

DANCOVER[®]



Manual
for
Commercial greenhouse tunnel
9,7x16x3,95m

Assembly Instructions



Dear customer / dear garden friend,

We congratulate you on purchasing a greenhouse.
You have chosen a high quality and stable greenhouse.
Please read the assembly instructions first.
Follow this step by step!

Storage / keeping

Store protected - Please store all components in a dry place and protected from direct sunlight!

Parts list / packing list

Before you start to assemble the greenhouse, please use this description (material list) to check that the components supplied are complete.
Each packaging unit goes through a quality control, which also includes checking the respective quantities. Missing parts can thus be almost ruled out. If parts are still missing, please tell us the wrong position.
The manufacturer assumes no responsibility for damage caused by improper assembly or force majeure.

Note:

If possible, the greenhouse should be set up in a sheltered place and not in stormy weather. It is dangerous to leave a partially assembled house!
The roof of the greenhouse must be free from snow loads greater than 10cm!

Safety regulations / intended use:

Protective gloves, safety shoes and suitable head protection must always be worn when assembling polycarbonate sheets and greenhouse components.
This variant of a greenhouse is designed for growing plants and should only be used for this. Any use beyond this is considered improper.
The operator / user of the greenhouse is solely liable for any resulting damage!

The construction of the greenhouse must be carried out by at least two people! Work with safe, handcrafted tools.

Always work with gloves (risk of injury, risk of cuts)



This symbol describes the manual work, e.g. the assembly of components

You need the following tools to set up:

- Open spanner 13 mm
- Plastic hammer
- Tape measure 5m
- Spirit level (1m)
- Stepladder
- Cutter knife
- Cordless screwdriver



Frame

List of material:

Width: 9,70m

Length: 16,00m

Note: The number of items in this material list corresponds to a greenhouse length of 16.00 m.

If the greenhouse length is longer/shorter, the individual items will be adjusted accordingly! See also delivery note!

	Qty.	Part-No.	Designation
1.1	14,00	9084	Arch 970ST
1.2	36,00	20007	Ancjor 80cm
1.3	14,00	9233	Strut 1,65m Typ 970
1.4	14,00	9225	Strut 3,69m Typ 970
1.5	14,00	9248	Longitudinal tube 1,98m (Querstrebe)
1.6	60,00	19004	Connector 2"
1.7	4,00	9251	Longitudinal tube 5,97m für 2m distance
1.8	2,00	9252	Longitudinal tube 3m für 2m distance
1.9	2,00	9253	Longitudinal tube 1m für 2m distance
1.10	6,00	9410	Connecting sleeves
1.11	24,00	9432	Longitudinal tube 1,90m
1.12	6,00	9434	Connector 1" End piece (2 Drilling)
1.13	21,00	9433	Connector 1" (3 Drilling)
1.14	8,00	16001	Impact bar Poppen 4m lang
1.15	6,00	18021	Double aluminum profile (4 x 6m and 2 x 4m)
1.16	6,00	9417	Square connector 15ner for aluminum profile
1.17	7,00	9412	Interconnects 54
1.18	16,00	9255	Cross tube 2,65m
1.19	32,00	13003	Film Type: 12m transparent (2 x 16m)
1.20	7,00	14004	Screw: 8x40
1.21	136,00	14005	Screw: 8x50
1.22	14,00	14006	Screw: 8x70
1.23	28,00	14007	Screw: 8x80
1.24	20,00	14008	Screw: 8x100
1.25	9,00	14009	Screw 8x 130

1.26	18,00	13997	T-head bolts 8x80
1.27	7,00	9470	Spacer
1.28	2,00	20024	Rep-Tape

Gable

	Qty.	Part-No.	Designation
2.1	2,00	9044	Gable 970ST with top part
2.2	6,00	13021	Twin wall plate (4 x 2,10m x 4,20m; 4 x 1,05m x 3,50m)
2.3	2,84	13022	H-Profile (4 x 3,50m)
2.4	4,00	18020	Alu simply 6m
2.5	6,00	16001	Impact bar Poppen 4m
2.6	2,00	20002	Running rail 6,8
2.7	8,00	9428	Bracket straight for Typ ST 860-1200
2.8	2,00	9423	Retaining plate at an angle to the left, all types
2.9	2,00	9424	Retaining plate at an angle to the right, all types
2.10	4,00	9541	Big door handles
2.11	8,00	20003	Trolleys
2.12	4,00	20004	Door Stopper
2.13	8,00	14055	Screw: 12 x 120
2.14	2,00	9090	Door set (r+l)
2.15	4,00	9443	Guide shoe
2.16	4,00	9429	Guide shoe holder
2.17	4,00	9458	Tengelblech ST Kopfstück
2.18	2,00	9456	Retaining plate left
2.19	2,00	9457	Tengelblech ST Middle piece on the right
2.20	2,00	9455	Tengelblech 860/970ST Start on the right
2.21	2,00	9454	Tengelblech 860/970ST Start on the left
2.22	1,00	20028	Blower motor with pressure valve
2.23	140,00	14101	Self drilling screw.: 4,8x19
2.24	300,00	14102	Self drilling screw.: 4,8x19 m.D.
2.25	2,00	9062	Aufbauhilfeab Typ 9,70

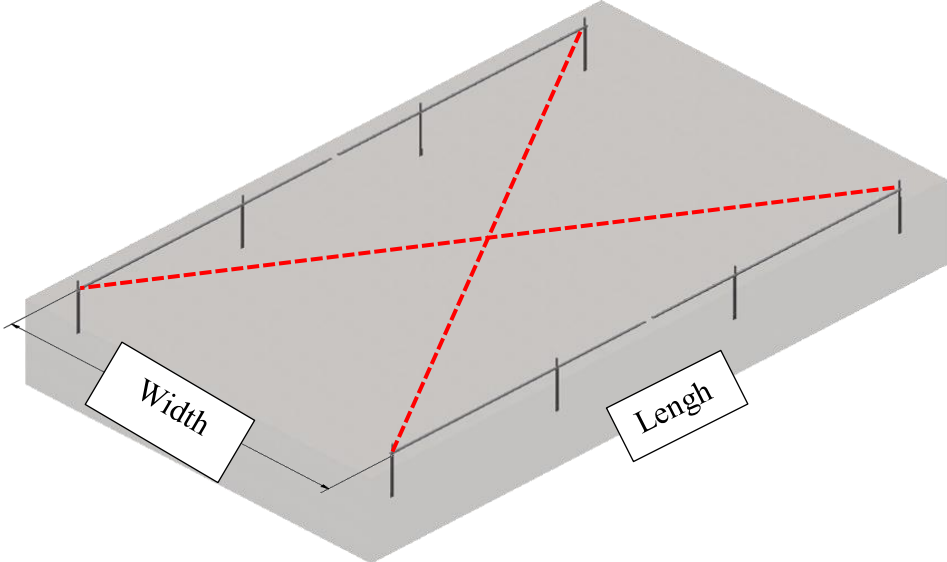


Side ventilation

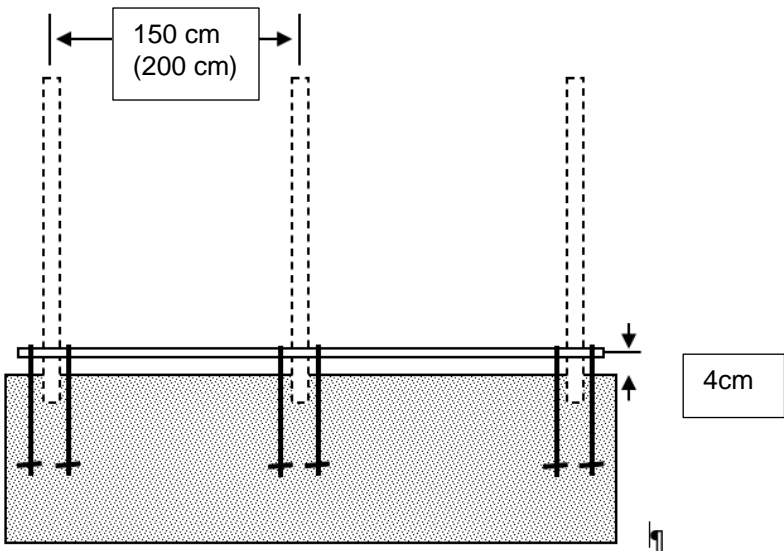
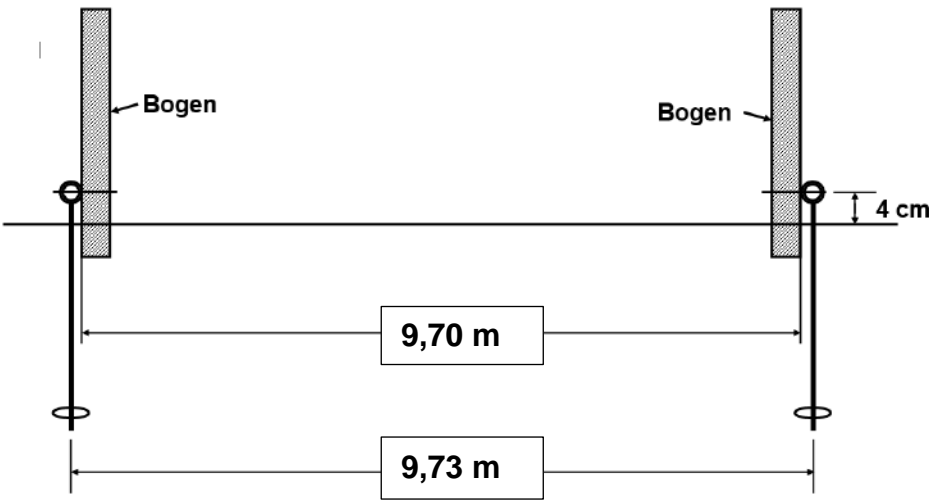
	Qty.	Part-No.	Designation
3.1	1,82	13021	Twin wall plate (4 x 2,10m x 2,20m, 2 x 1,00 x 2,20m)
3.2	1,37	13022	H-Profile (2 x 2,20m)
3.3	6,00	9291	Cross tube 1.9m with 2 holes
3.4	12,00	19004	Clamps 2 "
3.5	12,00	14004	Screw 8x40
3.6	16,00	13002	Film: 10m transparent, divided for side ventilation
3.7	10,00	16001	Impact bar Poppen 4m
3.8	14,00	9549	Washer: 6,4 x 40
3.9	4,00	9249	Winding tube 6,00m
3.10	2,00	9411	Connector
3.11	2,00	20030	Hand crank gear
3.12	2,00	9538	Telescopic arm
3.13	32,00	20011	Plastic clips 1 "
3.14	32,00	13034	Wire rope sheathed
3.15	2,00	19021	Wire rope clamp
3.16	2,00	20005	Wire rope tensioner
3.17	50,00	20139	Webbing 23mm for side ventilation
3.18	16,00	13017	Tubular film: 2.15m transparent - divided for the vestibule
3.19	2,00	9253	Aluminum profile (L=1,60m)
3.20	2,00	9253	Aluminum profile (L=2,10m)
3.21	2,00	13013	Tubular film: 1.66 m transparent (L = 2.50 m with perlon cord)
3.22	50,00	14102	Self drilling screw.: 4,8x19 m.D.
3.23	100,00	14101	Self drilling screw.: 4,8x19
3.24	20,00	14103	Self drilling screw.: 6,3x 25
3.25	4,00	14006	Screw: 8x70
3.26	2,00	14005	Screw: 8x50
3.27	20,00	14053	Screw: 10 x 40
3.28	4,00	14050	Screw: 10 x 90

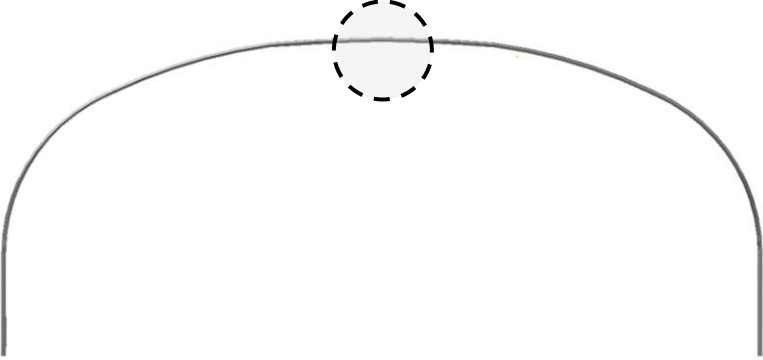
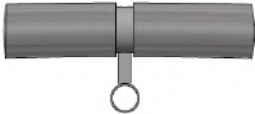

Foundation of your greenhouse

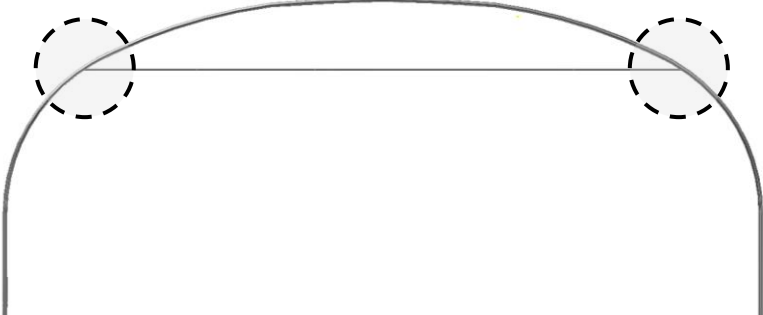
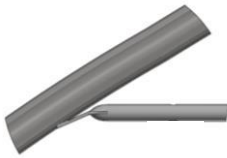

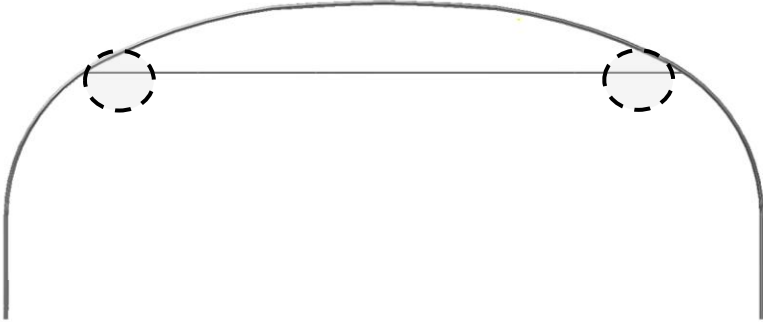


The stable and robust construction of the greenhouses allows them to be installed directly on a level, pre-compacted surface.

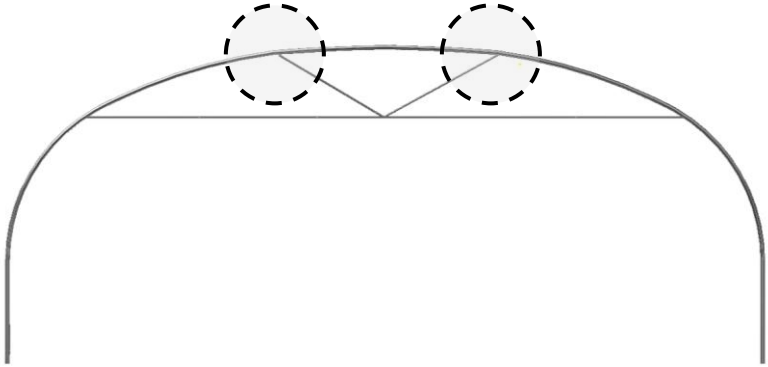
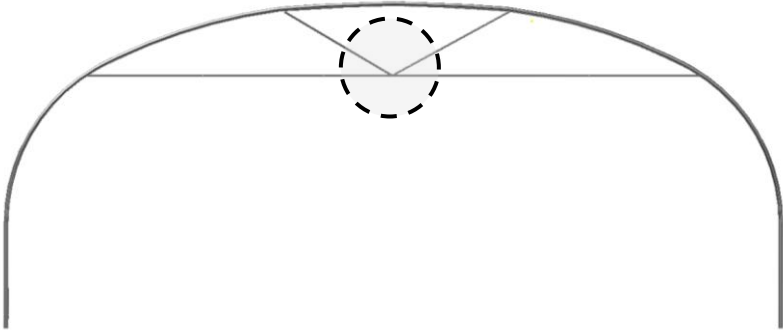

The fastening is carried out with an earth anchor system and the film has to be buried.

1.0	Angle the base	
		
1.1	Tension cords alongside	
1.2	Measure diagonally - distances must be the same	
1.3	Check parallelism	
		
		

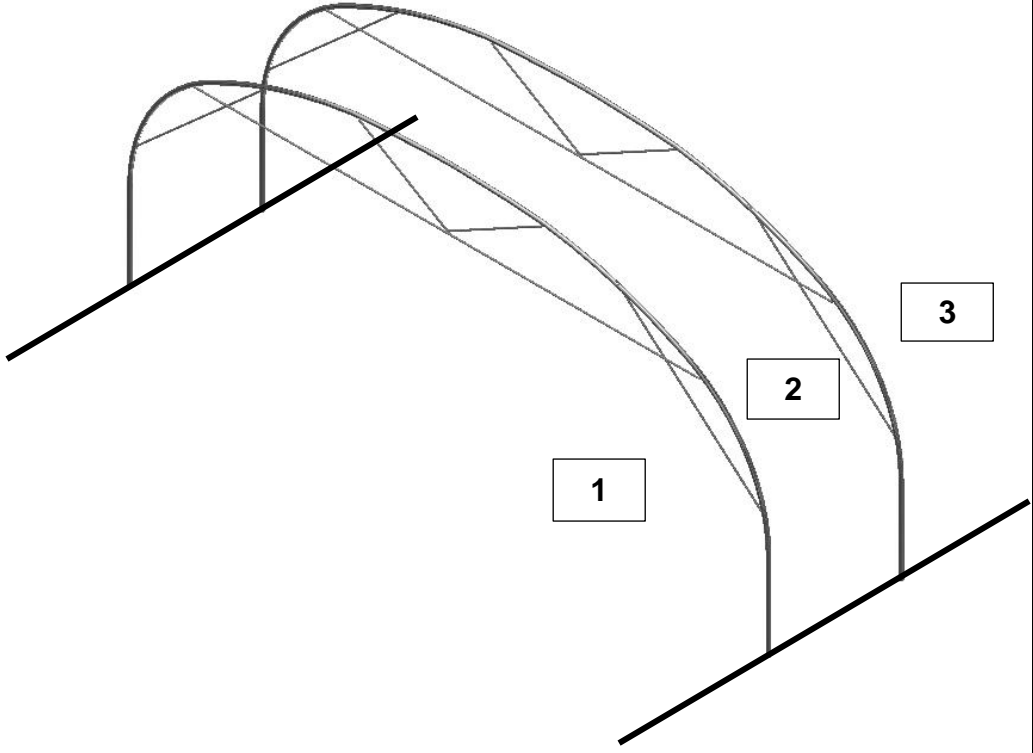
2.0.0	Anchor / longitudinal tube	
2.1.0		
		
		
2.1.1	Place the anchor along the cord - see for distance 2.1	20007
2.1.2	Push the longitudinal tubes through the eyelets of the anchor	9251 9252 9253
2.1.3	Connect the longitudinal pipes to the pipe sections.	9410
	<i>Note: The longitudinal tubes are 6m long, the start and end pieces are shorter</i>	

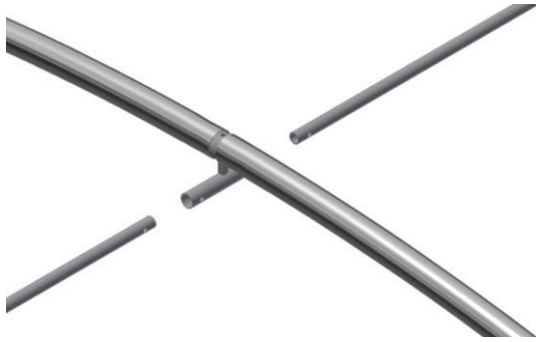

3.0.0	Arch assembling	
3.1.0		
		
3.1.1	Assemble left / right arch - using connector 54	9084 9412
3.1.2	Fix the arch left / right to connector with screw 4.8x19 <i>NOTE: nut must point inward</i>	
3.1.3	Mount connector, center	9433
	Place a spacer between the pipe bend and the connector <i>NOTE: The nut must point downwards</i>	9470
	Push the pipe clamp (2x left / 2x right of the connector) onto the bend	19004


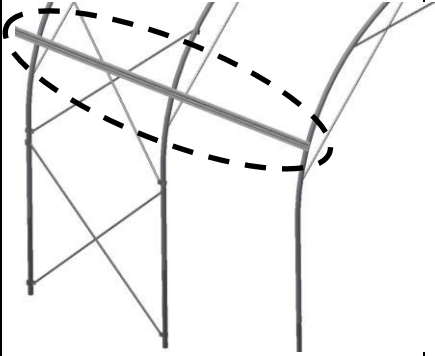



3.2.0	Arch assembling		
			
			
3.2.1	<p>Place cross brace and screw left / right <i>NOTE: nut must point inwards</i></p>	<p>9225 14007</p>	
3.3.0	Connector longitudinal tube left / right		
			
			
3.3.1	<p>Mount connector on the right <i>NOTE: The nut must point downwards</i></p>	<p>9433 14006</p>	
3.3.2	<p>Mount connector, left <i>NOTE: The nut must point downwards</i></p>	<p>9433</p>	

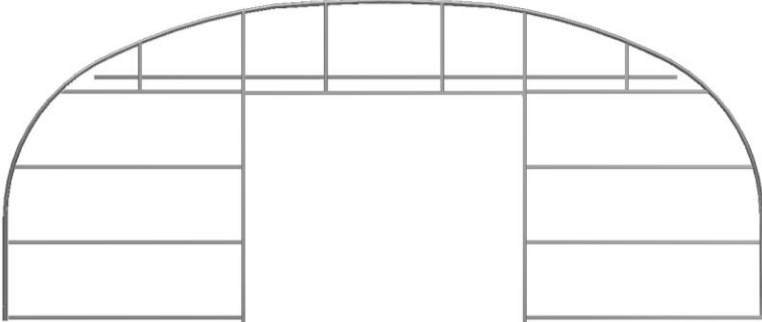
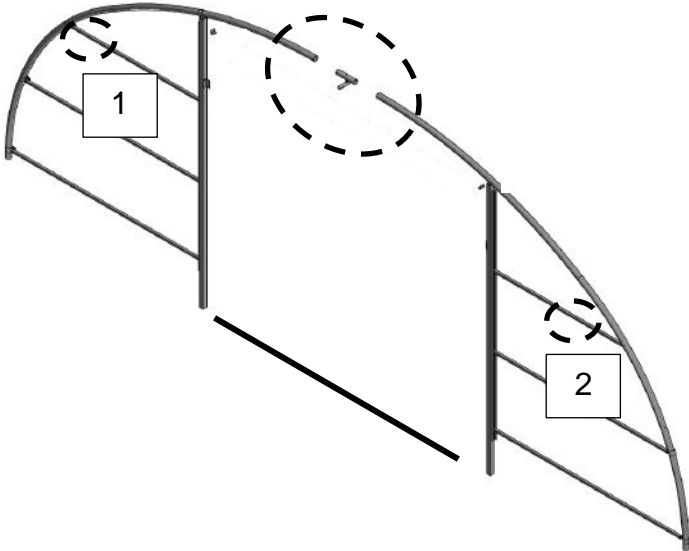
3.4.0	Struts	
		
3.4.1	Screw the strut into the bore of the pipe bend left / right	9233 14007
		
		
3.4.2	Bring struts and cross struts together at point A and screw together	14004

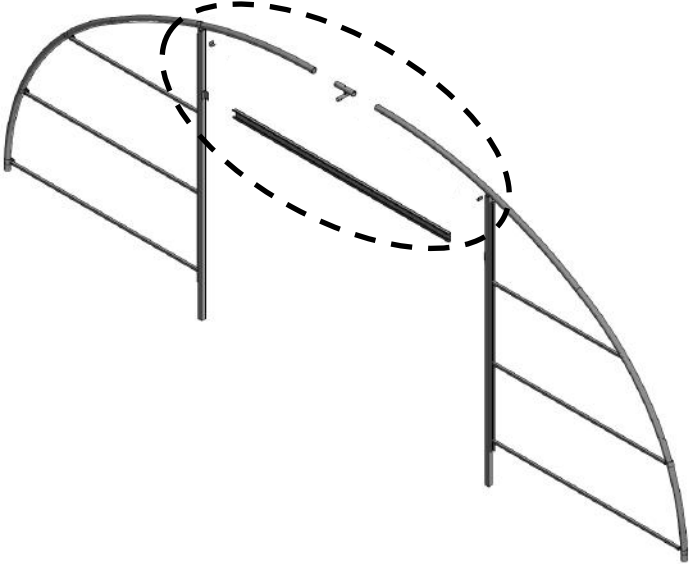

3.5.0	Struts (outside)		
3.5.1	Screw strut on pipe clamp in point 1 left / right		9248 14005
3.5.2	Push pipe clamp left / right (2x each) for point 2 onto the frame		19004
3.5.3	Screw strut on pipe clamp in point 2 left / right		9248 14005

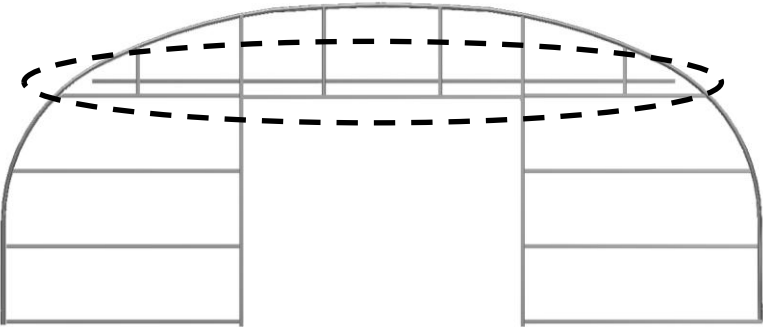
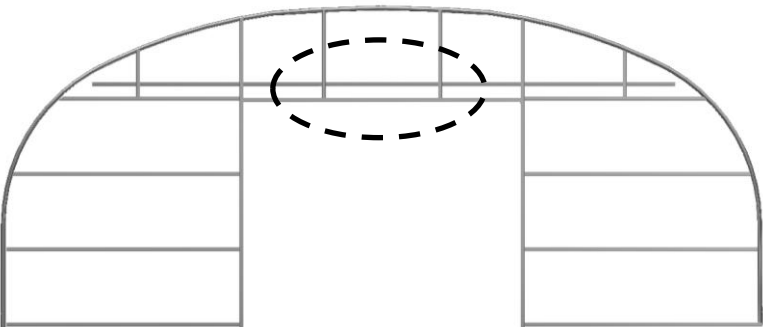
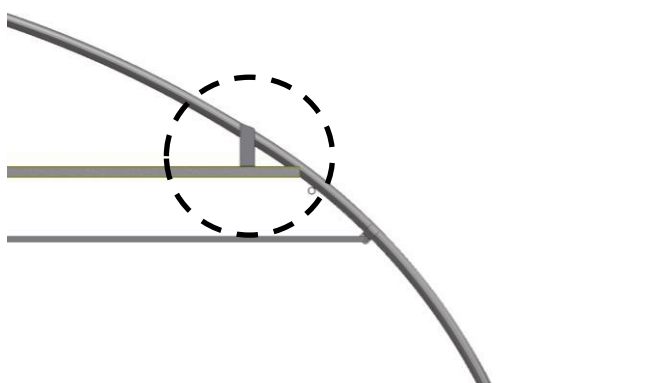

4.1.0	Set up the arch / frame	
		
4.1.1	Set up the preassembled frame in field 2 - screw it to the longitudinal tube 5.97m <i>NOTE: - The nut must point inwards</i>	14008
4.1.2	Push pipe clamp left / right (2x each) for bandage onto the frame <i>NOTE: The clamp leg must point inwards</i>	19004
4.1.3	Screw the frame to the longitudinal tube (see also 4.2.0 longitudinal tubes) <i>NOTE: - The nut must point inwards</i>	9432 14008
4.1.4	Set up pre-assembled frames in field 3 <i>ATTENTION: Secure both frames against tipping over!</i>	
4.1.5	Push pipe clamp left / right (2x each) for bandage onto the frame <i>NOTE: The clamp leg must point inwards</i>	19004

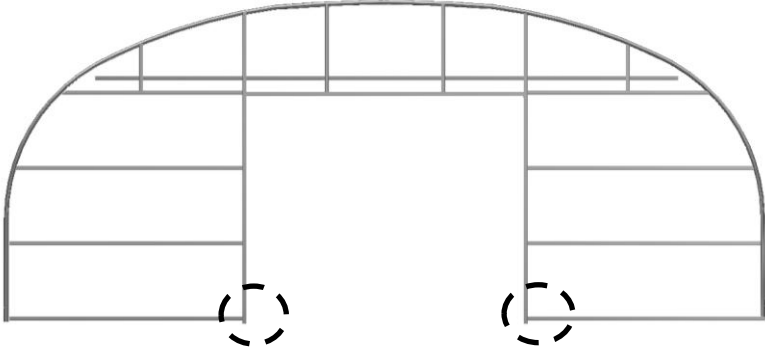
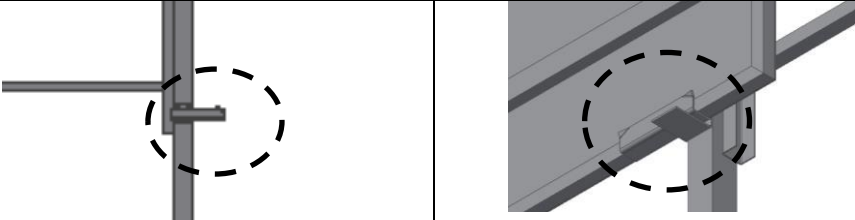
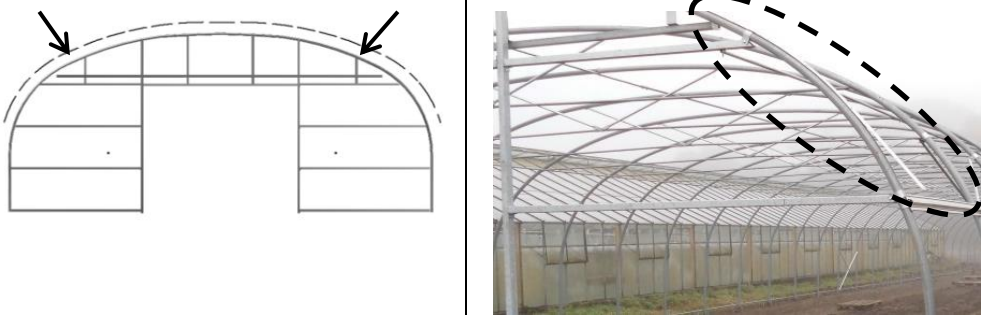
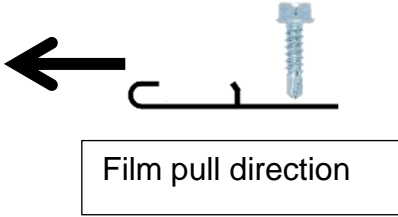
4.2.0	Longitudinal pipes	
	<p><i>NOTE - As soon as a frame is set up - mount the longitudinal tube</i></p> 	
4.2.1	Mount the center tube	9432 14005
4.2.2	Mount the longitudinal pipe on the left	9432 14005
4.2.3	Mount the longitudinal tubes on the right	9432 14005
4.3.0	Associations	
		
4.3.1	Place cross tubes between frames 2 + 3 - use a spirit level and align the frame	9248 14005
4.3.2	Fix the cross tubes in place in the clamp - self-drilling screw 4.8x19	14101
4.3.3	Mount the cross tubes on the opposite side	9248
4.3.4	Repeat steps 4.1.2 bis 4.2.1	

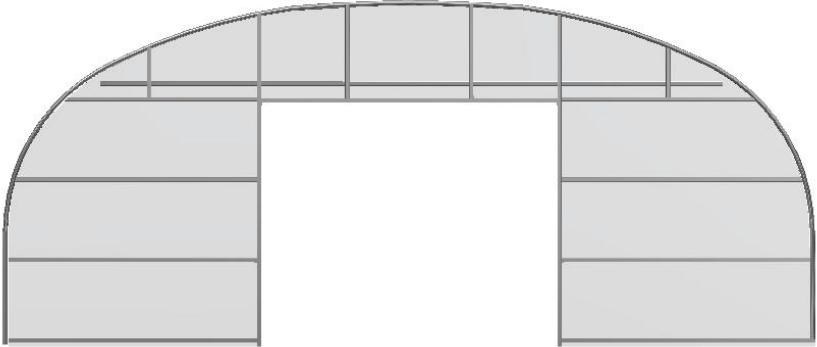
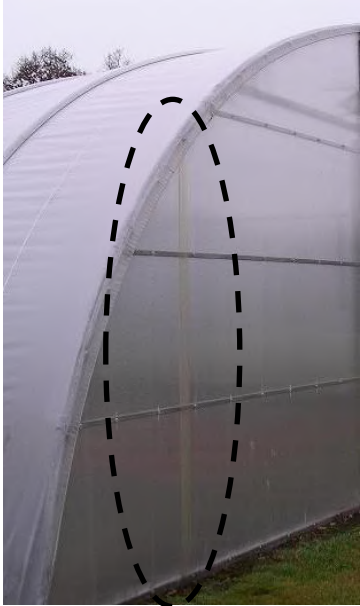

4.4.0 Aluminum clamping profile with double mount		
	  	
4.4.1	<p>Fasten the aluminum clamping profile (double mount) to the arch with hammer head screws - drill a hole in the arch</p> <p><i>NOTE: Position the profiles at a height of approx. 2.20 m</i></p>	<p>18021</p> <p>13997</p> <p>13997</p>
4.4.2	Fasten the gable aluminum clamping profile with a pipe clamp	
	 	
4.4.3	Connect the aluminum profile with the square connector	9417
4.4.4	Push the joint edges of the profiles together and secure with a self-tapping screw	14101
4.4.5	Cover or mask the saw edge of the aluminum clamping profile at the front and back so that the film is not damaged when it is pulled.	20024

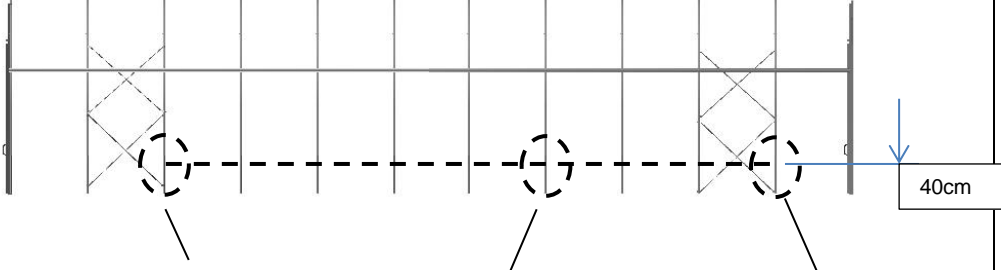

5.0.0	Gable assembly	
		
5.1.0	Gable element	
		9
5.1.1	Assemble gable element left / right using connector 54 <i>NOTE: nut must point down</i>	9041 9412 14006
5.1.2	Mount connector, center Place spacer between pipe bend and connector <i>NOTE: nut must point down</i>	9434 9470 14009
5.1.3	Mount connector, right – drilling in square tube (Pos.1) <i>NOTE: nut must point down</i>	9434 14005
5.1.4	Mount connector, left - drilling in square tube (Pos.2) <i>NOTE: nut must point down</i>	9434 14005
5.1.5	Place the assembly aid between the door posts <i>Note: Check the parallelism of the door posts</i>	9062 14101


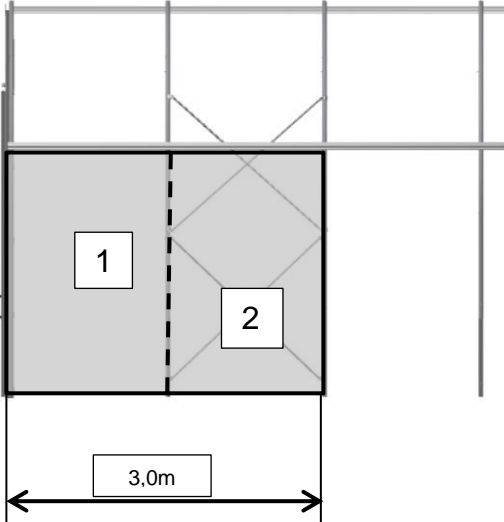
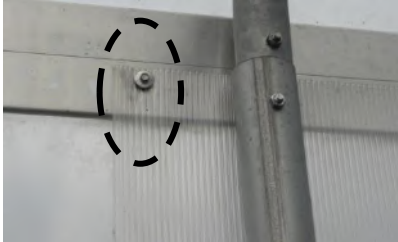
5.2.0	Upper part of the gable	
		
5.2.1		9206 14101
5.2.2	Mount the pre-assembled upper part of the gable <i>NOTE: Use existing screw holes for positioning</i>	14101

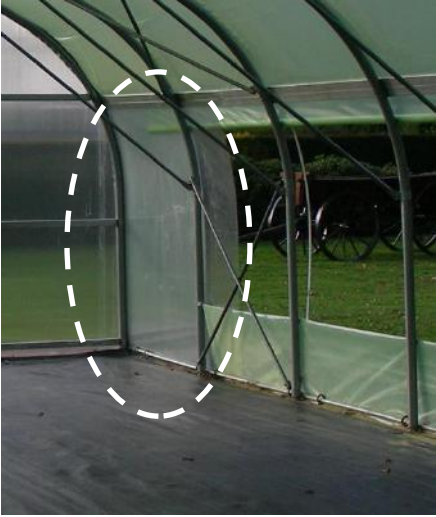
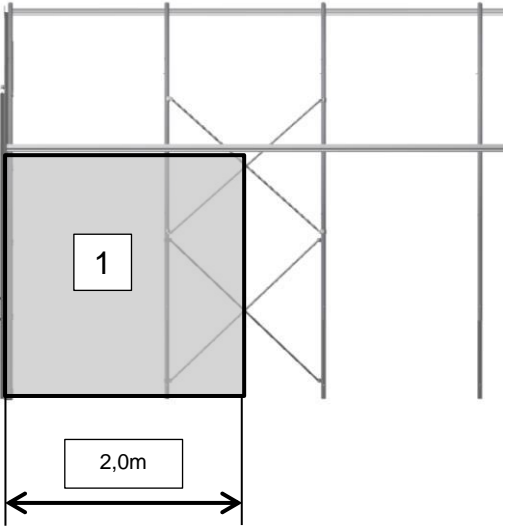
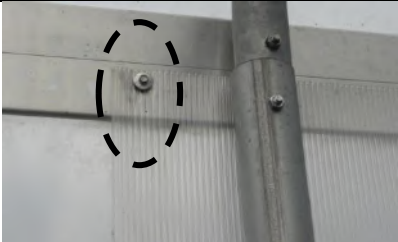
5.4.0	Running rail	
		
5.4.1	Mount the running rail <i>Note: distance between running rail and post must be 15mm</i>	
		
5.4.2	Mount the retaining plate in the middle	
		
5.4.3	Mount lteble, diagonally right and left	

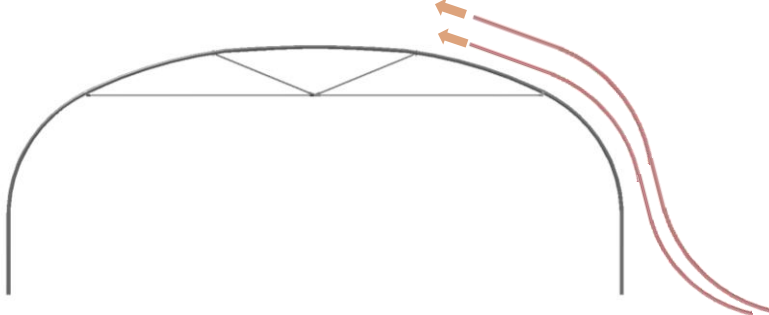
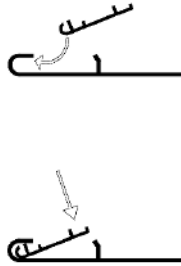

5.5.0	Guide shoes	
		
		
5.5.1	Mount guide shoe holder left / right	9429
5.5.2	Mount the left / right guide shoe	9443
5.6.0	Alu-profile	
		
5.6.1	Lay the Alu-Profile (6m length) over the gable arch Lateral height approx. 1.7 m	18020
5.6.2	Fastening - Self-drilling screw 4.8x19 at a distance of approx. 30cm	14101
	<p><i>NOTE:</i> Profile direction = film pull direction</p>	


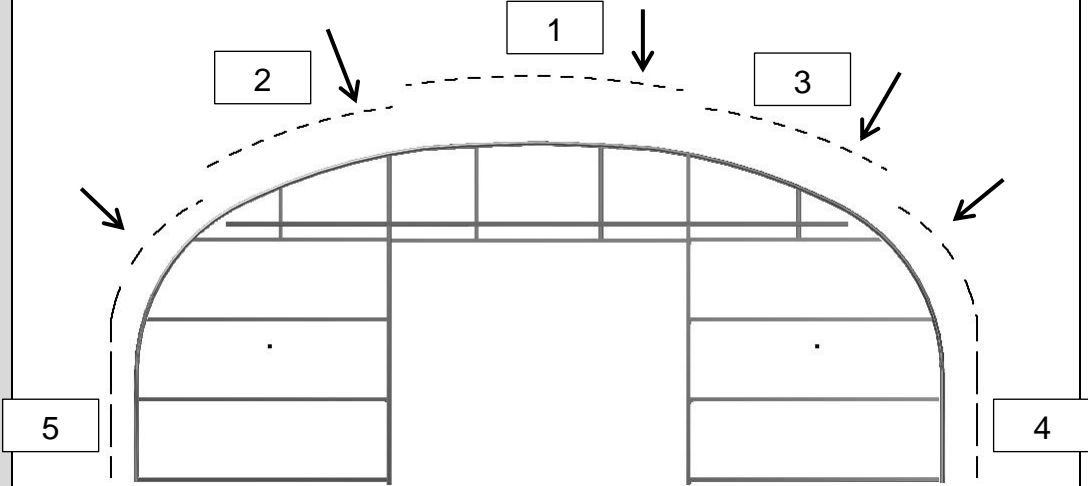
5.7.0	Gable assembly		
			
5.7.1	<p>Place twin-wall sheets and screw them together</p> <p><i>NOTE: Screws with sealing washer</i></p> <p><i>NOTE: Screw spacing approx. 30cm</i></p> <p><i>NOTE: Adapt the multi-skin sheets to the arch contour using a cutter knife</i></p>		<p>13021</p> <p>14102</p>
		<p>H-Profile</p> 	<p>13022</p>
5.7.2	<p>Connect the joint edge of the twin-wall sheet with the H-profile</p>		<p>13022</p>
5.7.3	<p>Foam adhesive tape - tape off the sharp edge of the twin-wall sheet as protection for the film</p>		
5.7.4	<p>Repeat steps 1.9.1 - 1.9.3 for the other half of the gable</p>		






6.1.0	Rabbit catch	
	NOTE: Only greenhouse with side ventilation	
		
		
6.1.1	Dig a trench along the greenhouse - about 20cm wide and 20cm deep	13021 14102
6.1.2	Fix the wire tensioner with a self-drilling screw 2x	13022
6.1.3	Guide the wire around the frame tube at the other end of the greenhouse and fix it with a wire clamp	
6.1.4	Pull the wire tight using the wire tensioner	13021
6.1.5	Foil - place fold over the wire and align (left / right / bottom) Lay the excess of the film evenly in the dug trench	
6.1.6	Screw the fender washer and self-drilling screw to fix the wire on each frame <i>NOTE: Wire height approx. 50cm</i>	9459 14101
6.1.7	Evenly weight down the foil in the trench with soil / no wrinkles!	
6.1.8	Repeat steps 5.8.1 - 5.8.3 for the other side of the greenhouse	

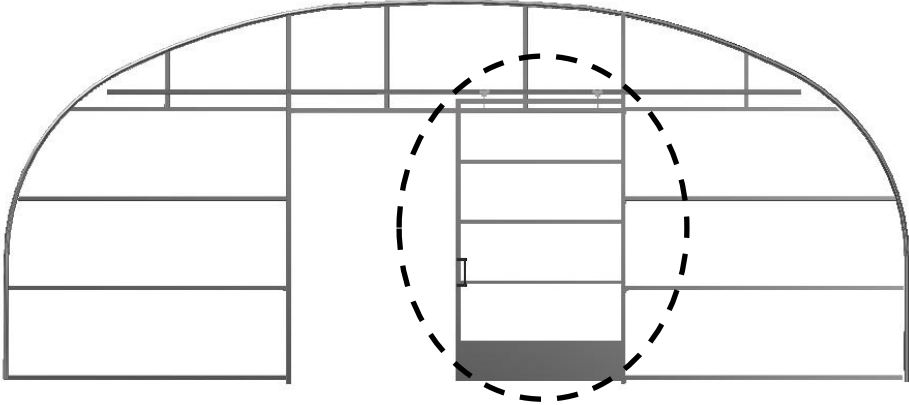
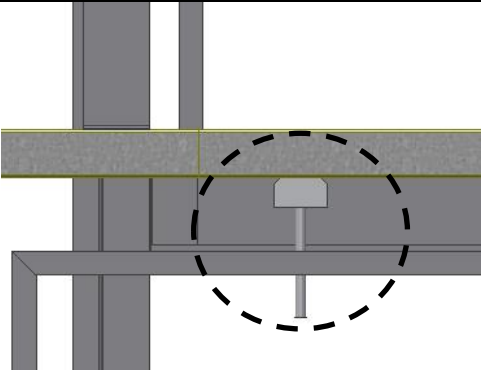

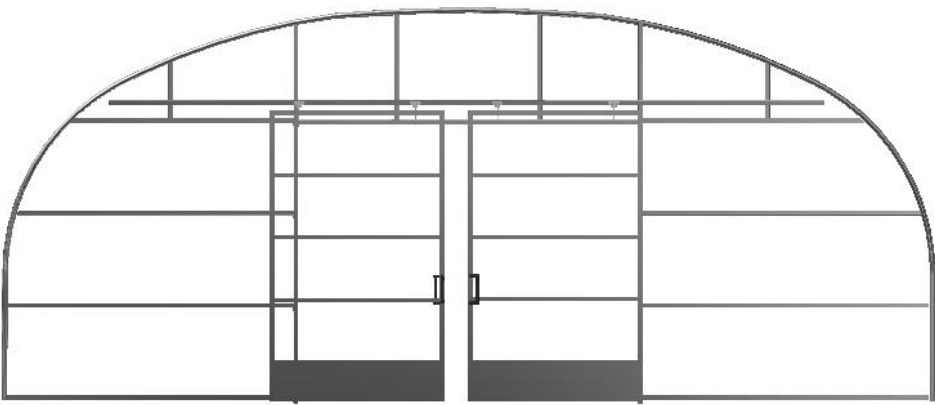
7.1.0	Side panel		
	<p>NOTE: Only for the version with side ventilation with hand crank gear / motor drive and telescopic rod</p>		
			
7.1.1	<p>Put on the web plate (1) and screw it on</p> <p><i>NOTE: Slide the web plate under the aluminum profile at the top</i></p> <p><i>NOTE: Screws with sealing washer</i></p> <p><i>NOTE: Screw spacing approx. 30cm</i></p>		<p>13021</p> <p>14102</p>
7.1.2	<p>Butting edge of the multi-skin sheet - set H-rail (dashed line)</p>		13022
7.1.3	<p>Place multi-wall sheets (2) and screw on</p> <p><i>NOTE: Slide the web plate under the aluminum profile at the top</i></p> <p><i>NOTE: Screws with sealing washer</i></p> <p><i>NOTE: Screw spacing approx. 30cm</i></p>		<p>13021</p> <p>14102</p>
7.1.4	<p>Fix the web plate on the inside of the aluminum profile with a screw</p>		14102
7.1.5	<p>Repeat steps 5.8.1 - 5.8.3 for the other half of the gable</p>		


7.2.0	Side panel	
	<p>NOTE: Only for version with side ventilation and hand crank gear / motor drive / telescopic rod</p>	
		
7.2.1	<p>Place / align multi-wall plate (1) and screw on</p> <p><i>NOTE: Slide the web plate under the aluminum profile at the top</i></p> <p><i>NOTE: Screws with sealing washer</i></p> <p><i>NOTE: Screw spacing approx. 30cm</i></p>	<p>13021</p> <p>14102</p>
7.2.2	<p>Fix the web plate on the inside of the aluminum profile with a screw</p>	
7.2.3	<p>Repeat steps 5.8.1 - 5.8.3 for the other half of the gable</p>	


8.1.0	Film		
	<p>NOTE: prerequisite for the installation of the foil is calm and temperatures above 8 ° C!</p> 		
	<p><i>NOTE: Before installing the film, mask off sharp edges, screws, etc. so that the film is not damaged.</i></p>		
8.1.1	<p>Pull the film over the frame from one long side - use a rope of the appropriate length</p> <p><i>NOTE: Knot the foil at the corner points with a rope as a pulling aid</i></p>		13003
8.1.2	<p>In the case of double foils, the strips are drawn one after the other over the frame (see also diagram)</p>		
8.1.3	<p>Align the foil and pull it tight</p> <p><i>NOTE: Prefabricated foils are always cut with an excess length of about 1.0 m</i></p> <p><i>NOTE: The length of the made-up film may vary slightly depending on the ambient temperature</i></p> <p>Cutting temperature: approx. 15 ° C (winter)</p>		
8.1.4	<p>Fasten the foil on the gable side in the aluminum profile using a fold-in strip</p>		16001
8.1.5	<p>Fasten the foils lengthways in the aluminum profile using a fold-in strip</p> <p><i>NOTE: Pull the foil tight before it is wrapped</i></p>		16001

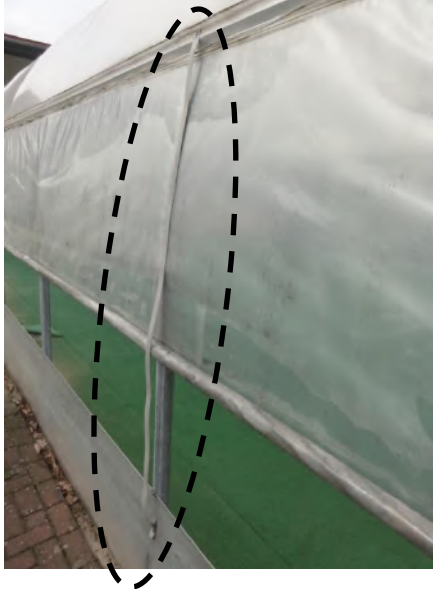

8.2.0	Tengel plate	
		
		
8.2.1	Tengel plate ST head piece (1) <i>Note: screw on from the front with a self-drilling screw every 50cm</i>	9458 14101
8.2.2	Tengel plate ST middle piece left (2) <i>Note: screw on from the front with a self-drilling screw every 50cm</i> <i>Note: Sheets must overlap - middle piece under head piece</i>	9456 14101
8.2.3	Tengel plate ST middle piece right (3) <i>Note: screw on from the front with a self-drilling screw every 50cm</i> <i>Note: Sheets must overlap - middle piece under head piece</i>	9457 14101
8.2.4	Tengel plate ST start piece on the right (4) <i>Note: screw on from the front with a self-drilling screw every 50cm</i> <i>Note: Sheets must overlap - start piece under middle piece</i>	9455 14101
8.2.5	<i>Note: screw on from the front with a self-drilling screw every 50cm</i> <i>Note: Sheets must overlap - start piece under middle piece Tengeltel sheet</i> ST start piece on the left (5)	9454 14101

8.3.0 Fan for double foil			20028
			
8.3.1	Cut a hole (Ø90mm) in the multi-skin sheet		
8.3.2	Push the fan through the hole Secure the fan		
8.3.3	with the counter plate (bayonet lock)		
8.3.4	Place a 90 ° bend on the socket from the outside <i>NOTE: Suction direction downwards</i>		
8.3.5	Position of the injection valve approx. 50cm from the gable		
8.3.6	Cross cut approx. 80 mm in foil (inner foil only)		
8.3.7	Turn the injection valve in a cross section		
8.3.8	Secure the injection valve using the counter plate (bayonet locking)		
8.3.9	Place the hose on the blower and the injection valve		
8.3.10	Secure the hose with a clamp		
8.3.11	Push the pressure hose (transparent) onto the socket on the injection valve		
8.3.12	Electrical connection 230V <i>NOTE: The electrical connection may only be carried out by authorized / trained persons (electricians).</i>		

9.1.0	Doors	
		9090
	 	
9.1.1	Screw the trolleys into the holes provided	20003 14055
9.1.2	Hang the door on the track	20002
9.1.3	Place the door stop at the end of the track	20004
9.1.4	Mount the door handle	9541
		
9.2.0	Repeat steps 1.8.1 - 1.8.4 for the second door	

10.1.0	Side slide	
		
10.1.1	Place the winding tube connector between the winding tube and screw it together	9249 9411
10.1.2	Place the winding tube lengthways next to the greenhouse	
10.1.3	Wrap the foil with the seam in the aluminum profile <i>NOTE: Align the film before wrapping it</i>	13013
10.1.4	Angle tube - lay on the open side of the foil	
10.1.5	Slide 2 turns on angled tube	
10.1.6	Fix the film on the winding tube with plastic clips (distance 2m)	20011
10.1.7	Foil 1 turn on the winding tube	
10.1.8	Fix the film on the winding tube with plastic clips (distance 1m)	20011

10.2.0	Drive (hand crank gear)	
		
10.2.1	Place the hand crank gear on the gable - approx. 1.0 m high	20030
10.2.2	Transfer the hole spacing from the hand crank gear to the gable	
10.2.3	Remove the hand crank gear and place 10.00 mm holes	
10.2.4	Mount the hand crank gear in the bores	20030 14050
10.2.5	Push the telescopic arm holder into the winding tube and fix it	9538
10.2.6	Screw the telescopic arm to the gearbox	
10.3.0	Repeat steps 10.1.1 - 10.2.6 on the other side of the greenhouse	

11.1.0	Mount the belt straps		
			
11.1.1	<p>The straps are attached to every other arch using self-tapping screws. <i>NOTE: Belt strap at the top in the aluminum clamping profile and at the bottom in the middle of the rabbit catch</i></p>	<p>20139 14102</p>	
12.1.0	Side ventilation cover apron		
			
	<i>NOTE: Position - remote hand crank</i>		
12.1.1	Dig a trench along the greenhouse - approx. 20 cm wide and 20 cm deep - approx. 2.0 m lengthways from the gable		
12.1.2	Fix the aluminum clamping profile (single) 1.6m long on the aluminum clamping profile (double) using self-drilling screws	<p>9253 14101</p>	
12.1.3	<p>Foil apron - width 1.66 mx 2.5 m, fold in with the short sides <i>NOTE: Knock in at the top and on the gable side</i></p>	<p>13013 16001</p>	
12.1.4	Weigh down the film evenly in the trench with soil / no wrinkles!		
12.2.0	Repeat steps 10.1.1 - 10.2.6 on the other side of the greenhouse		

Contact information

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