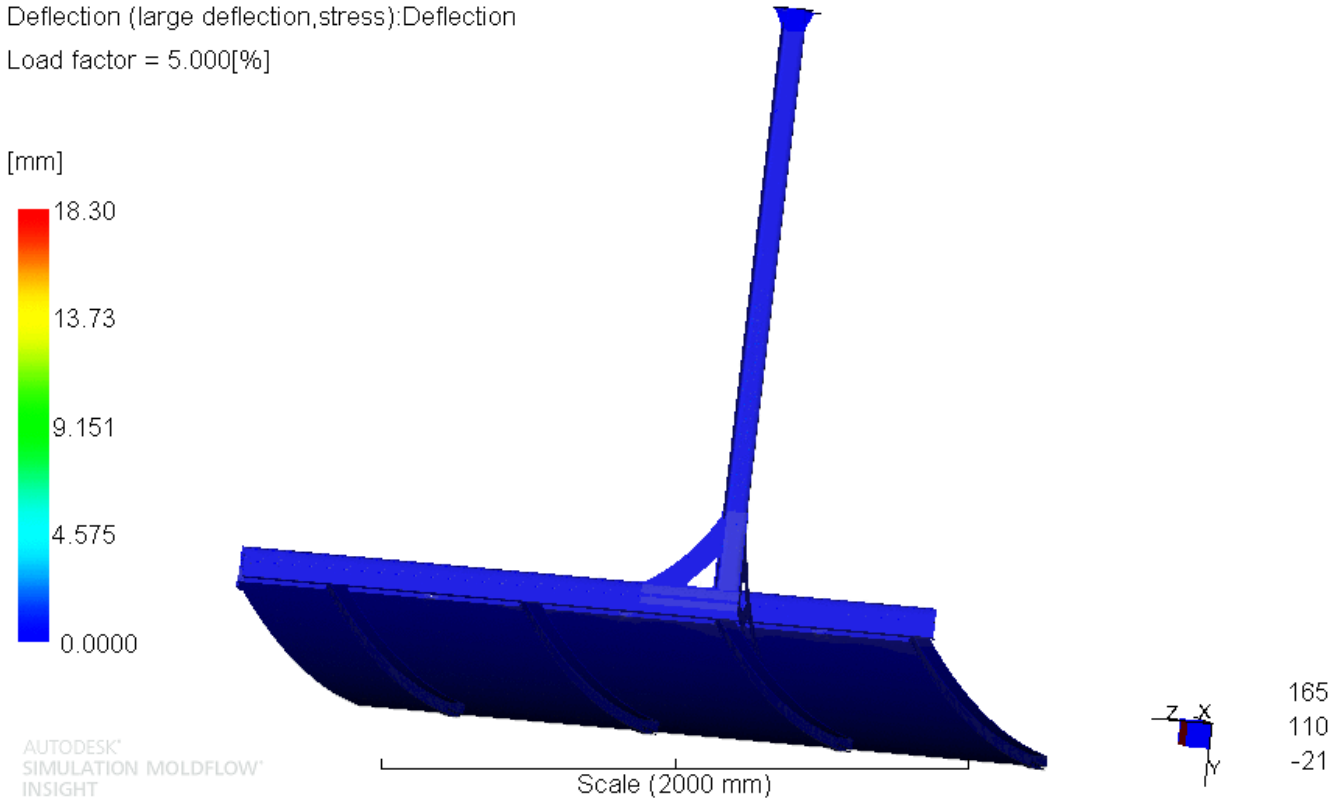
54
35
39

AUTODESK
SIMULATION MOLDFLOW
INSIGHT

Scale (2000 mm)

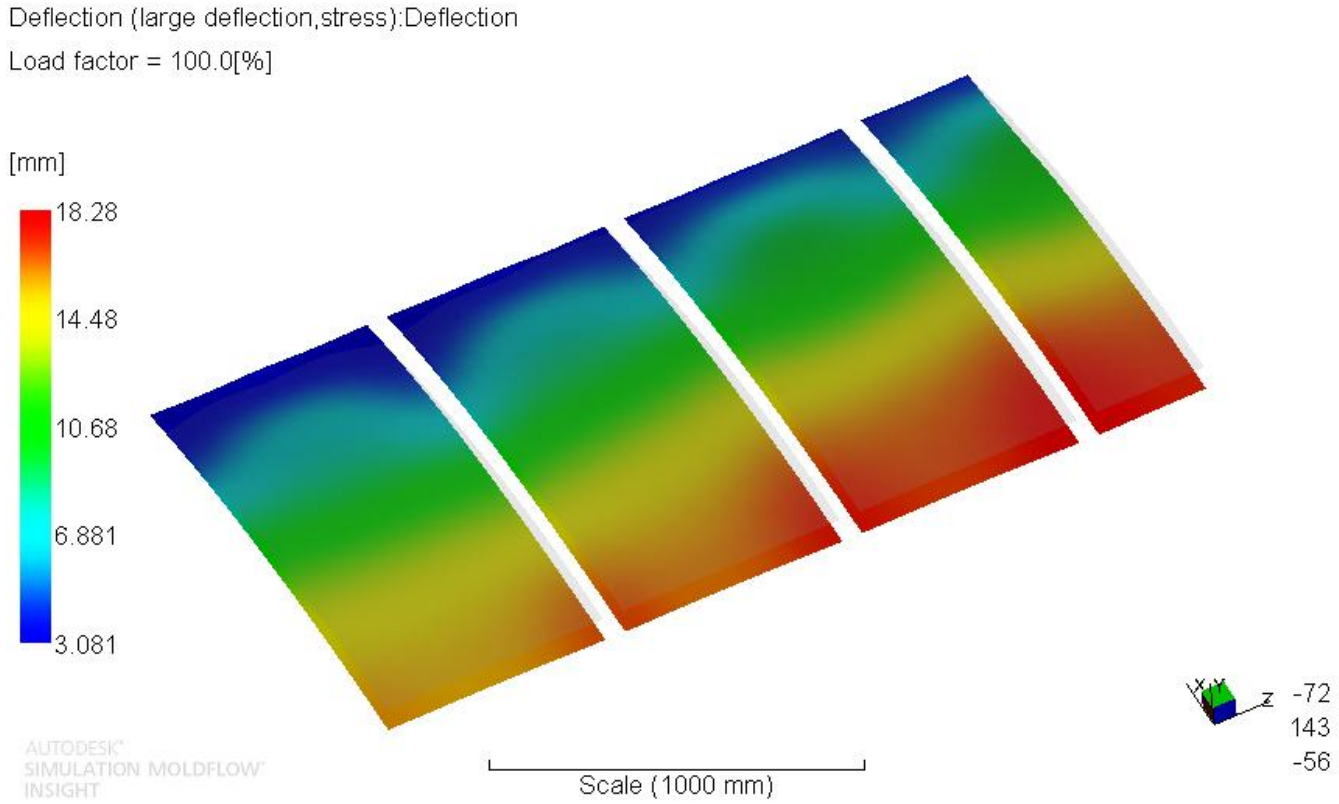
Load Case 1 – 100Kg/M^2 on Roof

- Exaggeration factor 5



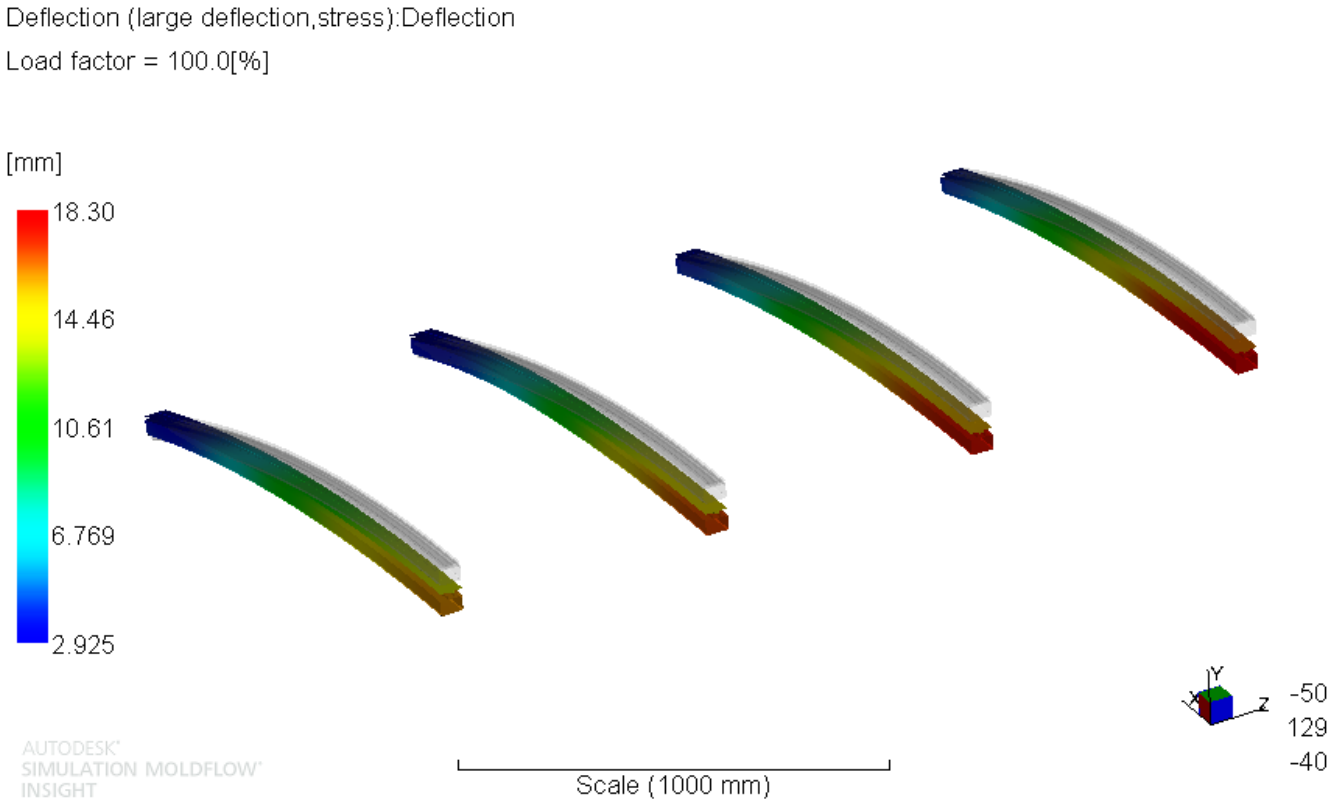
Load Case 1 – 100Kg/M^2 on Roof

- Deflection – 18.3mm



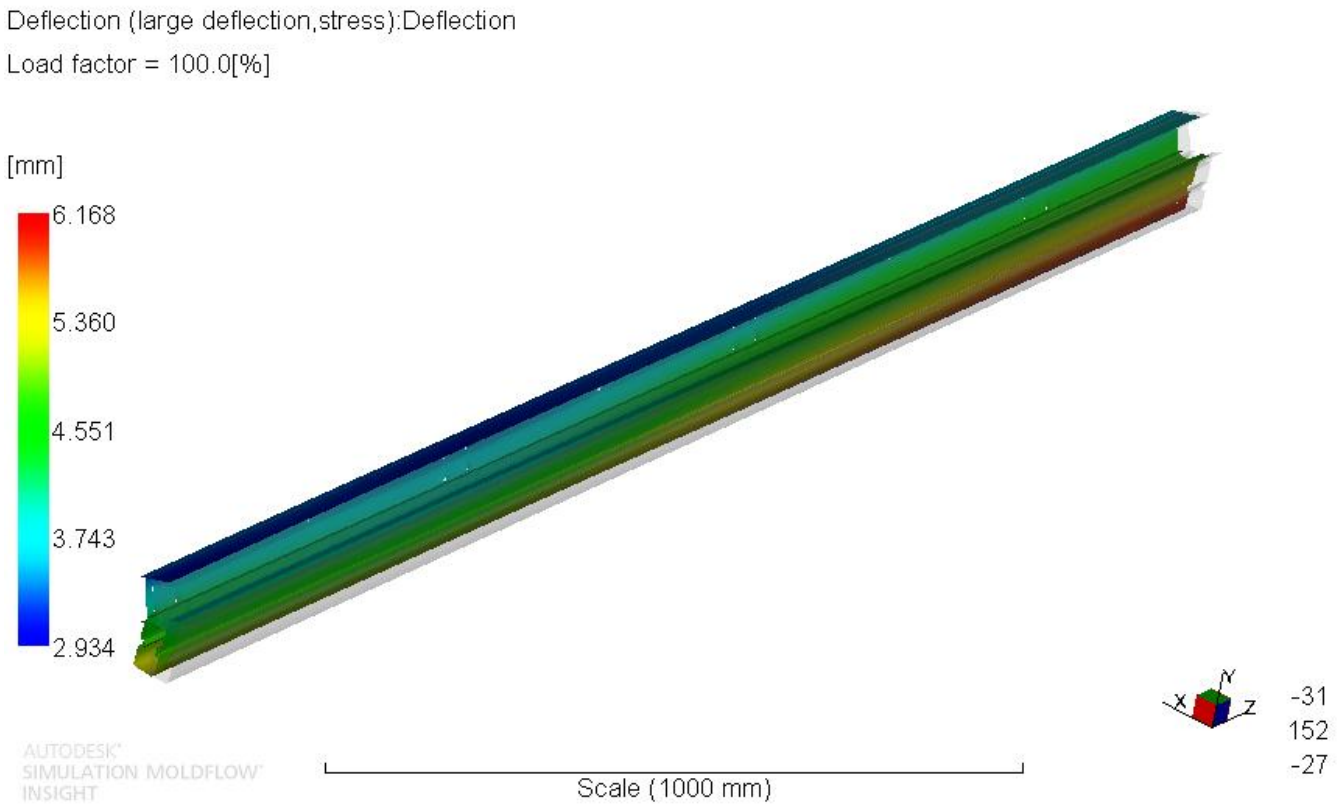
Load Case 1 – 100Kg/M^2 on Roof

- Deflection – 18.3mm



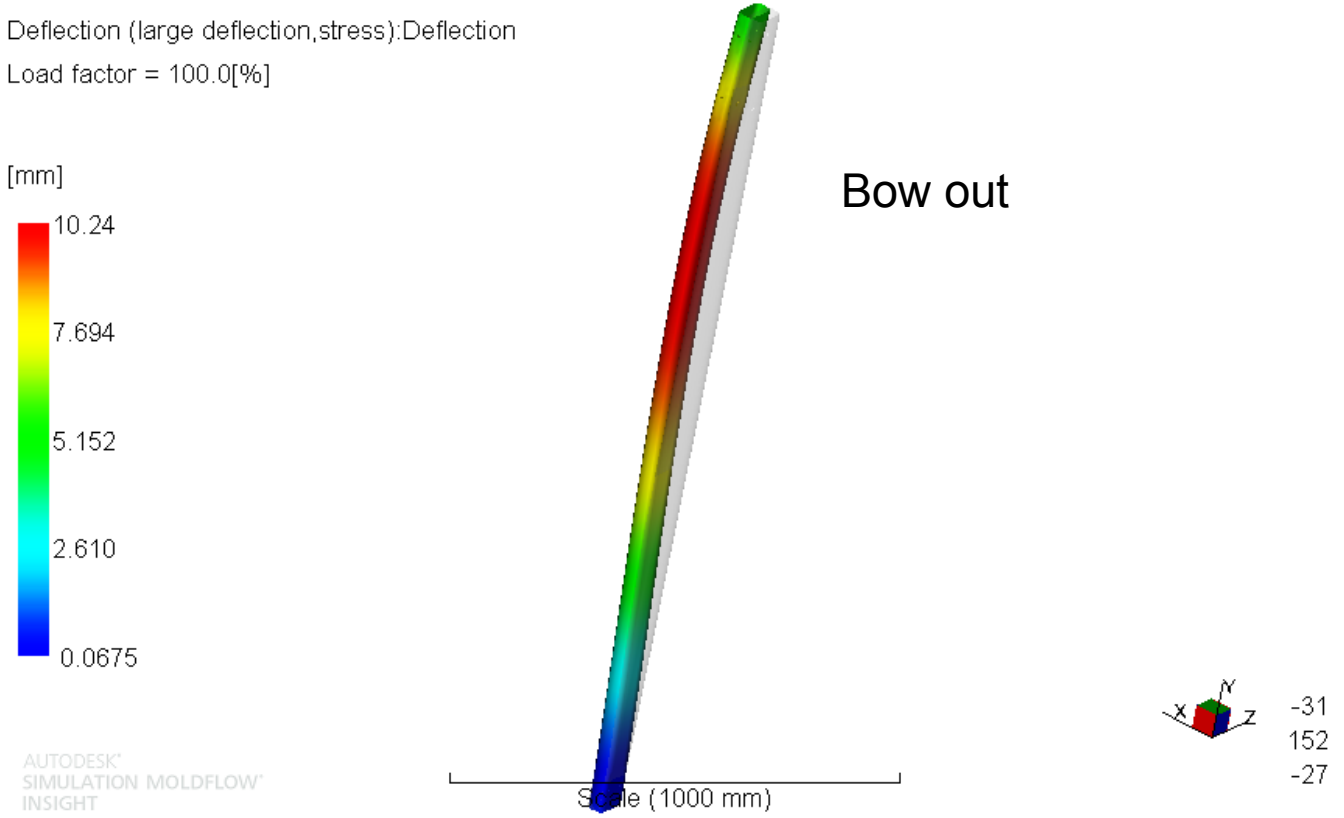
Load Case 1 – 100Kg/M^2 on Roof

- Deflection – 6.2mm



Load Case 1 – 100Kg/M^2 on Roof

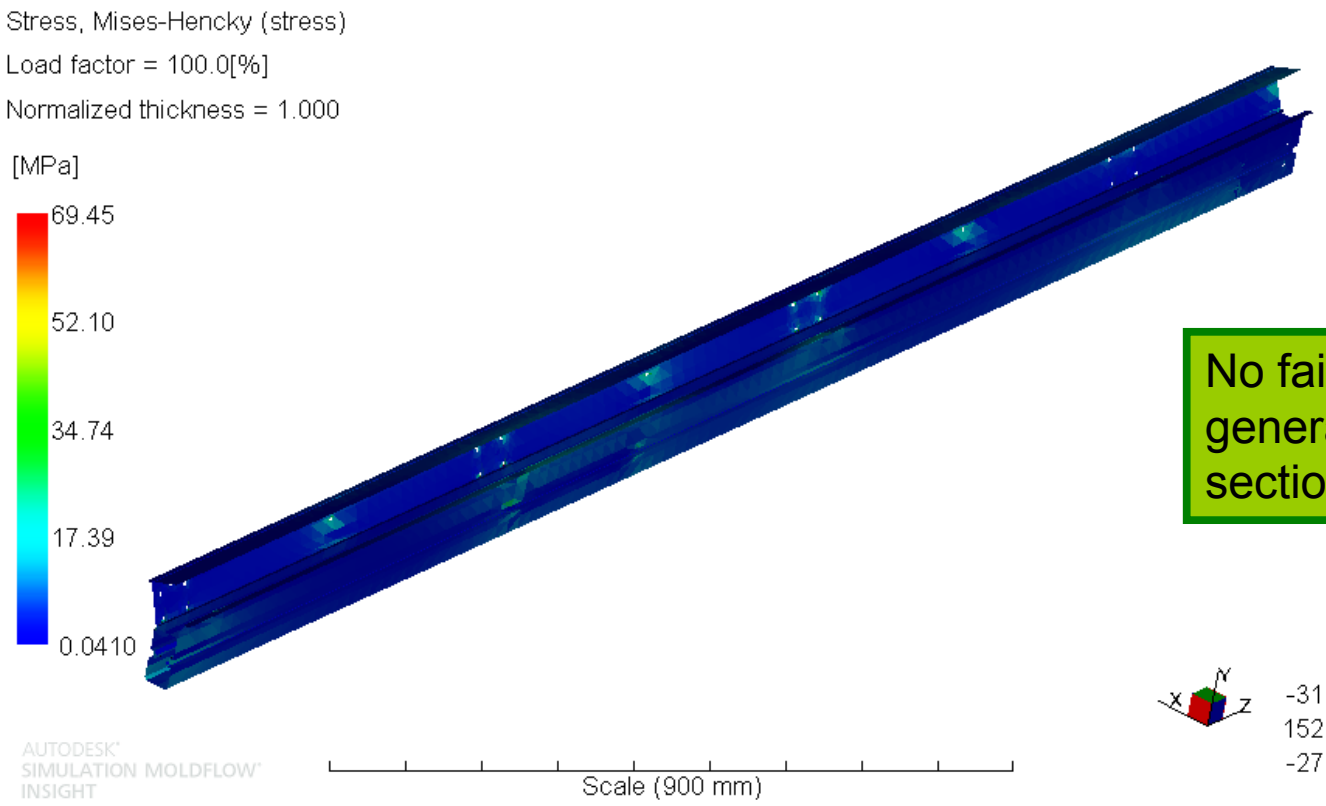
- Deflection – 10.2mm



Bow out

Load Case 1 – 100Kg/M^2 on Roof

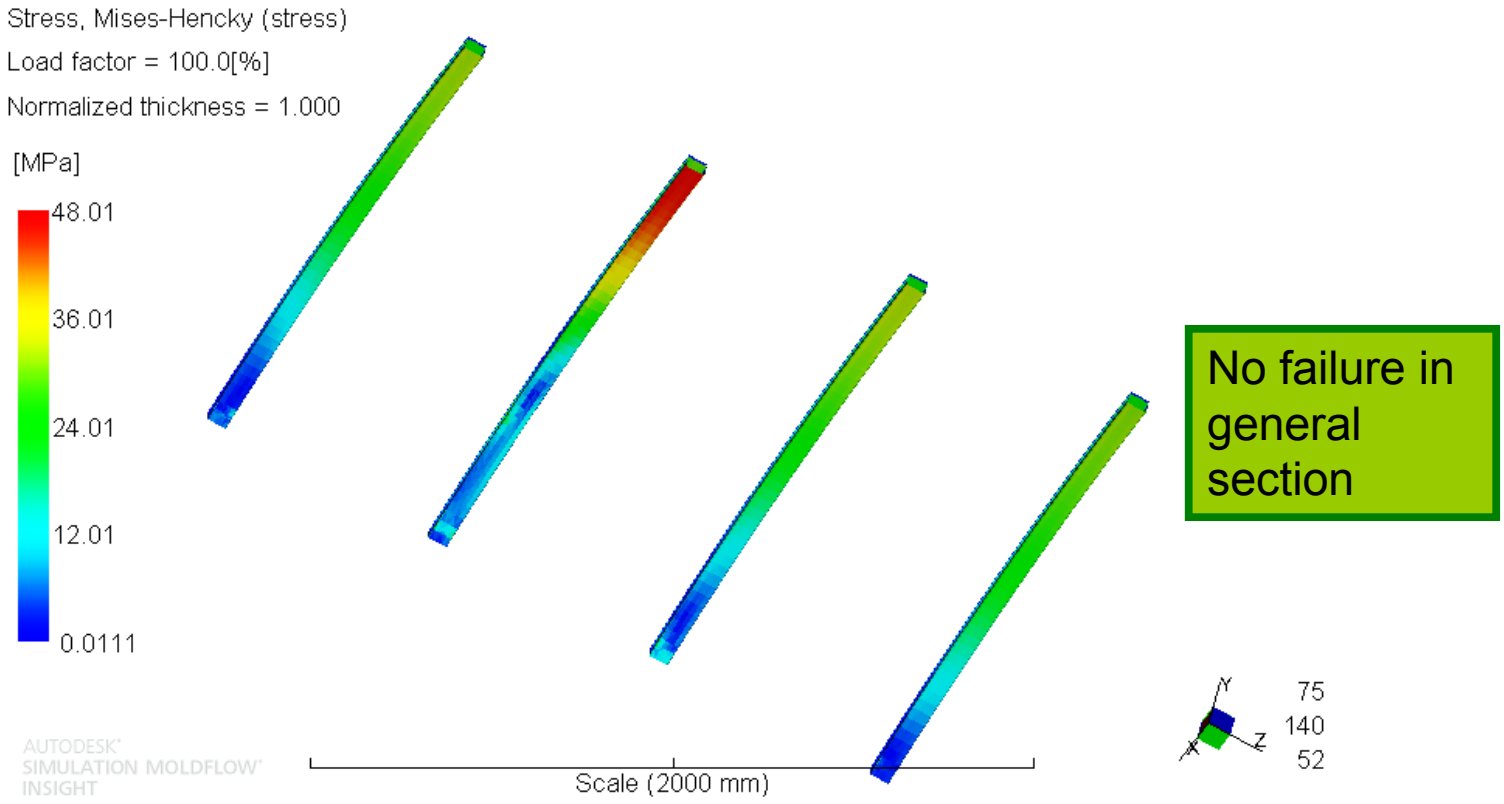
- Stress in Side – 69.5Mpa



No failure in general section

Load Case 1 – 100Kg/M^2 on Roof

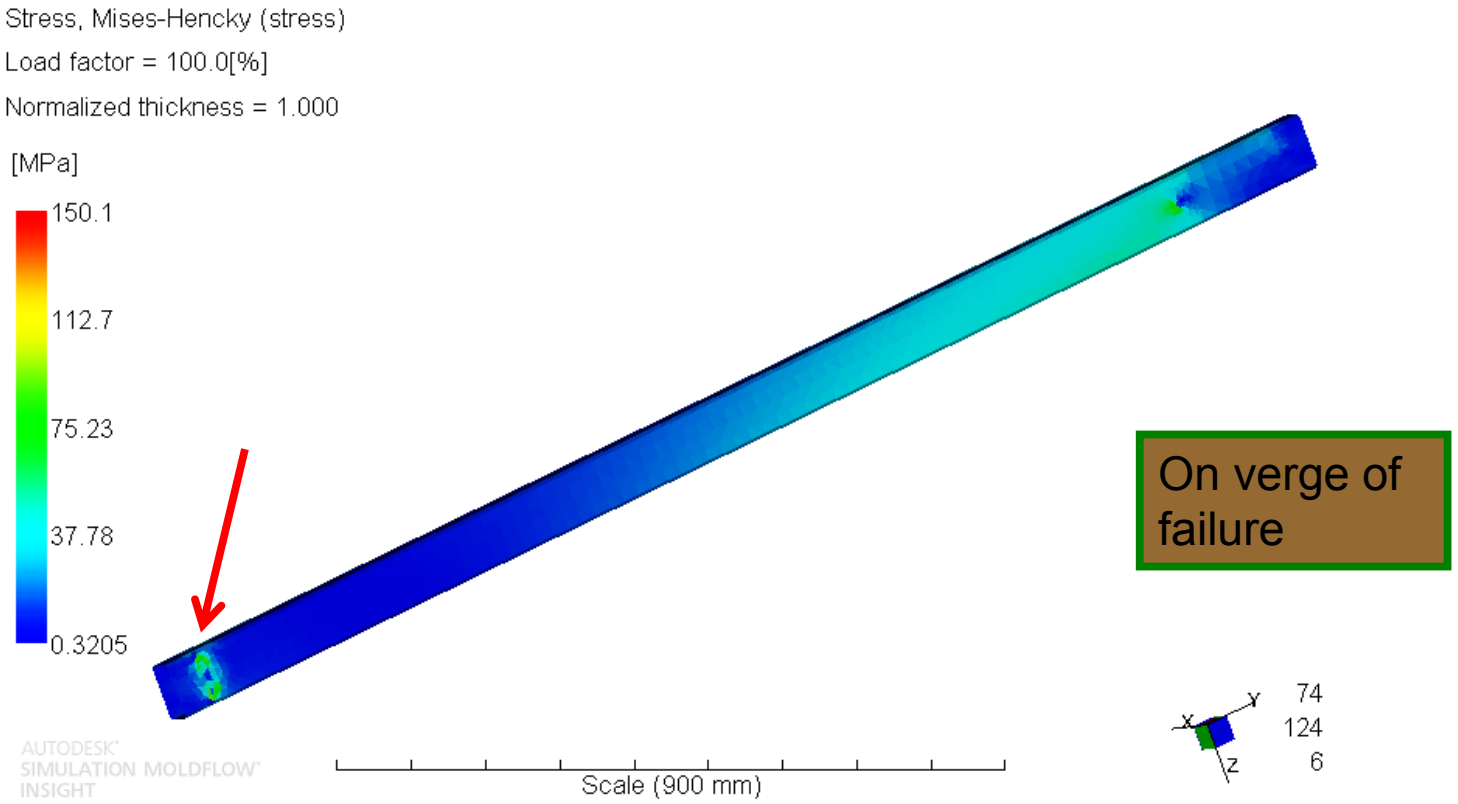
- Stress in Tile Support Beam – 48.0Mpa



No failure in general section

Load Case 1 – 100Kg/M^2 on Roof

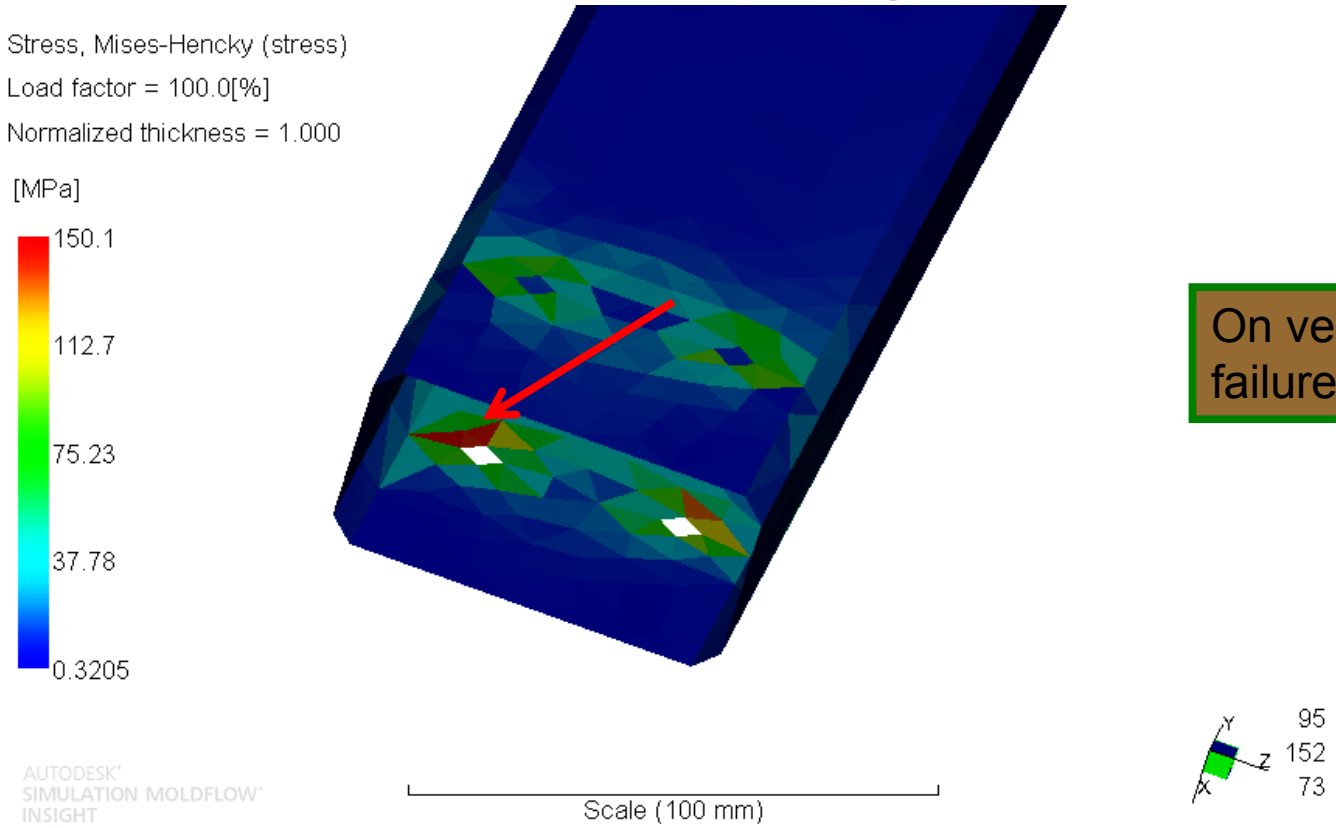
- Stress in Column – 150Mpa



On verge of failure

Load Case 1 – 100Kg/M^2 on Roof

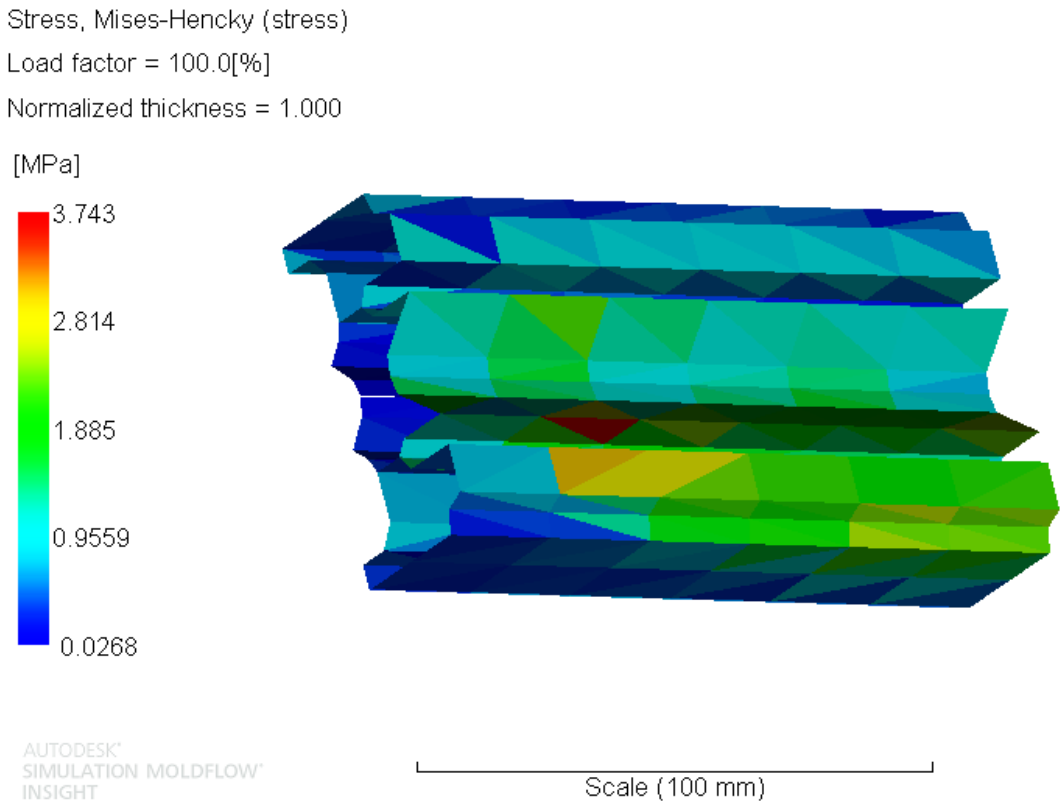
- Stress in Column – 150.1Mpa



On verge of failure

Load Case 1 – 100Kg/M^2 on Roof

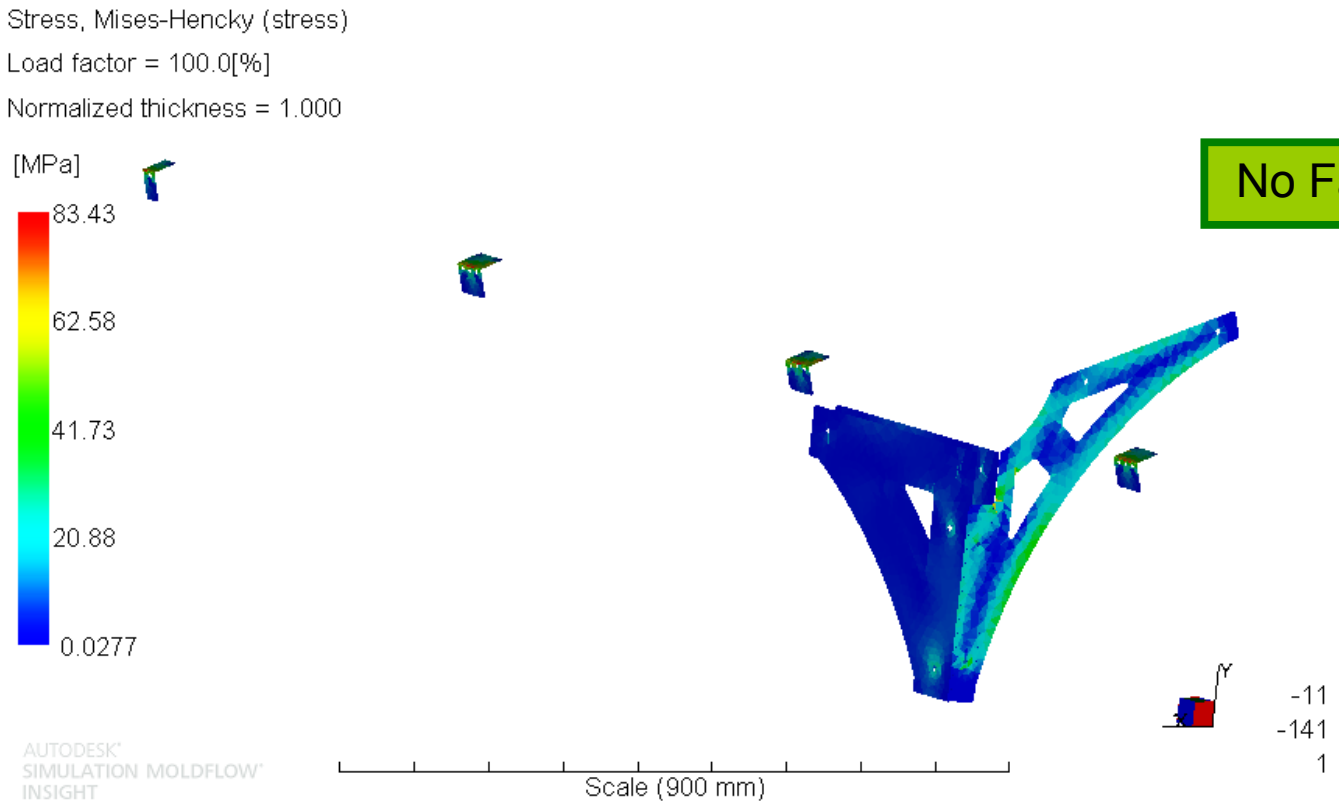
- Stress in Side Connector – 3.7Mpa



No Failure

Load Case 1 – 100Kg/M^2 on Roof

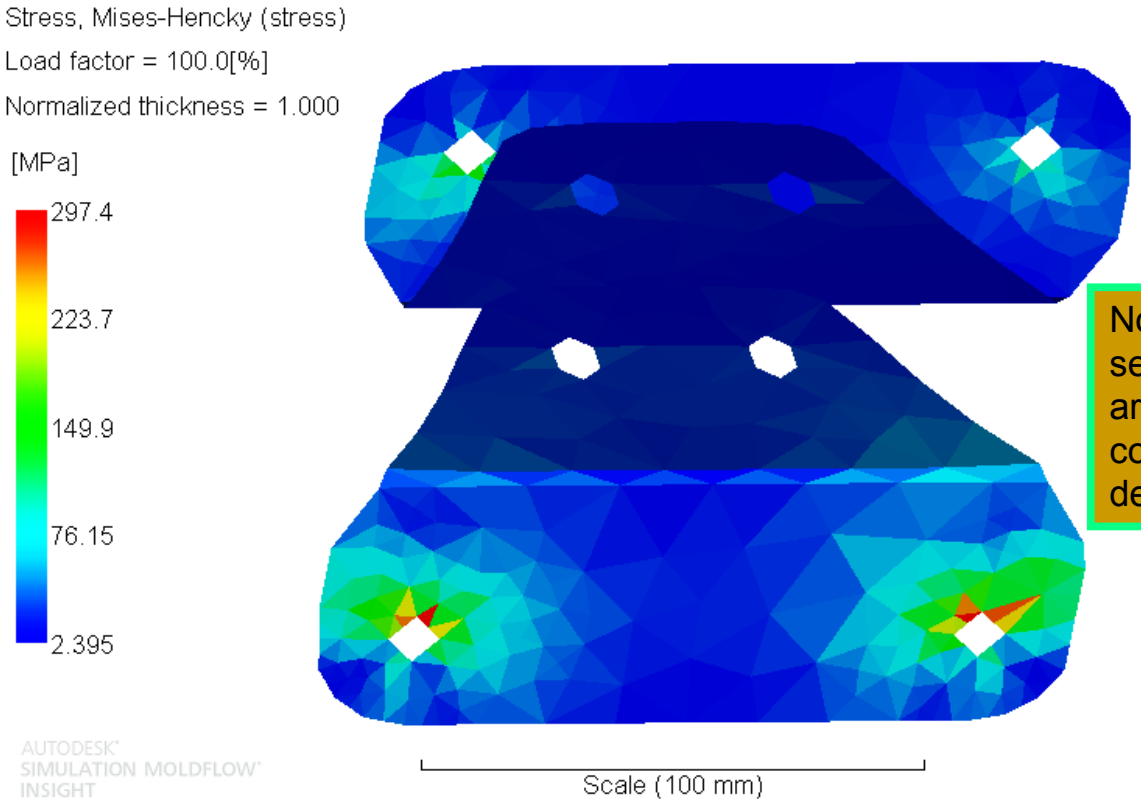
- Stress in Steel Brackets – 83.4Mpa



No Failure

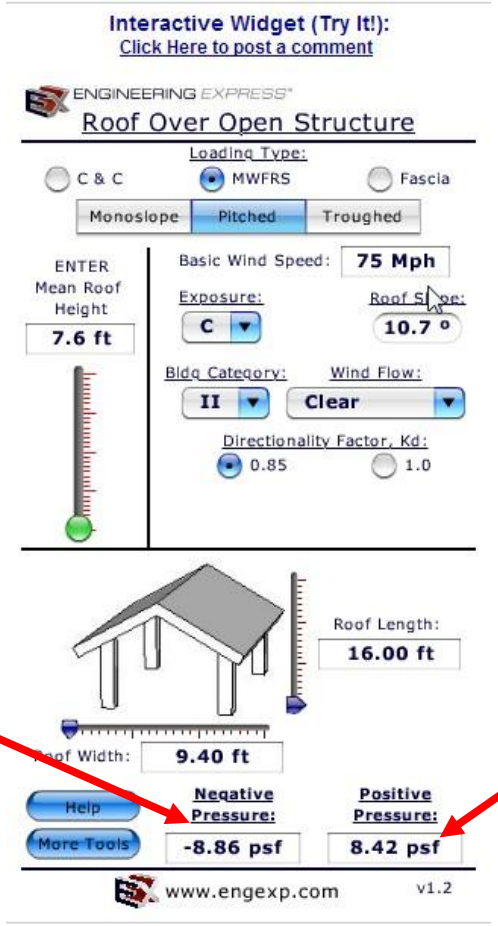
Load Case 1 – 100Kg/M^2 on Roof

- Stress in Leg Steel Brackets – 297.4Mpa



No failure in general section. Local high stress around screw holes. Area could get slightly deformed.

Load Case 2 – 120Km/Hr Wind Load

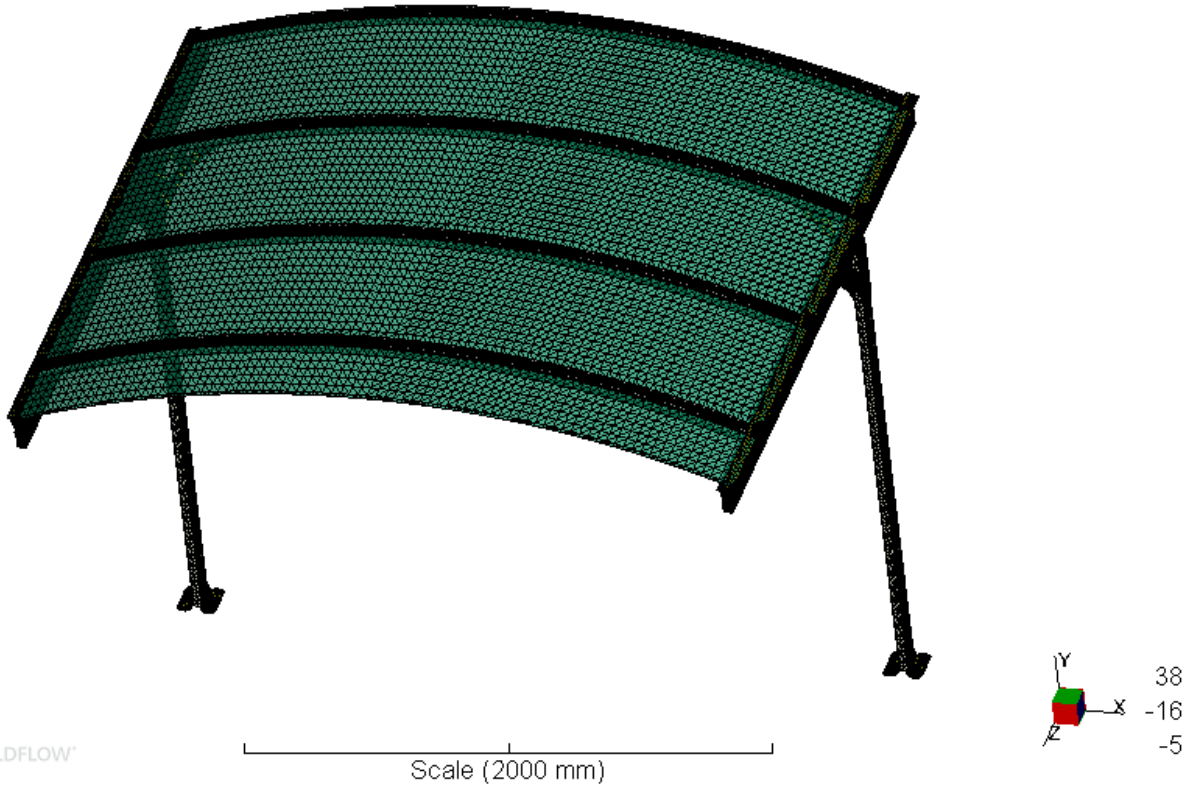


Lifting load – 43.2kg/m^2

Pushing load – 41.1kg/m^2

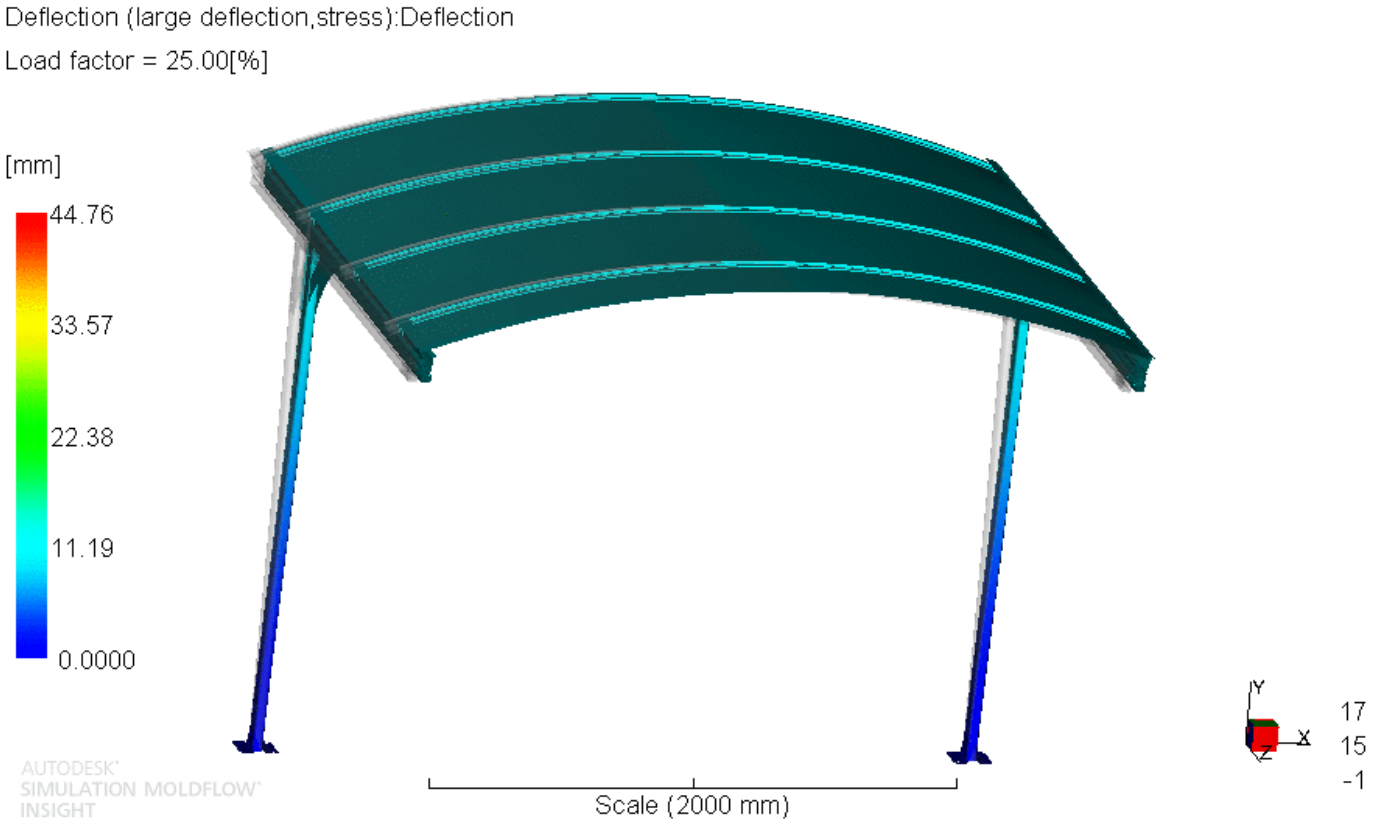
Load Case 2 – 120Km/Hr Wind Load

- Half model used



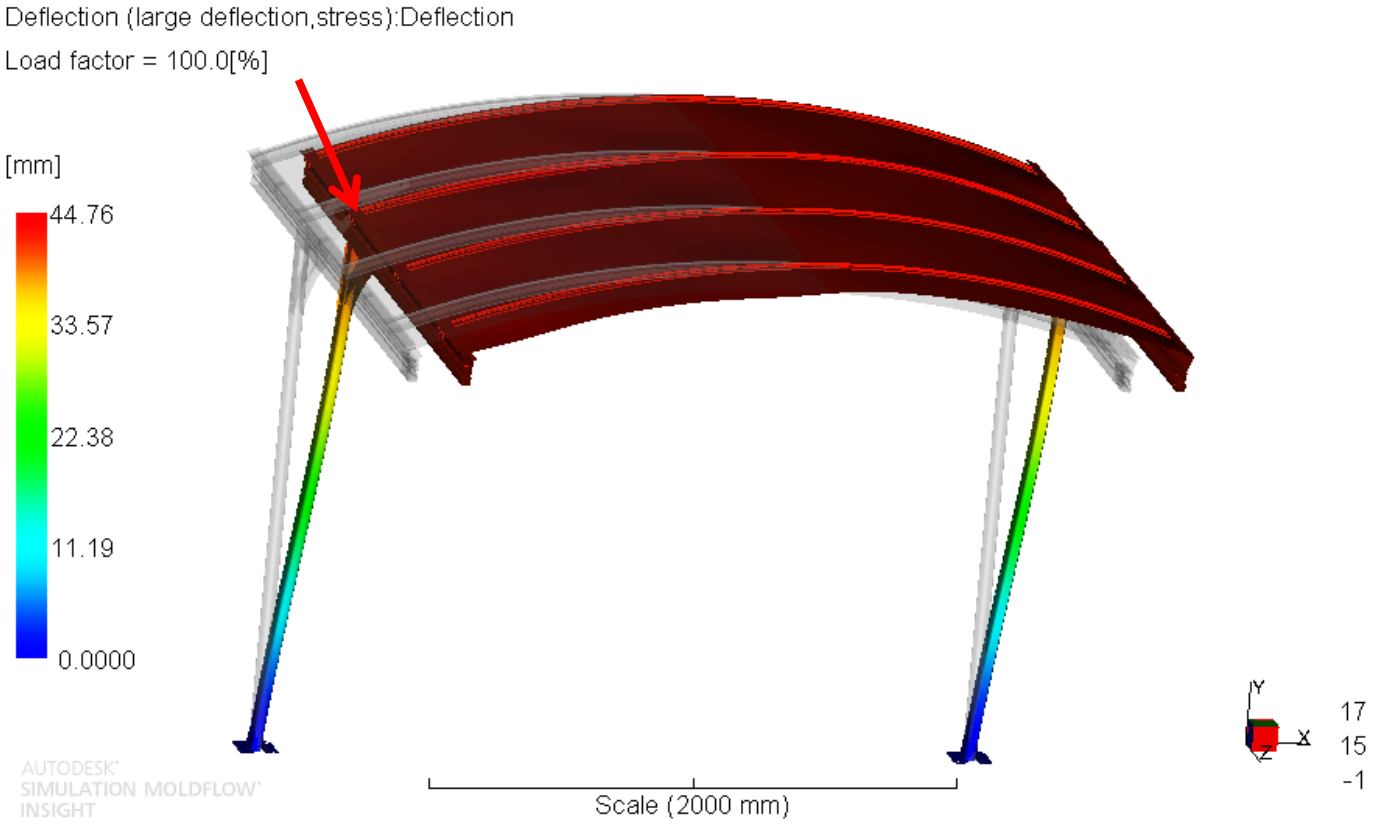
Load Case 2 – 120Km/Hr Wind Load

- Exaggeration factor 5



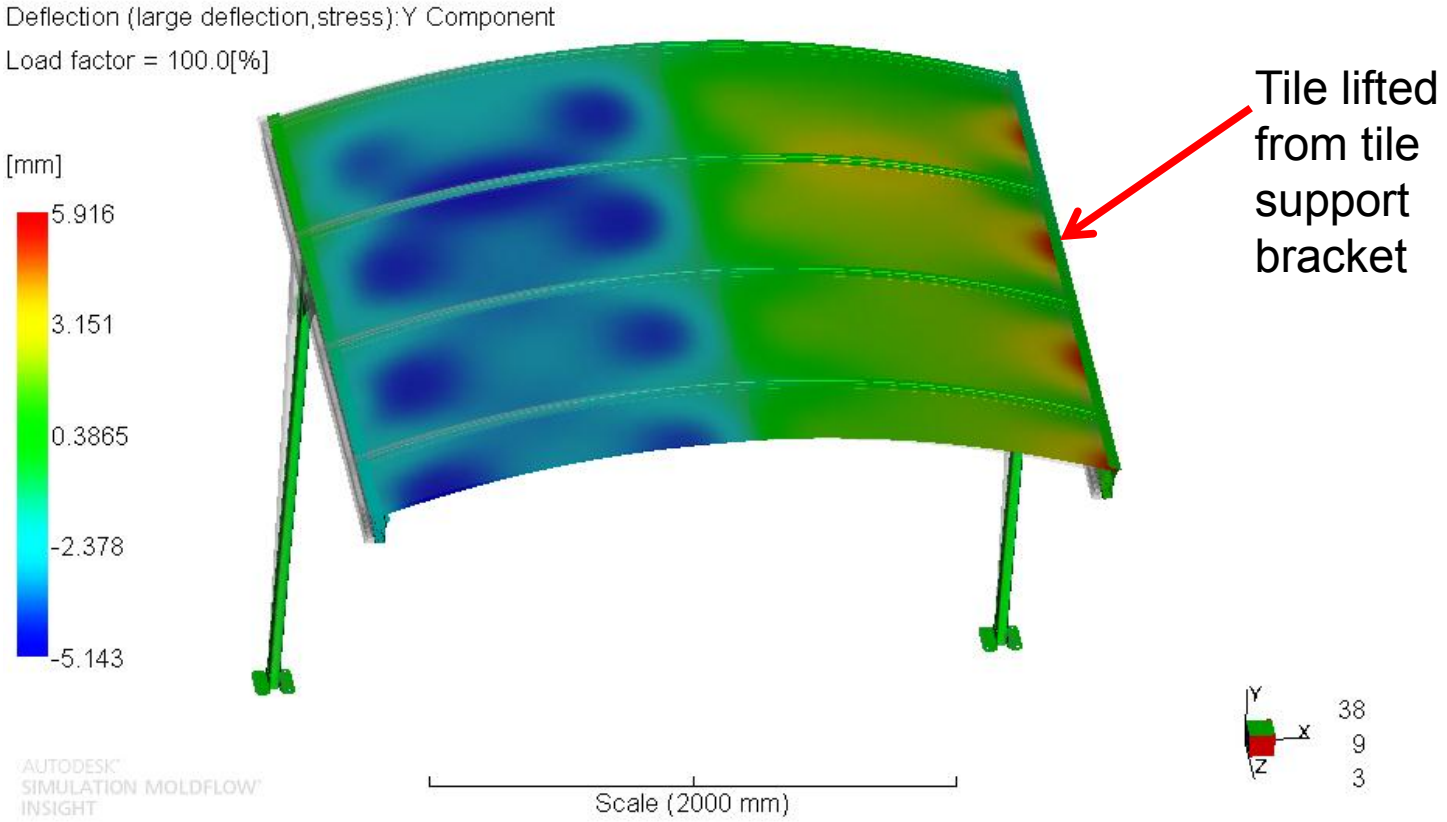
Load Case 2 – 120Km/Hr Wind Load

- Side pushed 44.8mm



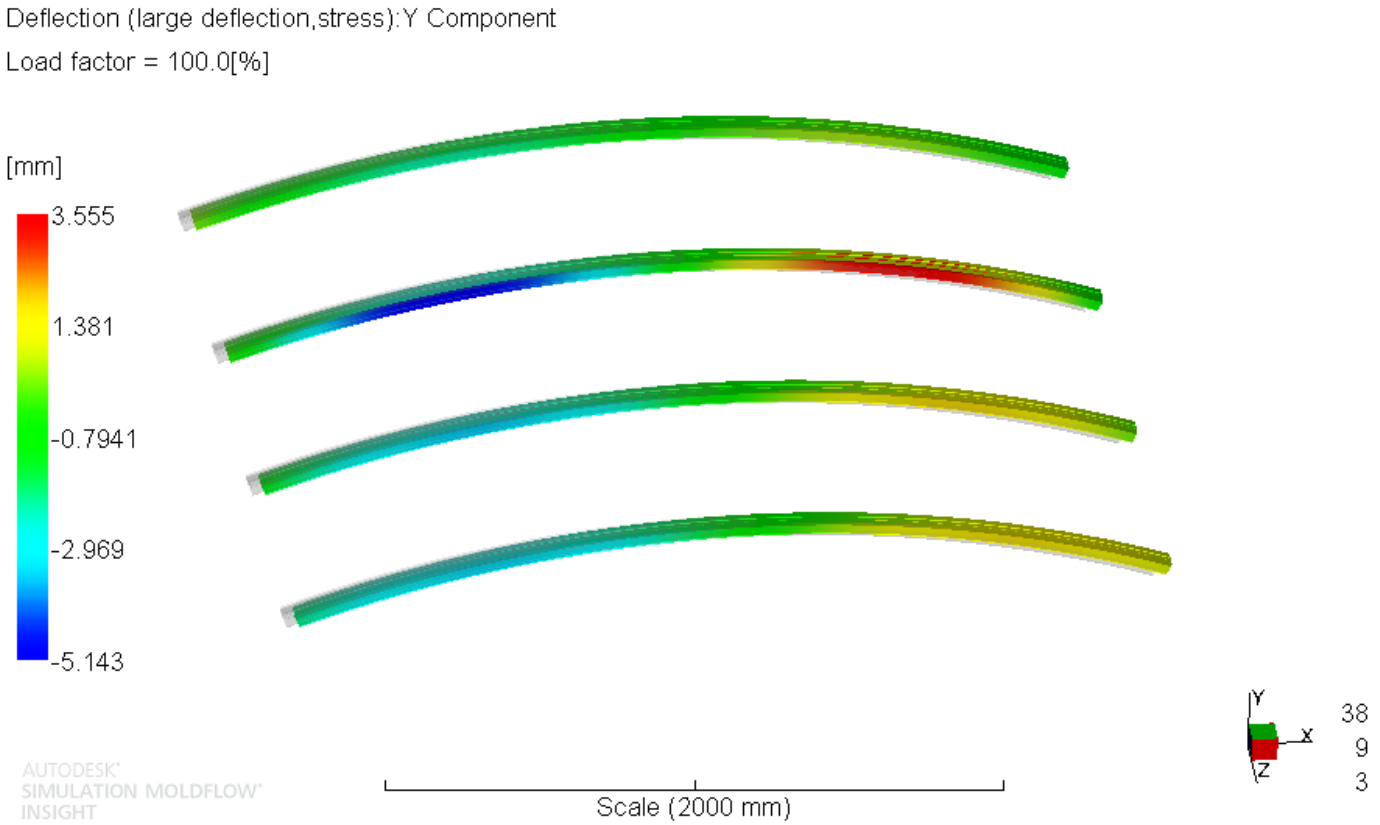
Load Case 2 – 120Km/Hr Wind Load

- Downward/upward Deflection – 5.9mm



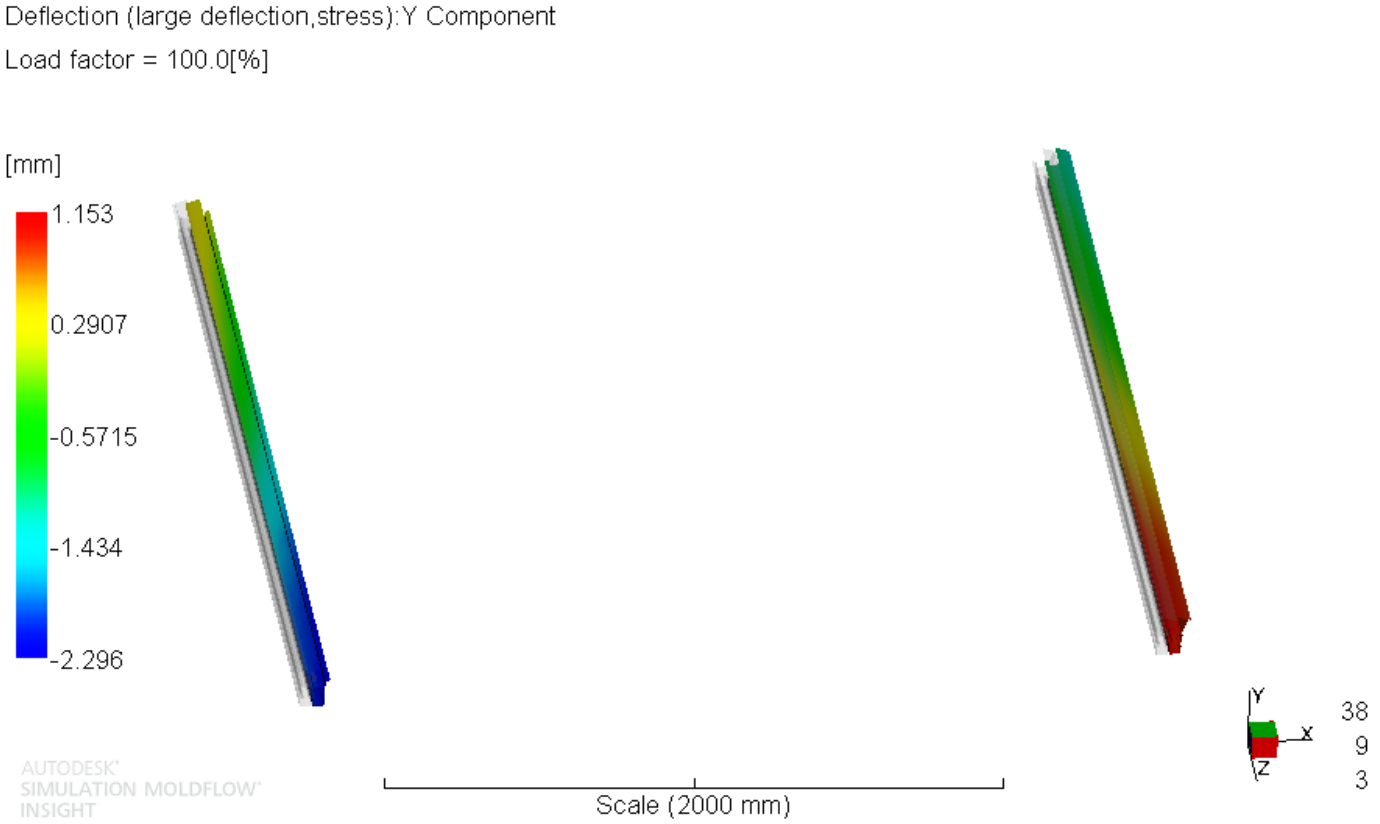
Load Case 2 – 120Km/Hr Wind Load

- Downward/upward Deflection – 3.5mm



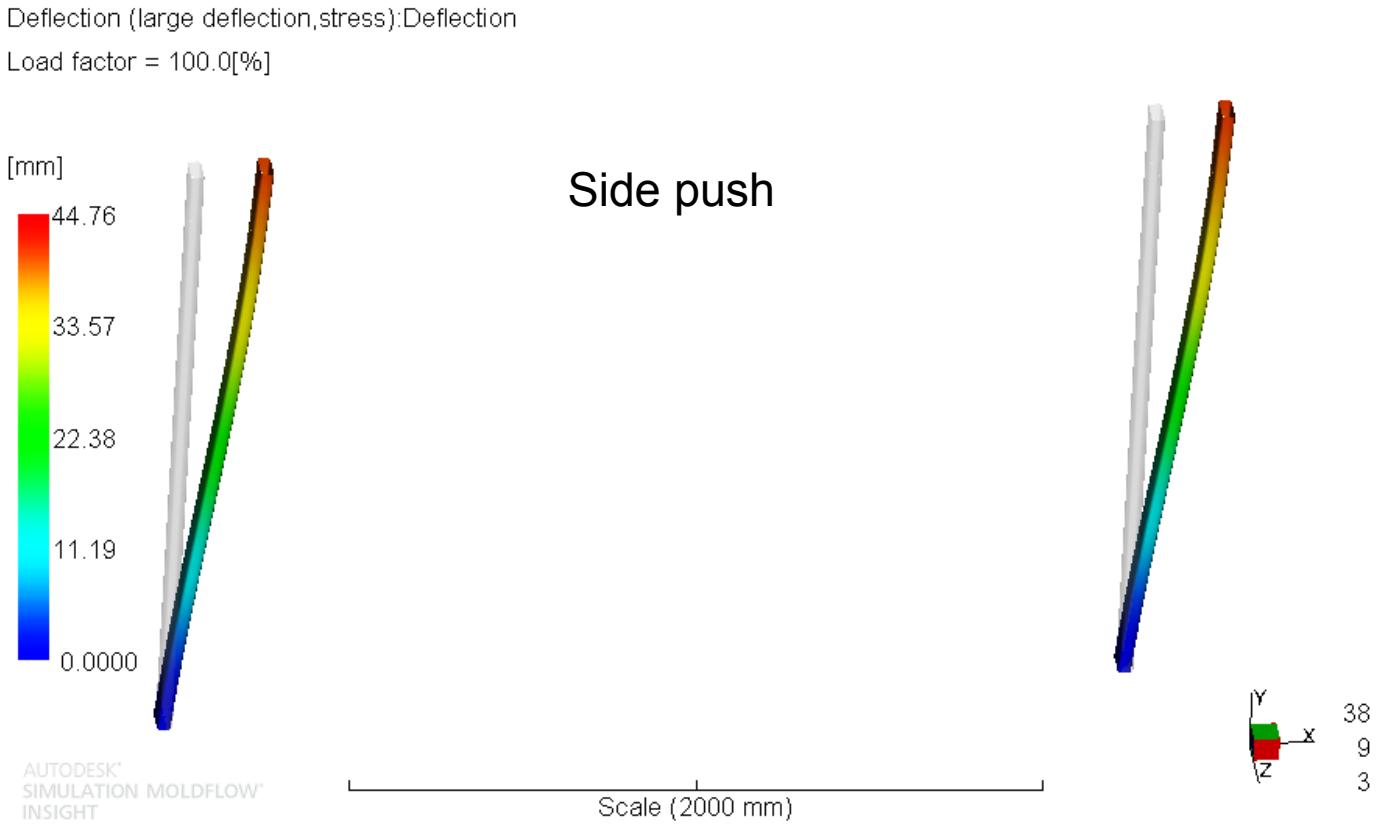
Load Case 2 – 120Km/Hr Wind Load

- Deflection – 2.3mm



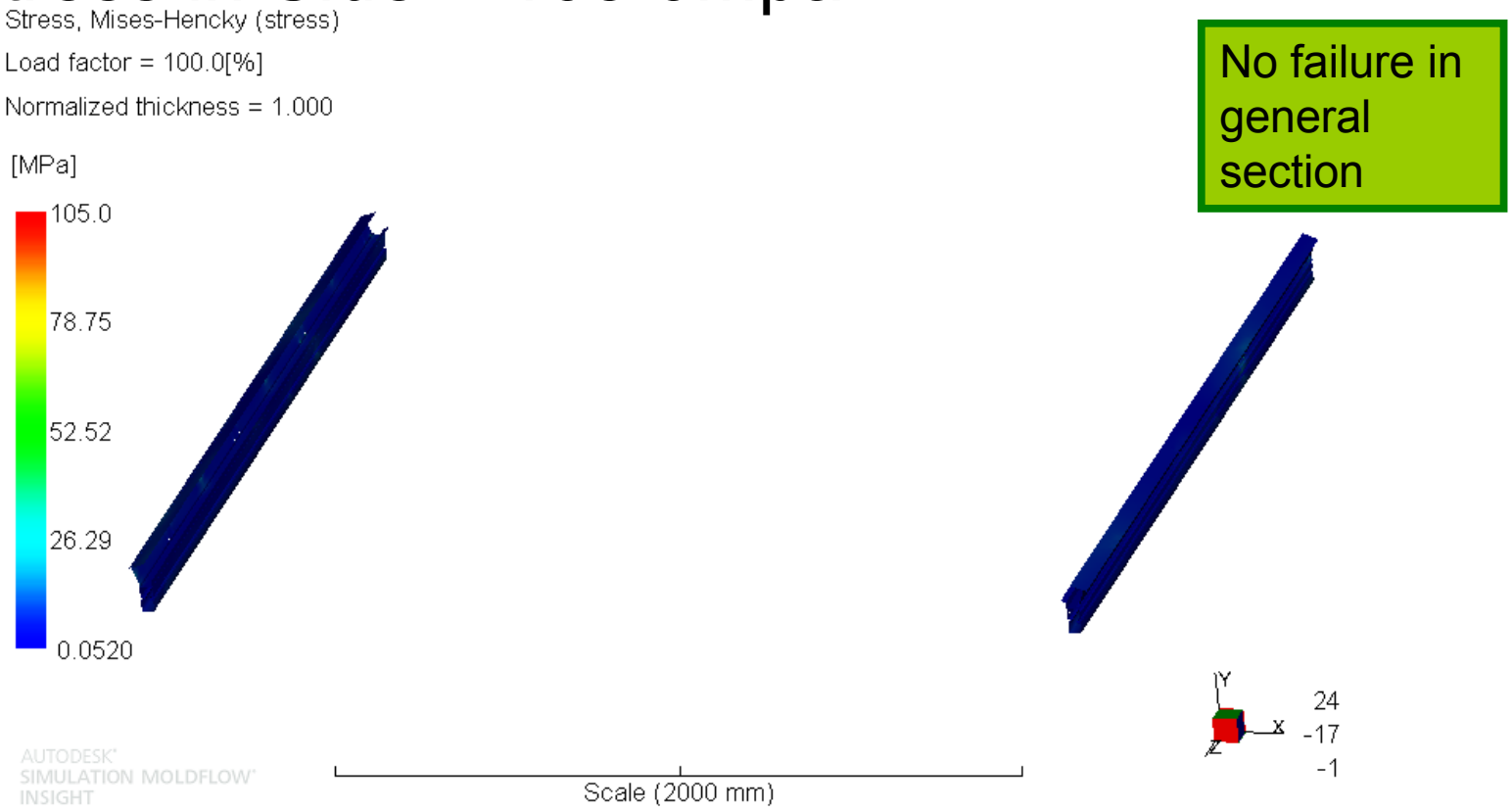
Load Case 2 – 120Km/Hr Wind Load

- Deflection – 44.8mm



Load Case 2 – 120Km/Hr Wind Load

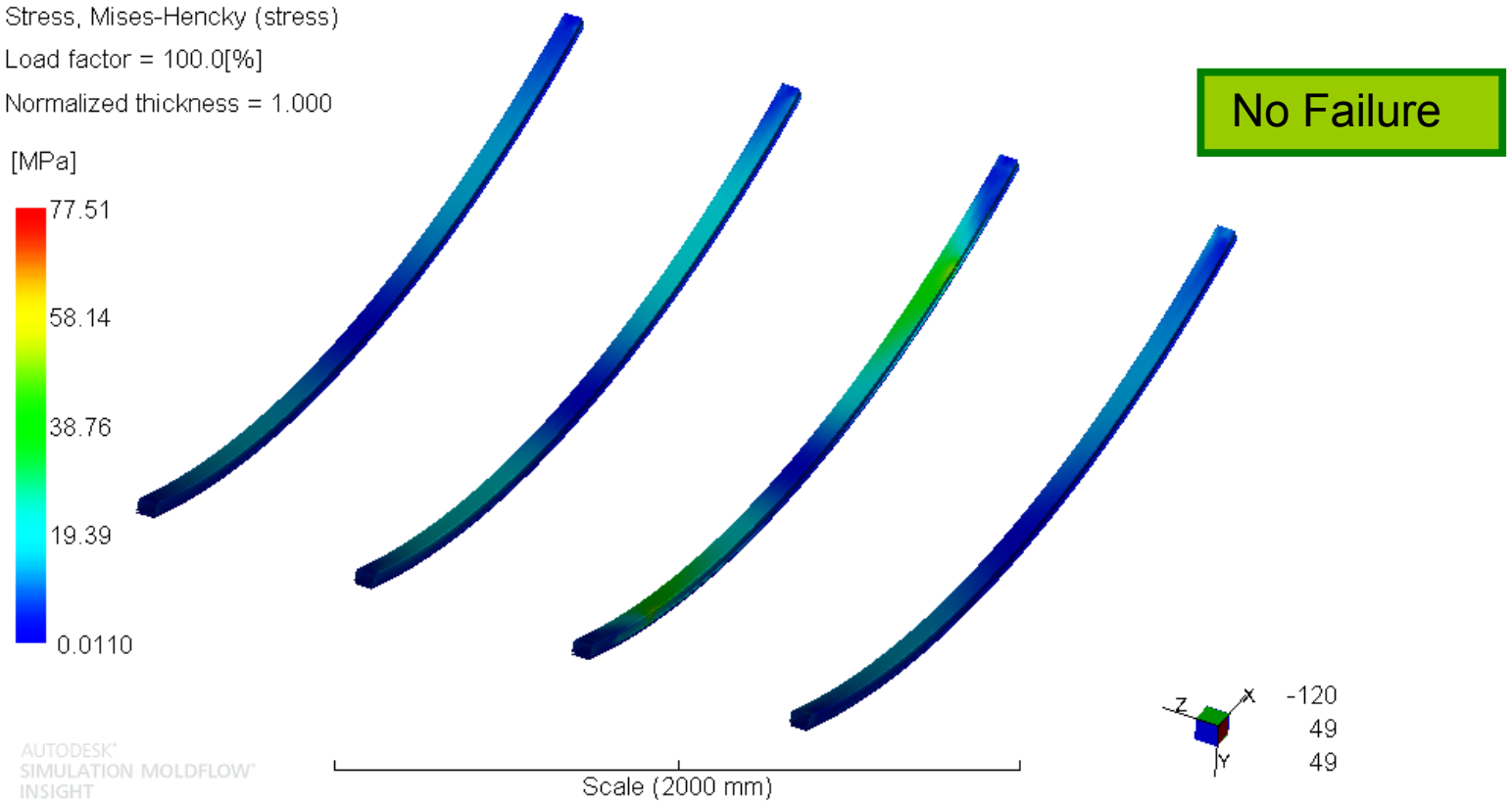
- Stress in Side – 105.0Mpa



No failure in general section

Load Case 2 – 120Km/Hr Wind Load

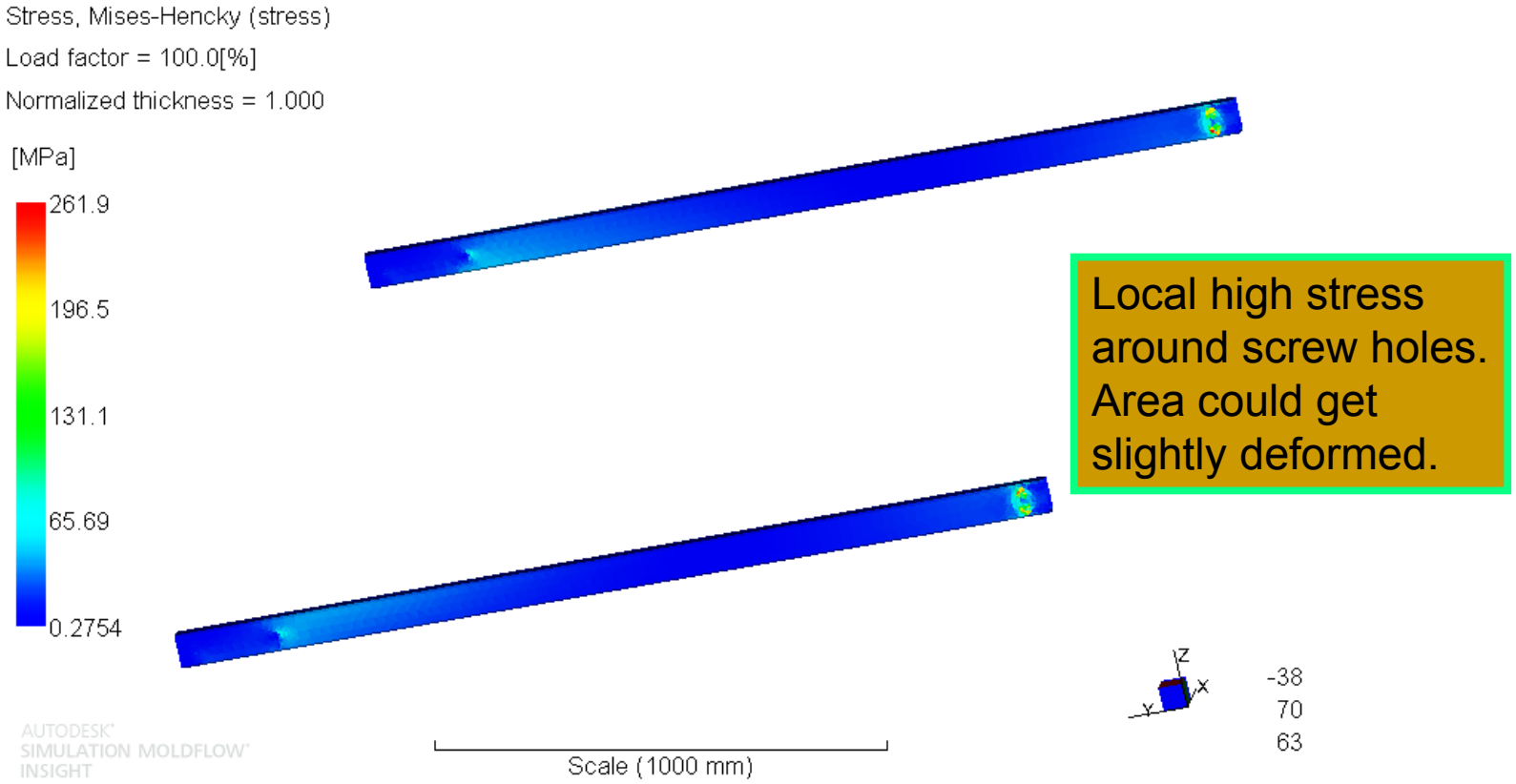
- Stress in Tile Support Beam – 77.5Mpa



No Failure

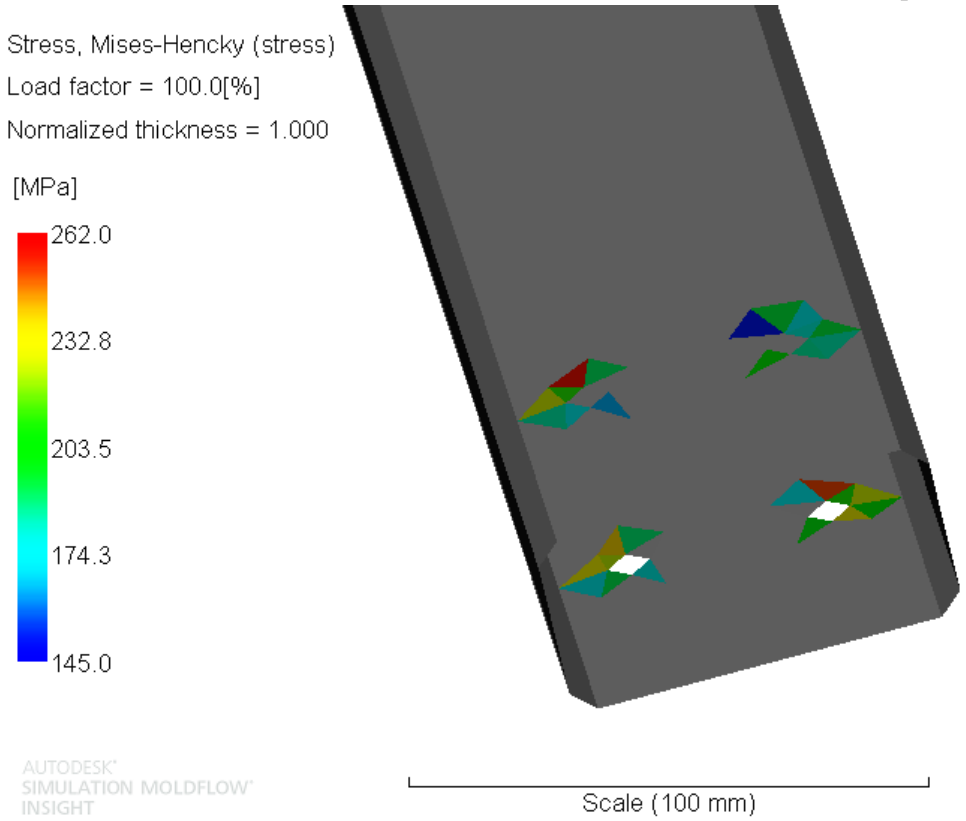
Load Case 2 – 120Km/Hr Wind Load

- Stress in Column – 261.9Mpa



Load Case 2 – 120Km/Hr Wind Load

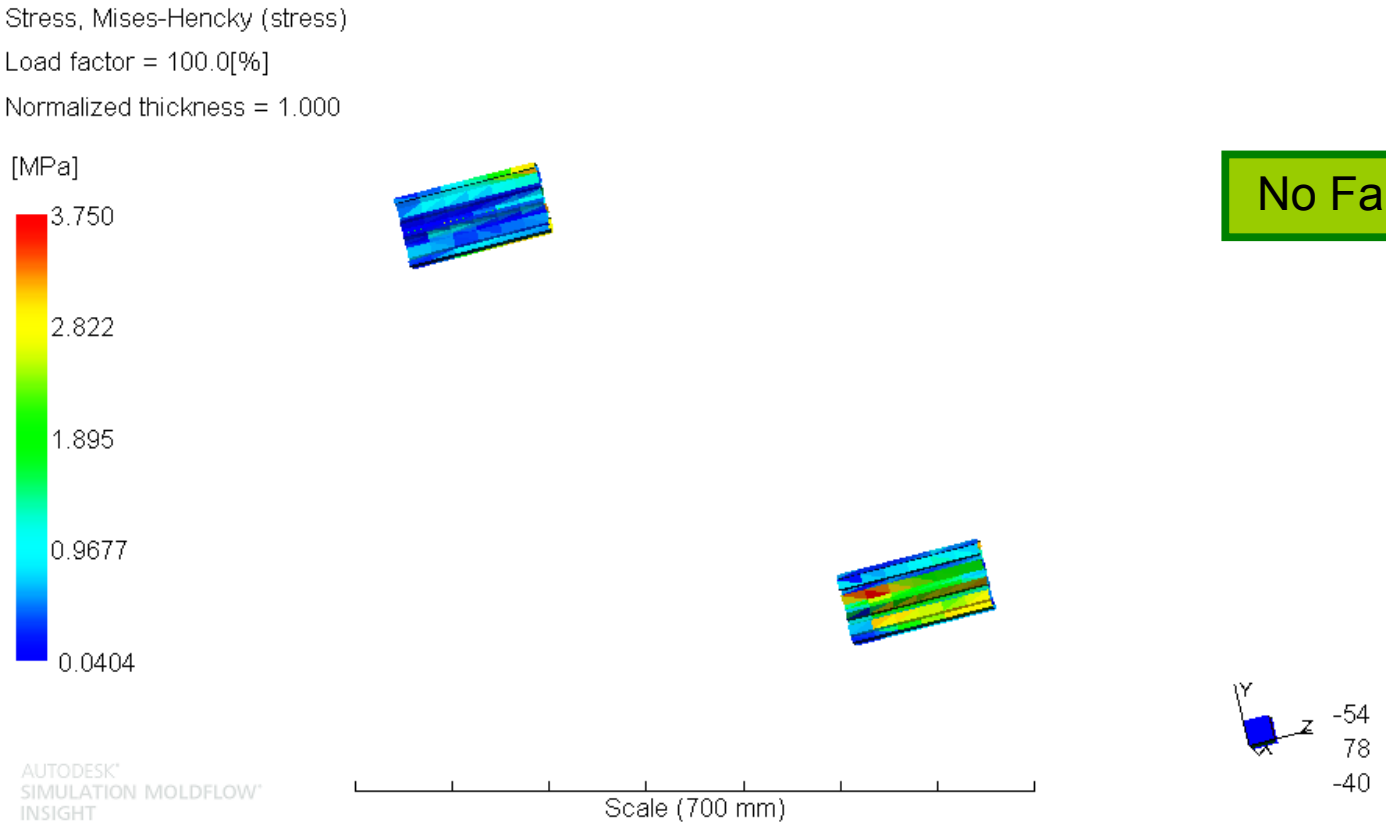
- Stress in Column – 261.9Mpa



Local high stress around screw holes. Area could get slightly deformed.

Load Case 2 – 120Km/Hr Wind Load

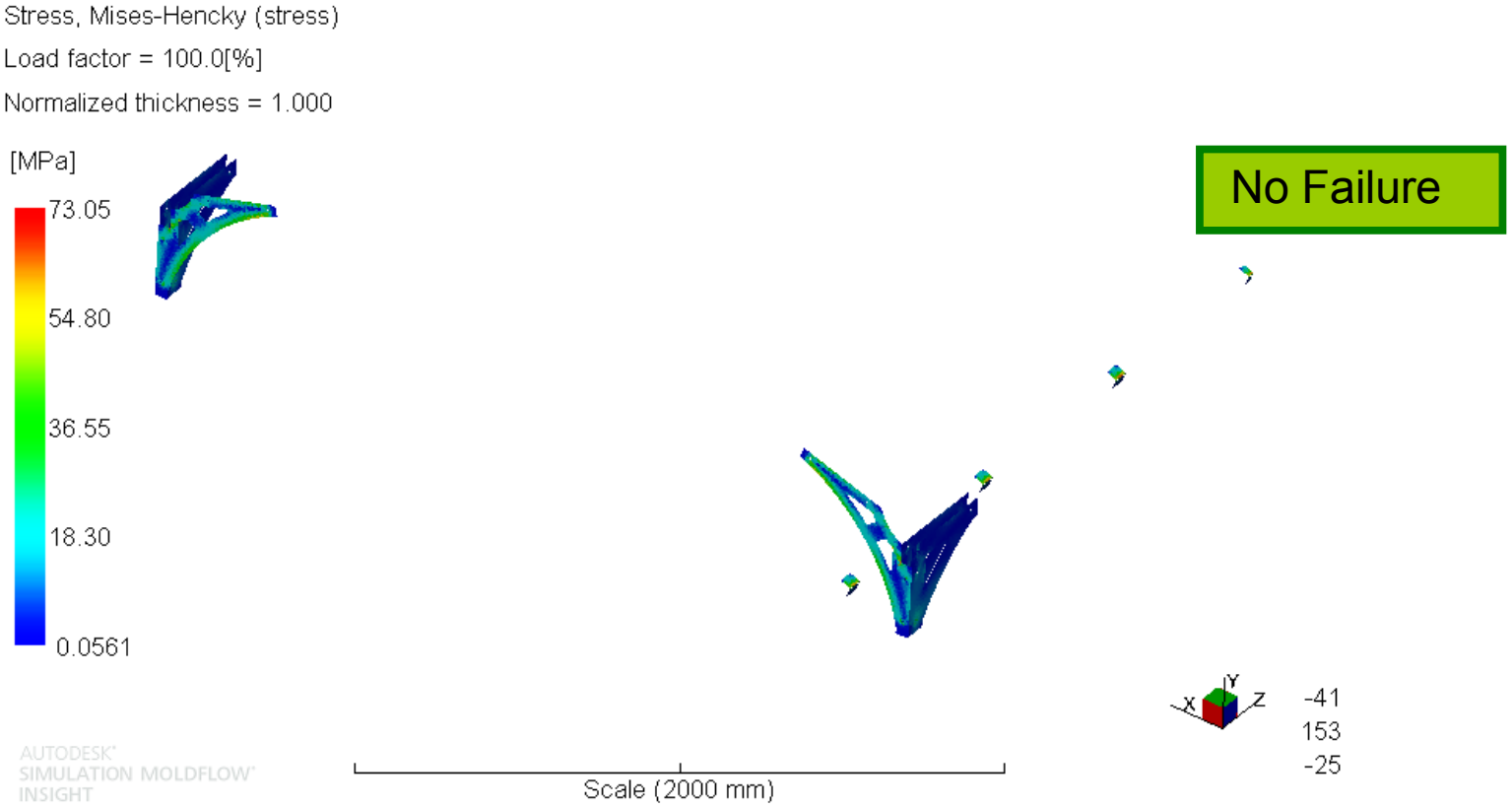
- Stress in Side Connector – 3.75Mpa



No Failure

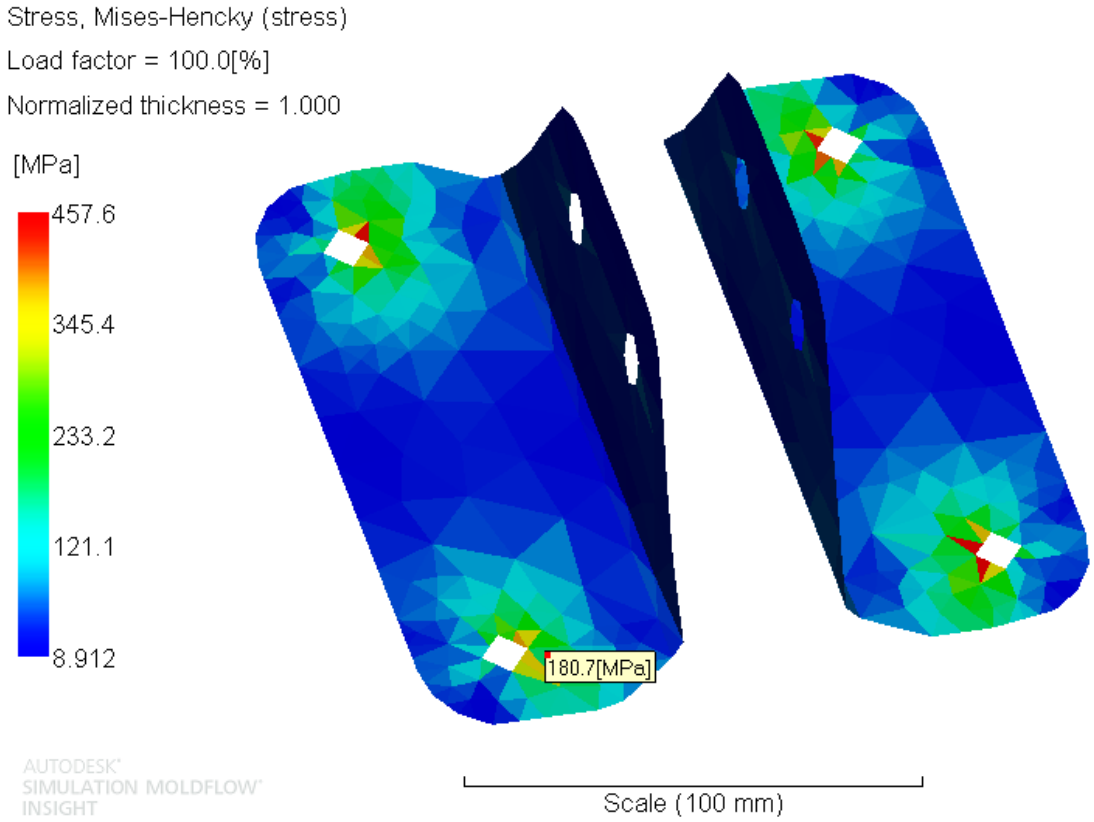
Load Case 2 – 120Km/Hr Wind Load

- Stress in Steel Brackets – 73.05Mpa



Load Case 2 – 120Km/Hr Wind Load

- Stress in Leg Steel Brackets – 457.6Mpa



No failure in general section. Local high stress around screw holes. Area could get slightly deformed.