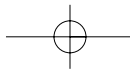


Introduction

TITLE	PAGE NO.
Foreward	3
Safety tips	4
Exploded view	5
Components lists	6
Profiles and fittings	10
An introduction to the components and method of assembly	10A

STAGES OF ASSEMBLY:

Stage 1	Side frame assembly	11
Stage 2	Assembly of rear gable	12
Stage 3	Assembly of door gable double door	14
	Assembly of door gable single door	17
Stage 4	Fixing of gable ends to side sections	20
Stage 5	Fixing of ridge bar	20
Stage 6	Roof glazing bars	21
Stage 7	Vent assembly	22
Stage 8	Check that the whole assembly is square and true	22
Stage 9	Glazing	23
	Glazing plan	24
	Plastic end stops	25
Stage 10	Door assembly	26



Foreward

Your aluminium greenhouse is designed to give you many years of trouble -free service. By carefully following the steps contained in this manual, you will have a greenhouse of which to be proud.

Your aluminium greenhouse must be built upon a firm, level surface. The optional galvanised steel base is an ideal foundation but you may also prepare a base from bricks, concrete blocks or impregnated timber. Whatever your choice of material, it is essential that the base is square and level and the greenhouse must be securely fastened to it (the steel base contains all the necessary fittings).

Though many gardeners will have little choice of position for their greenhouse, the following factors should be borne in mind...

A flat, level site is essential. Your greenhouse can then be erected easily, staging can be installed properly, and the whole structure will be stable and secure.

Locate your greenhouse where there is a minimum of shade - if possible avoid any shading from trees, fences or shrubs. Overhanging branches are particularly troublesome as raindrops dripping from them quickly dirty the glass, and quite small twigs tapping against the panes are capable of breaking them. A North-South facing aspect is most suitable for raising summer and autumn crops as it will allow the rays of the early morning sun to warm-up the greenhouse quickly and as the sun sets, its rays will still keep up the temperature until the last possible moment.

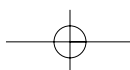
If you wish to produce crops and plants in the winter and early spring then an East-West location is probably better. In winter the daylight hours are very few and adequate sun (which at a low aspect will then shine through the south wall) is only available between 10.00am and 4.00pm.

Remember too that your plants will need a great deal of water every day, so the site should be near to a water stand-pipe or not too far away from a convenient source.

Finally, try to choose a site where the soil drains freely so that you can enjoy pleasant working conditions underfoot!

Please read this manual thoroughly before commencing assembly.

You may find it useful (though it is not essential) to fit the glazing strip to all Glazing Bars (1), (7) & (23), (39) Corner Posts (5), Gable Bars (13), Vent Sides (25) and Door Posts (16) before you commence assembly.



Safety Tips

1. Extreme care should be taken when handling glass.
2. When glazing it is advisable to wear some head protection, gloves and strong shoes - safety glasses are strongly recommended.
3. Do not, under any circumstances, climb stepladders whilst carrying glass - get an assistant to hand you each piece in turn.
4. When fixing glass into the aluminium sections using spring wire glazing clips, hold the clip in position with one hand and spring the legs of the clip into the retaining groove with the other.

PLEASE NOTE that the Spring Wire Glazing Clips are in a tensioned state during and after fitting, great care should therefore be taken in seating them securely into the aluminium retaining groove.

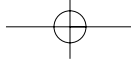
5. Attention! Do not walk over the glazed roof as the glass panes and the frame are unable to withstand the weight.

User notes

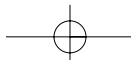
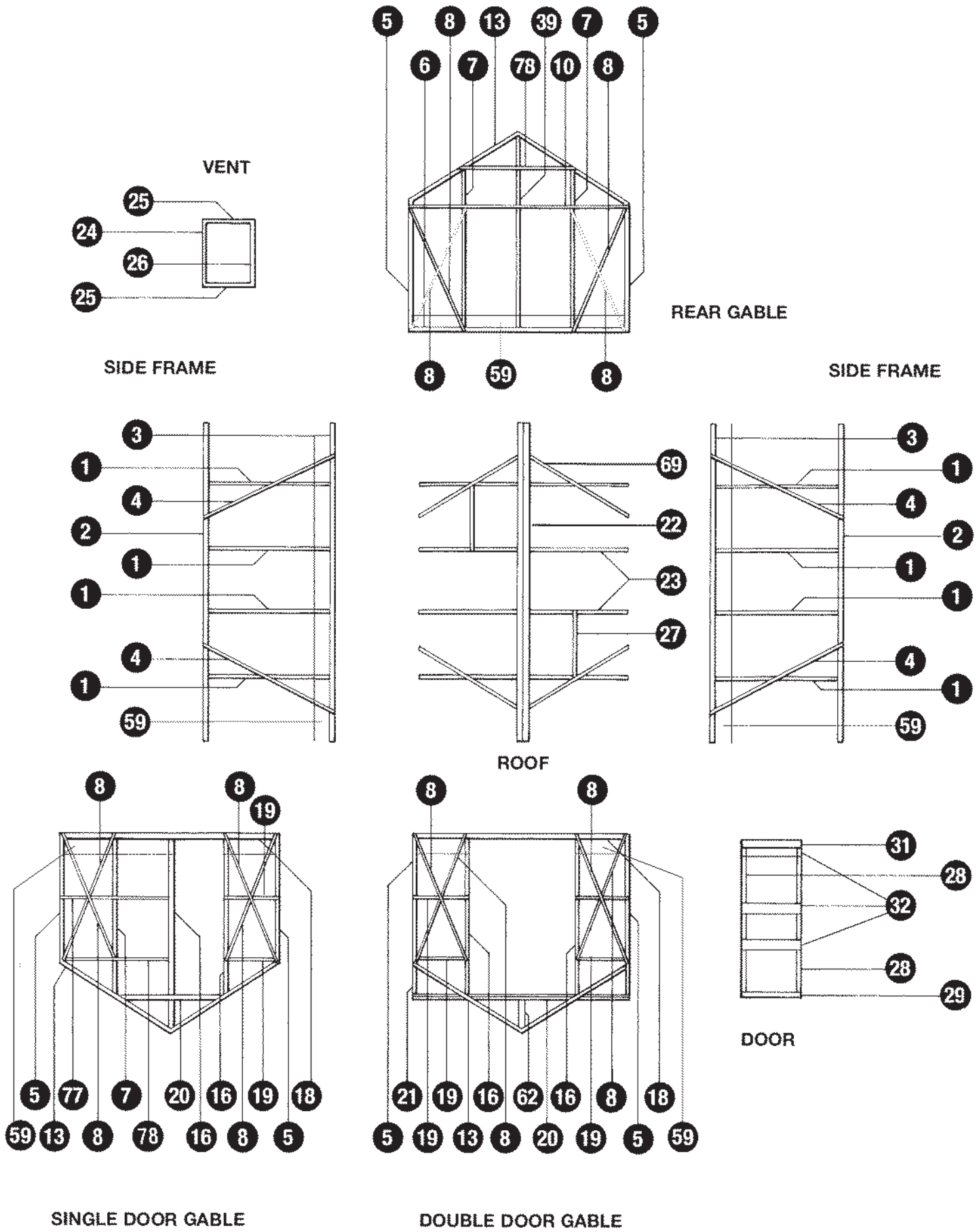
1. This greenhouse has been designed to withstand a snow load of 36cm (equivalent to 10cm of wet snow or 5cm of ice) but to avoid a dangerous build-up, snow should be cleared from the roof as quickly as possible.
2. If you have to leave the greenhouse unattended for any length of time during winter months when snow might be expected, please take the following precautions:
 - either - provide a prop for the roof or
 - ensure that the greenhouse is secured against unauthorised entry.
3. Close and secure all windows and doors when strong winds are experienced or forecast.
4. Always replace immediately broken or damaged panes of glass.
5. Periodically lubricate the vent hinges and door rollers.
6. At the start of each season wash all glass and framework with a warm water and horticultural disinfectant to remove algae and prevent the build-up of diseases which may affect your plants.
7. Always take great care when using a rotary mower in close proximity to the greenhouse as small stones can easily be thrown in the air and may break the glass.

Assembly Tips

All the following diagrams and illustrations are viewed from the inside of the greenhouse, unless otherwise stated. It is easier to construct the greenhouse by working from the inside.



Exploded view



Components List 8' single door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	06	Side glazing bar	—	1447
02	02	Gutter	RG058	2500
03	02	Base sill - side	SIL010	2500
04	04	Diagonal bracing - side	—	1573
05	04	Corner post	—	1447
06	01	Base sill - rear	SIL050	2500
07	03	Intermediate glazing bar	—	1875
08	08	Diagonal bracing - front & rear		1530
09	06	Gusset plate	F550	—
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	—
16	02	Door post	—	1875
18	01	Base sill - front	SIL055	2500
19	02	Horizontal brace	M001	632
20	01	Door lintel & track	PB005	1270
22	01	Ridge bar	RB058	2500
23	06	Roof glazing bar	SR053	1494
24	02	Vent head	TV007	636
25	04	Vent side	TV037	606
26	02	Vent sill	TV027	610
27	02	Vent trimmer including casement stay keeper	TV016	638
28	02	Door stile	—	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA009	610
32	03	Door rail - intermediate (kick plate)	PA006	610
33	01	Lintel support bracket	F833	—
39	01	Centre glazing bar - rear gable	—	2308
40	09	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	142	'Z' clip	F205	—
44	476	Spring wire glazing clip	F105	—
45	02	Door seal	F905	1.78m
46	02	Door roller	F646	—
46	02	Door roller bolts & nuts	F656	—
47	02	Door track closure cap L & R	F658/847	—
50	280	Square head bolt M6 x 12	F005	—
51	280	Hexagonal nut M6	F005	—
52	02	Door stops	F652	—
53	02	Rainwater outlet - left	F553	—
54	02	Rainwater outlet - right	F554	—
55	01	10mm spanner	F655	—
56	01	Assembly instructions	FM047	—
59	15	Kickplate		610
62	01	Centre glazing bar - front	530	—
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	—
73	04	Casement stay screws	F657	—
74	02	Ridge end cap	F556	—
77	01	Front horizontal brace	M003	1250
78	02	Horizontal brace - short	L030	1250
90	02	Gusset plate	F551	—

Components List 8' double door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	06	Side glazing bar	—	1447
02	02	Gutter	RG058	2500
03	02	Base sill - side	SIL010	2500
04	04	Diagonal bracing - side	—	1573
05	04	Corner post	—	1447
06	01	Base sill - rear	SIL050	2500
07	02	Intermediate glazing bar	—	1875
08	08	Diagonal bracing - front & rear		1530
09	06	Gusset plate	F550	—
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	—
16	02	Door post	—	1875
18	01	Base sill - front	SIL055	2500
19	04	Horizontal brace	M001	632
20	01	Door lintel & track	PB007/011	2480
21	02	Door track support	—	—
22	01	Ridge bar	RB058	2500
23	06	Roof glazing bar	SR053	1494
24	02	Vent head	TV007	636
25	04	Vent side	TV037	606
26	02	Vent sill	TV027	610
27	02	Vent trimmer including casement stay keeper	TV016	638
28	03	Door stile	—	1820
29	02	Door rail - top	PA004	610
31	02	Door rail - bottom	PA007	610
32	06	Door rail - intermediate (kick plate)	PA006	610
39	01	Centre glazing bar - rear gable	—	2308
40	09	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	142	'Z' clip	F205	—
44	476	Spring wire glazing clip	F105	—
45	04	Door seal	F905	1.78m
46	04	Door roller	F646	—
46	04	Door roller bolts & nuts	F656	—
47	02	Door track closure cap L & R	F658/847	—
50	280	Square head bolt M6 x 12	F005	—
51	280	Hexagonal nut M6	F005	—
52	04	Door stops	F652	—
53	02	Rainwater outlet - left	F553	—
54	02	Rainwater outlet - right	F554	—
55	01	10mm spanner	F655	—
56	01	Assembly instructions	FM047	—
59	14	Kickplate		610
62	01	Centre glazing bar - front	—	—
65	01	Overlap door stile	PC020	1820
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	—
73	04	Casement stay screws	F657	—
74	02	Ridge end cap	F556	—
78	01	Horizontal brace - short	M012	1250
82	02	Track support bracket	—	—
90	02	Gusset plate	F551	—

Components List 10' single door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	8	Side glazing bar	-	1447
02	02	Gutter	RG058	3118
03	02	Base sill - side	SIL010	3118
04	04	Diagonal bracing - side	-	1573
05	04	Corner post	-	1447
06	01	Base sill - rear	SIL050	2500
07	03	Intermediate glazing bar	-	1875
08	08	Diagonal bracing - front & rear	-	1530
09	06	Gusset plate	F550	-
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	-
16	02	Door post	-	1875
18	01	Base sill - front	SIL055	2500
19	02	Horizontal brace	M001	632
20	01	Door lintel & track	PB005	1270
22	01	Ridge bar	RB058	3118
23	08	Roof glazing bar	SR053	1494
24	04	Vent head	TV007	636
25	08	Vent side	TV037	606
26	04	Vent sill	TV027	610
27	04	Vent trimmer including casement stay keeper	TV016	638
28	02	Door stile	-	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA009	610
32	03	Door rail - intermediate (kick plate)	PA006	610
33	01	Lintel support bracket	F833	-
39	01	Centre glazing bar - rear gable	-	2308
40	12	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	142	'Z' clip	F205	-
44	476	Spring wire glazing clip	F105	-
45	02	Door seal	F905	1.78m
46	02	Door roller	F646	-
46	02	Door roller bolts & nuts	F656	-
47	02	Door track closure cap L & R	F658/847	-
50	280	Square head bolt M6 x 12	F005	-
51	280	Hexagonal nut M6	F005	-
52	02	Door stops	F652	-
53	02	Rainwater outlet - left	F553	-
54	02	Rainwater outlet - right	F554	-
55	01	10mm spanner	F655	-
56	01	Assembly instructions	FM047	-
59	17	Kickplate	-	610
62	01	Centre glazing bar - front	-	530
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	-
73	04	Casement stay screws	F657	-
74	02	Ridge end cap	F556	-
77	01	Front horizontal brace	M003	1250
78	02	Horizontal brace - short	L030	1250
90	02	Gusset plate	F551	-

Components List 10' double door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	8	Side glazing bar	-	1447
02	02	Gutter	RG058	3118
03	02	Base sill - side	SIL010	3118
04	04	Diagonal bracing - side	-	1573
05	04	Corner post	-	1447
06	01	Base sill - rear	SIL050	2500
07	02	Intermediate glazing bar	-	1875
08	08	Diagonal bracing - front & rear	-	1530
09	06	Gusset plate	F550	-
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	-
16	02	Door post	-	1875
18	01	Base sill - front	SIL055	2500
19	04	Horizontal brace	M001	632
20	01	Door lintel & track	PB007/011	2480
21	02	Door track support	-	-
22	01	Ridge bar	RB058	3118
23	08	Roof glazing bar	SR053	1494
24	04	Vent head	TV007	636
25	08	Vent side	TV037	606
26	04	Vent sill	TV027	610
27	04	Vent trimmer including casement stay keeper	TV016	638
28	03	Door stile	-	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA007	610
32	06	Door rail - intermediate (kick plate)	PA006	610
39	01	Centre glazing bar - rear gable	-	2308
40	12	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	142	'Z' clip	F205	-
44	476	Spring wire glazing clip	F105	-
45	04	Door seal	F905	1.78m
46	04	Door roller	F646	-
46	04	Door roller bolts & nuts	F656	-
47	02	Door track closure cap L & R	F658/847	-
50	280	Square head bolt M6 x 12	F005	-
51	280	Hexagonal nut M6	F005	-
52	04	Door stops	F652	-
53	02	Rainwater outlet - left	F553	-
54	02	Rainwater outlet - right	F554	-
55	01	10mm spanner	F655	-
56	01	Assembly instructions	FM047	-
59	16	Kickplate	-	610
62	01	Centre glazing bar - front	-	-
65	01	Overlap door stile	PC020	1820
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	-
73	04	Casement stay screws	F657	-
74	02	Ridge end cap	F556	-
78	01	Horizontal brace - short	M012	1250
82	02	Track support bracket	-	-
90	02	Gusset plate	F551	-

Components List 12' single door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	10	Side glazing bar	-	1447
02	02	Gutter	RG058	3736
03	02	Base sill - side	SIL010	3736
04	04	Diagonal bracing - side	-	1573
05	04	Corner post	-	1447
06	01	Base sill - rear	SIL050	2500
07	03	Intermediate glazing bar	-	1875
08	08	Diagonal bracing - front & rear	-	1530
09	06	Gusset plate	F550	-
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	-
16	02	Door post	-	1875
18	01	Base sill - front	SIL055	2500
19	02	Horizontal brace	M001	632
20	01	Door lintel & track	PB005	1270
22	01	Ridge bar	RB058	3736
23	10	Roof glazing bar	SR053	1494
24	04	Vent head	TV007	636
25	08	Vent side	TV037	606
26	04	Vent sill	TV027	610
27	04	Vent trimmer including casement stay keeper	TV016	638
28	02	Door stile	-	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA009	610
32	03	Door rail - intermediate (kick plate)	PA006	610
33	01	Lintel support bracket	F833	-
39	01	Centre glazing bar - rear gable	-	2308
40	15	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	142	'Z' clip	F205	-
44	476	Spring wire glazing clip	F105	-
45	02	Door seal	F905	1.78m
46	02	Door roller	F646	-
46	02	Door roller bolts & nuts	F656	-
47	02	Door track closure cap L & R	F658/847	-
50	280	Square head bolt M6 x 12	F005	-
51	280	Hexagonal nut M6	F005	-
52	02	Door stops	F652	-
53	02	Rainwater outlet - left	F553	-
54	02	Rainwater outlet - right	F554	-
55	01	10mm spanner	F655	-
56	01	Assembly instructions	FM047	-
59	19	Kickplate	-	610
62	01	Centre glazing bar - front	-	530
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	-
73	04	Casement stay screws	F657	-
74	02	Ridge end cap	F556	-
77	01	Front horizontal brace	M003	1250
78	02	Horizontal brace - short	L030	1250
90	02	Gusset plate	F551	-

Components List 12' double door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	10	Side glazing bar	-	1447
02	02	Gutter	RG058	3736
03	02	Base sill - side	SIL010	3736
04	04	Diagonal bracing - side	-	1573
05	04	Corner post	-	1447
06	01	Base sill - rear	SIL050	2500
07	02	Intermediate glazing bar	-	1875
08	08	Diagonal bracing - front & rear	-	1530
09	06	Gusset plate	F550	-
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	-
16	02	Door post	-	1875
18	01	Base sill - front	SIL055	2500
19	04	Horizontal brace	M001	632
20	01	Door lintel & track	PB007/011	2480
21	02	Door track support	-	-
22	01	Ridge bar	RB058	3736
23	10	Roof glazing bar	SR053	1494
24	04	Vent head	TV007	636
25	08	Vent side	TV037	606
26	04	Vent sill	TV027	610
27	04	Vent trimmer including casement stay keeper	TV016	638
28	03	Door stile	-	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA007	610
32	06	Door rail - intermediate (kick plate)	PA006	610
39	01	Centre glazing bar - rear gable	-	2308
40	15	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	142	'Z' clip	F205	-
44	476	Spring wire glazing clip	F105	-
45	04	Door seal	F905	1.78m
46	04	Door roller	F646	-
46	04	Door roller bolts & nuts	F656	-
47	02	Door track closure cap L & R	F658/847	-
50	280	Square head bolt M6 x 12	F005	-
51	280	Hexagonal nut M6	F005	-
52	04	Door stops	F652	-
53	02	Rainwater outlet - left	F553	-
54	02	Rainwater outlet - right	F554	-
55	01	10mm spanner	F655	-
56	01	Assembly instructions	FM047	-
59	18	Kickplate	-	610
62	01	Centre glazing bar - front	-	-
65	01	Overlap door stile	PC020	1820
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	-
73	04	Casement stay screws	F657	-
74	02	Ridge end cap	F556	-
78	01	Horizontal brace - short	M012	1250
82	02	Track support bracket	-	-
90	02	Gusset plate	F551	-

Components List 14' single door

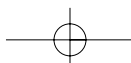
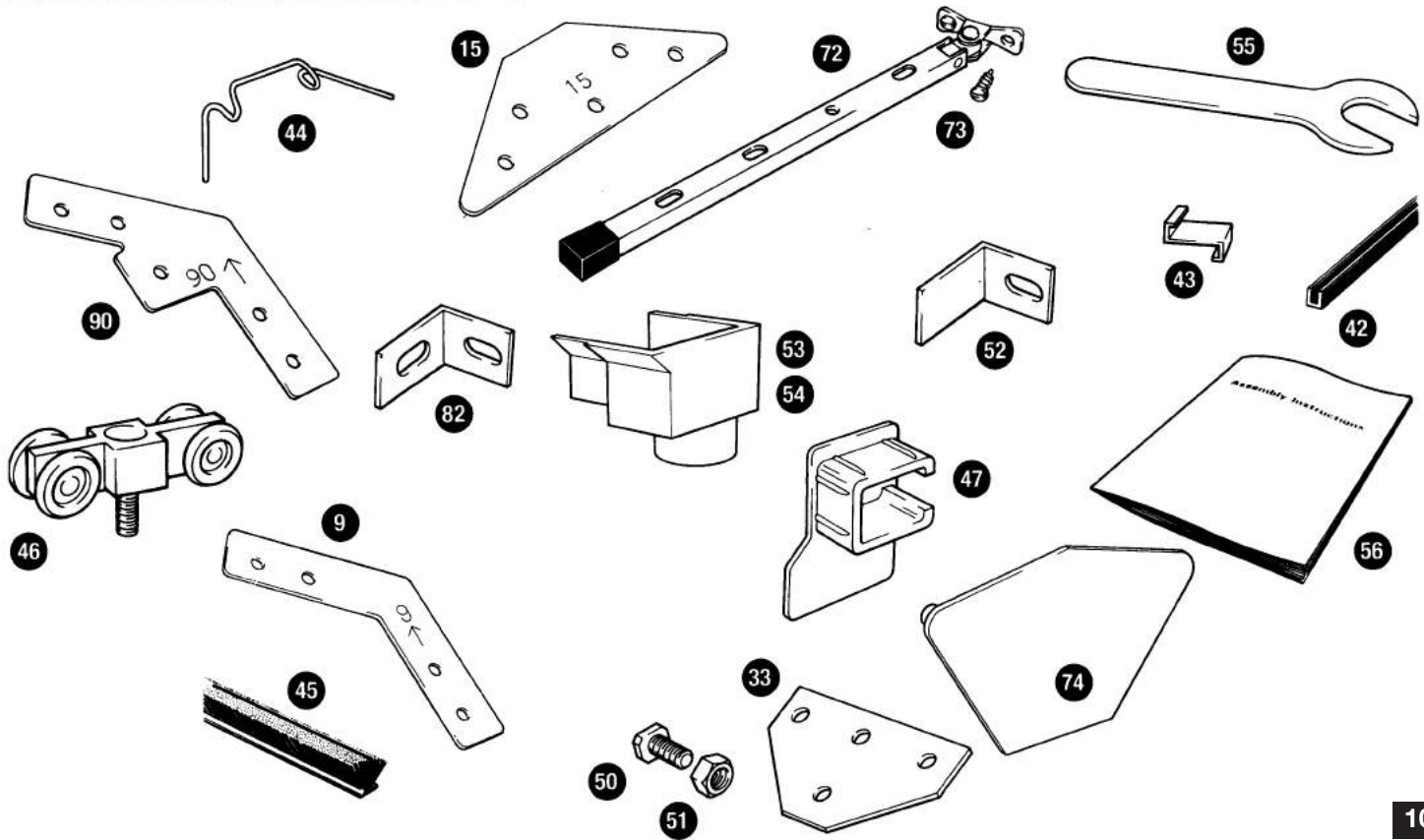
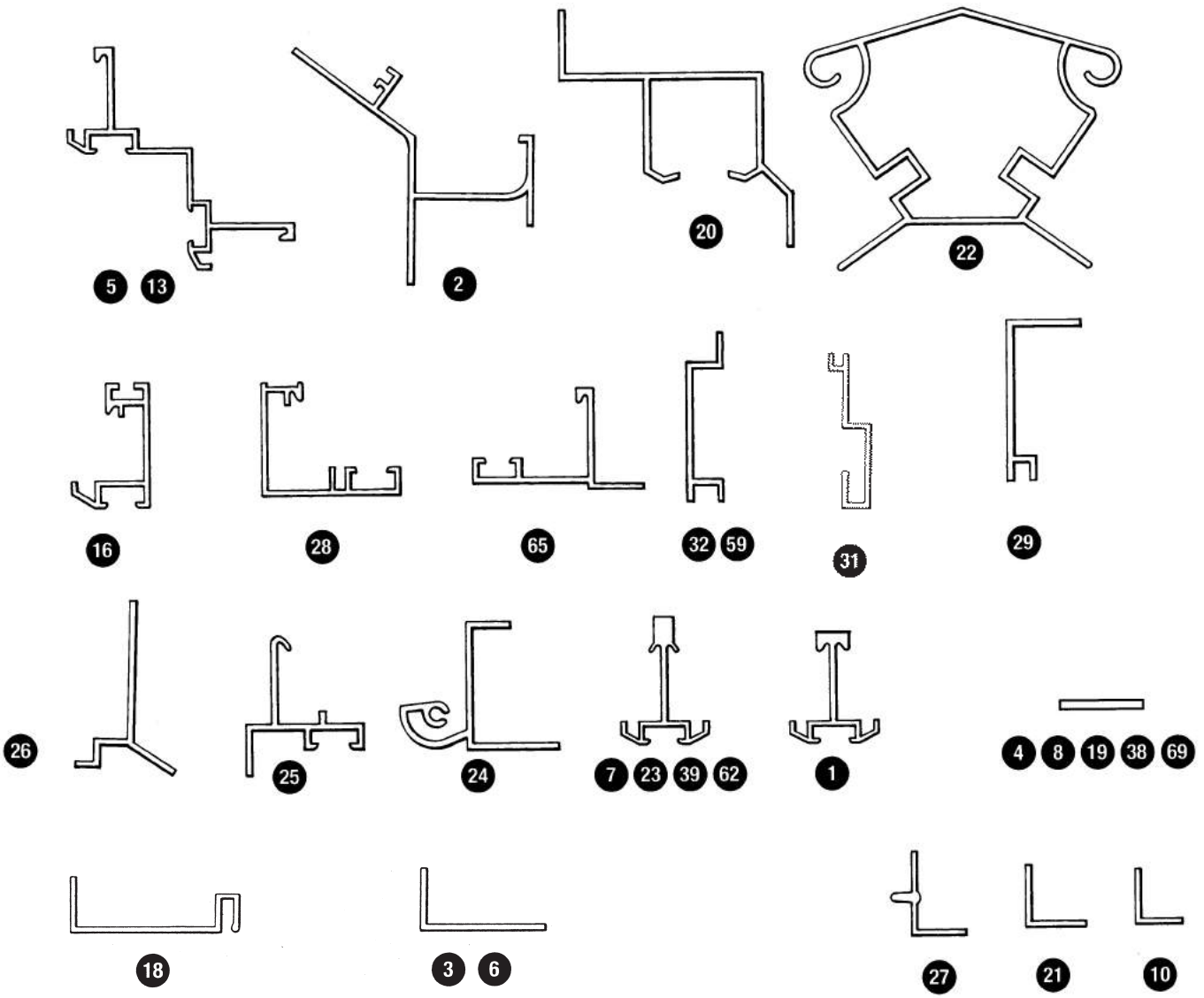
Pos. No.	Qty	Description	Ref. No.	Length mm
01	12	Side glazing bar	-	1447
02	02	Gutter	-	4354
03	02	Base sill - side	-	4354
04	04	Diagonal bracing - side	-	1573
05	04	Corner post	-	1447
06	01	Base sill - rear	SIL050	2500
07	03	Intermediate glazing bar	-	1875
08	08	Diagonal bracing - front & rear	-	1530
09	06	Gusset plate	F550	-
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	-
16	02	Door post	-	1875
18	01	Base sill - front	SIL055	2500
19	02	Horizontal brace	M001	632
20	01	Door lintel & track	PB005	1270
22	01	Ridge bar	RB058	4354
23	12	Roof glazing bar	SR053	1494
24	04	Vent head	TV007	636
25	08	Vent side	TV037	606
26	04	Vent sill	TV027	610
27	04	Vent trimmer including casement stay keeper	TV016	638
28	02	Door stile	-	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA009	610
32	03	Door rail - intermediate (kick plate)	PA006	610
33	01	Lintel support bracket	F833	-
39	01	Centre glazing bar - rear gable	-	2308
40	18	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	166	'Z' clip	F205	-
44	540	Spring wire glazing clip	F105	-
45	02	Door seal	F905	1.78m
46	02	Door roller	F646	-
46	02	Door roller bolts & nuts	F656	-
47	02	Door track closure cap L & R	F658/847	-
50	300	Square head bolt M6 x 12	F005	-
51	300	Hexagonal nut M6	F005	-
52	02	Door stops	F652	-
53	02	Rainwater outlet - left	F553	-
54	02	Rainwater outlet - right	F554	-
55	01	10mm spanner	F655	-
56	01	Assembly instructions	FM047	-
59	21	Kickplate	-	610
62	01	Centre glazing bar - front	-	530
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	-
73	04	Casement stay screws	F657	-
74	02	Ridge end cap	F556	-
77	01	Front horizontal brace	M003	1250
78	02	Horizontal brace - short	L030	1250
90	02	Gusset plate	F551	-

Components List 14' double door

Pos. No.	Qty	Description	Ref. No.	Length mm
01	12	Side glazing bar	-	1447
02	02	Gutter	-	4354
03	02	Base sill - side	-	4354
04	04	Diagonal bracing - side	-	1573
05	04	Corner post	-	1447
06	01	Base sill - rear	SIL050	2500
07	02	Intermediate glazing bar	-	1875
08	08	Diagonal bracing - front & rear	-	1530
09	06	Gusset plate	F550	-
10	01	Horizontal brace - rear	SIL050	2500
13	04	Gable bar	T056	1494
15	02	Apex gusset plate	F552	-
16	02	Door post	-	1875
18	01	Base sill - front	SIL055	2500
19	04	Horizontal brace	M001	632
20	01	Door lintel & track	PB007/011	2480
21	02	Door track support	-	-
22	01	Ridge bar	RB058	4354
23	12	Roof glazing bar	SR053	1494
24	04	Vent head	TV007	636
25	08	Vent side	TV037	606
26	04	Vent sill	TV027	610
27	04	Vent trimmer including casement stay keeper	TV016	638
28	03	Door stile	-	1820
29	01	Door rail - top	PA004	610
31	01	Door rail - bottom	PA007	610
32	06	Door rail - intermediate (kick plate)	PA006	610
39	01	Centre glazing bar - rear gable	-	2308
40	18	Eaves brace	M004	300
42	04	Glazing strip	FGL010	32m
43	166	'Z' clip	F205	-
44	540	Spring wire glazing clip	F105	-
45	04	Door seal	F905	1.78m
46	04	Door roller	F646	-
46	04	Door roller bolts & nuts	F656	-
47	02	Door track closure cap L & R	F658/847	-
50	300	Square head bolt M6 x 12	F005	-
51	300	Hexagonal nut M6	F005	-
52	04	Door stops	F652	-
53	02	Rainwater outlet - left	F553	-
54	02	Rainwater outlet - right	F554	-
55	01	10mm spanner	F655	-
56	01	Assembly instructions	FM047	-
59	20	Kickplate	-	610
62	01	Centre glazing bar - front	-	-
65	01	Overlap door stile	PC020	1820
69	04	Roof diagonal brace	M014	1612
72	02	Casement stay	F657	-
73	04	Casement stay screws	F657	-
74	02	Ridge end cap	F556	-
78	01	Horizontal brace - short	M012	1250
82	02	Track support bracket	-	-
90	02	Gusset plate	F551	-



Profiles and fittings - component identification



Method Of Assembly

Please read through these instructions carefully before you assemble the greenhouse.

Each kit contains a components list. Lay out the components and check all items against this list before you begin assembly.

Having established that the components are complete, familiarise yourself with each section by reference to the Identification Chart on previous page and to the labels on individual aluminium components.

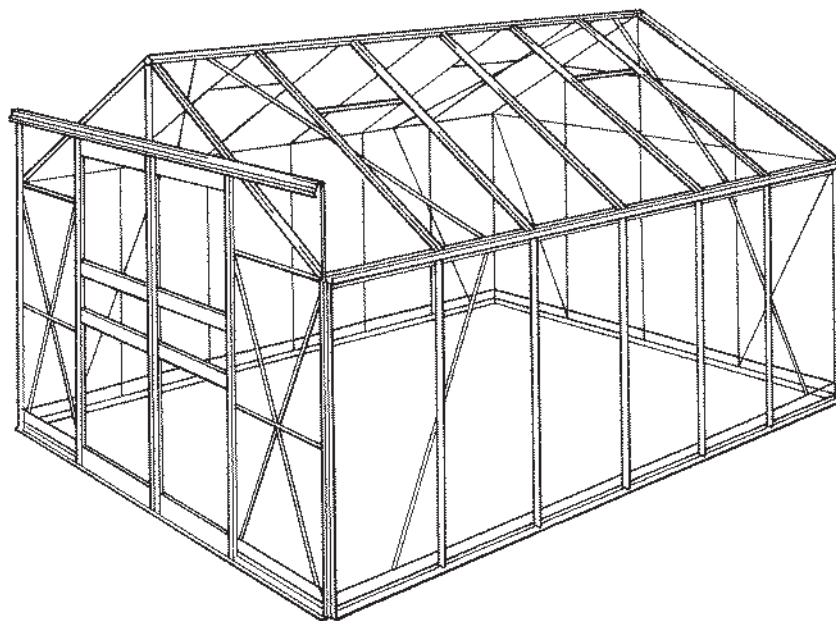
Please note that where several identical components are contained within the pack, these are bundled together, and the bundle identified by one label (e.g. roof glazing bars (23)).

IMPORTANT: The base of the greenhouse must be square and level before securing and glazing is commenced.

Please note that all illustrations are shown viewed from inside the greenhouse unless otherwise stated.

THE HIGHLINE

8 x 8 - 8 x 10 - 8 x 12 - 8 x 14

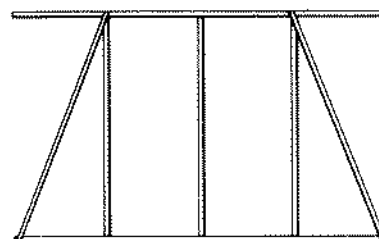


The greenhouse framework is assembled by using the square headed bolts and nuts provided. The glazing bars in the sides and roof are attached to the lateral members (ridge, eaves bar and base) by sliding the head of a bolt into the channel at the back of the glazing bar, and then inserting the thread of the bolt through the pre-punched holes located at intervals along the lateral members. The same procedure applies to the fixing of the glazing bars and door posts in the gable ends.

The bolt-carrying channels on the corner posts are used to hold the bolts which connect the corner posts to the side sill.

Assembly of Integral Staging

N.B. If you intend to fit Integral Staging we recommend that you position the side bracing as shown thereby creating room for the fixing brackets.



Side Frame Assembly

Lay out the side frame components as shown in the diagrams below.

Slide four square head bolts (50) into each of the outer glazing bars (1) and slide three square headed bolts into each of the remaining glazing bars (1).

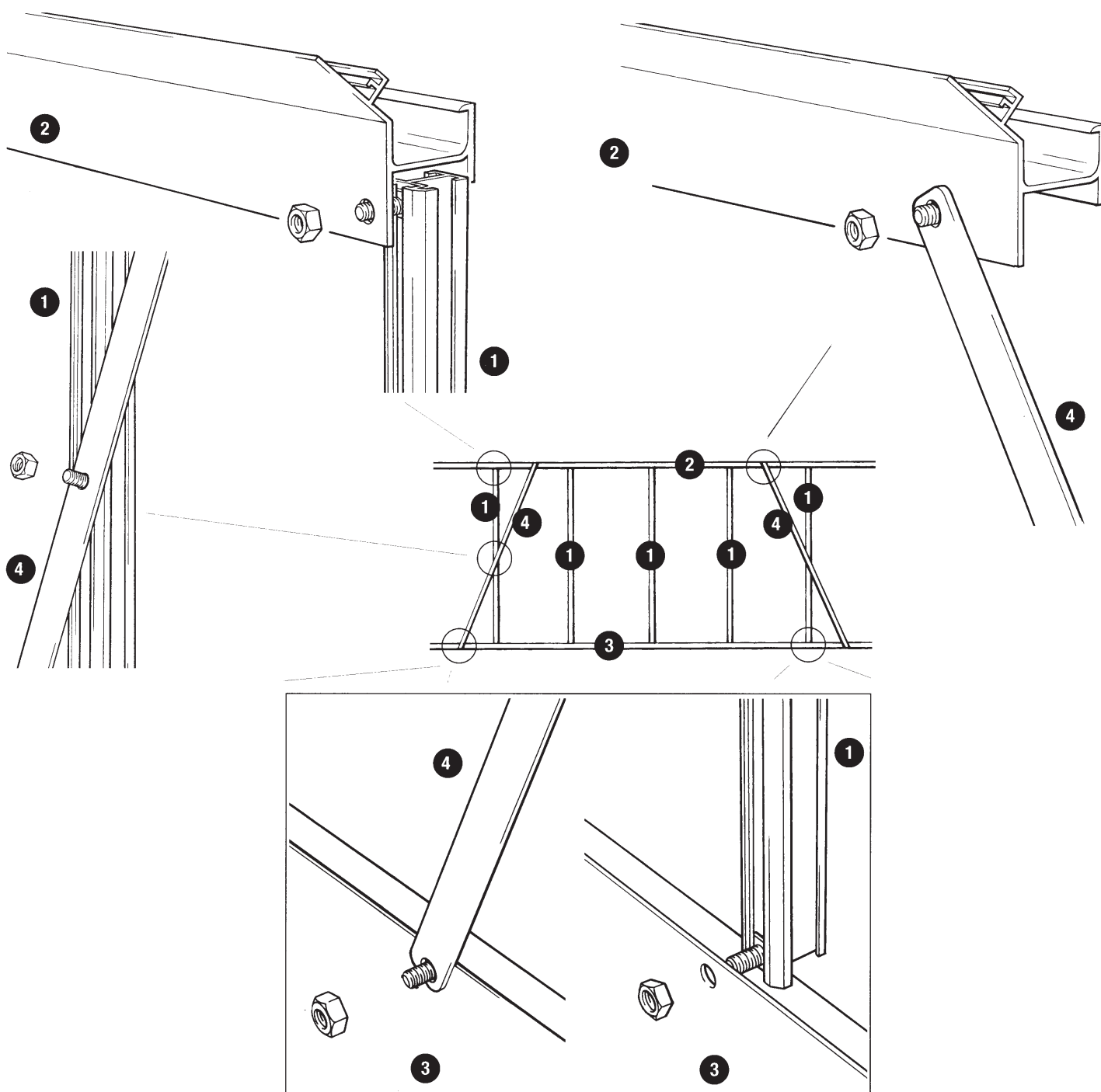
Now locate the uppermost bolt in each glazing bar (1) into the appropriate hole in the gutter (2) ensuring that the two components are located as shown in the inset diagram (upper left) and secure with a nut (finger-tight).

Using the lowermost bolt in each glazing bar, connect to the side sill/integral base (3) in a similar manner.

Now slide one bolt in each of the outer glazing bars (1) to a position above halfway (these bolts, and those in the remaining glazing bars, will later be used to fasten the eaves bracing (40).

Take the side diagonal braces (4) and with square headed bolts and nuts connect the gutter (2) and sill (3) as shown in the diagram on this page. Where the braces (4) cross the outer glazing bars (1) locate a pre-positioned square headed bolt through each of the centrally placed holes in the braces and secure with a nut.

Check that the side frame assembly is square and true and then fully tighten the bolts and nuts.



Assembly of rear gable

Stage 3

1. Identify and lay out the components on the ground in the configuration shown in the main diagram for this assembly.

2. Slide four square headed bolts into one channel of each of the corner posts (5). Connect the lowermost bolt in each corner post (5) to the outer holes of the rear sill (6) and at the same time attach a diagonal flat brace (8) ensuring that the components are positioned as shown in the lower diagram on this page.

3. Now slide five square headed bolts into the intermediate glazing bars (7) and four bolts into the centre glazing bar (39). Connect the lowermost bolt in the intermediate glazing bars (7) to the appropriate hole in the rear sill (6). Fasten the centre glazing bar (39) to the rear sill (6).

4. Using the two uppermost bolts in the corner posts (5) loosely connect a gusset plate (9) to the top of each, ensuring that the components are positioned as shown in the diagram along side.

5. Fasten the rear horizontal brace (10) to the upper bolt holding each gusset plate (9) to corner post (5) and to one of the pre-positioned bolts in the intermediate glazing bars (7) and centre glazing bar (39).

6. Use the bolt below that connecting the rear horizontal brace (10) to each intermediate glazing bar (7) to secure the loose end of either diagonal flat brace (8).

7. Connect a diagonal brace (8) to the lower bolt on the gusset plate (9) and the bolt holding the intermediate glazing bar (7) to the rear sill (6).

8. Two bolts should be left in the intermediate (7) and centre (39) glazing bars above the rear horizontal brace (10). These bolts will later be used to fasten the gusset plates (9) connecting these components to the gable bars (13).

9. Fasten a gusset plate (9) to each intermediate glazing bar (7) using the uppermost two bolts in each component.

10. Now slide six bolts into one of the channels of each of the gable bars (13).

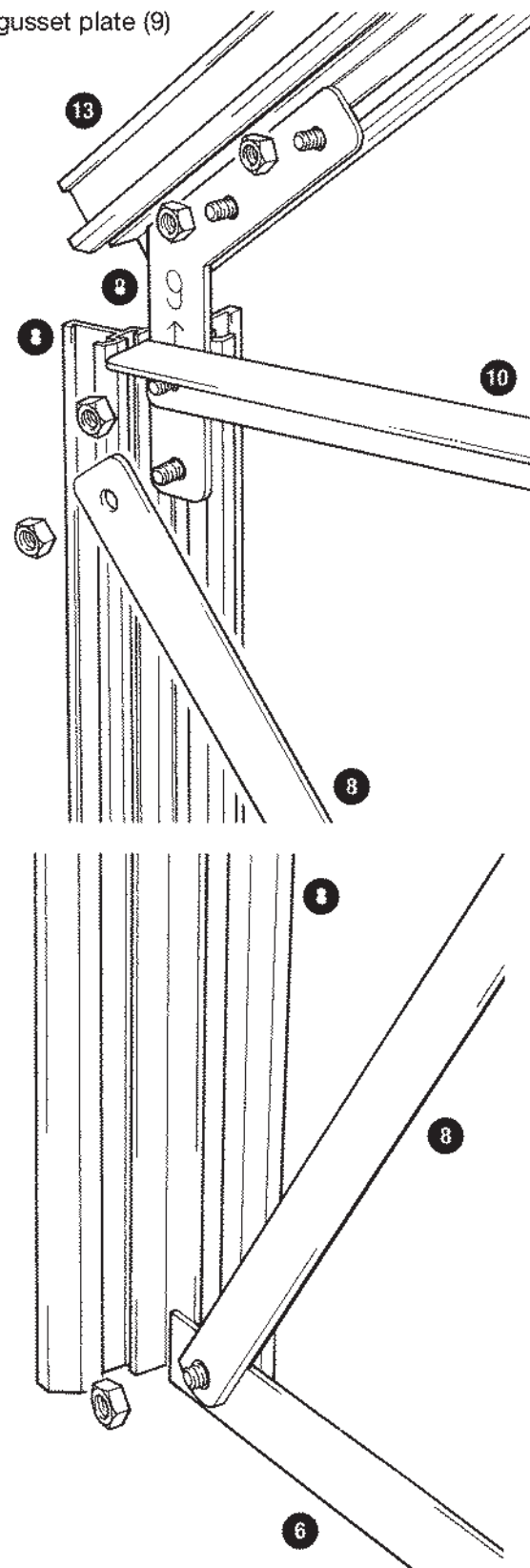
11. Position four of the bolts in each gable bar (13) so that you can connect the gusset plates (9) which are fastened to the top of the corners (5) and the intermediate glazing bars (7).

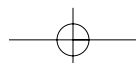
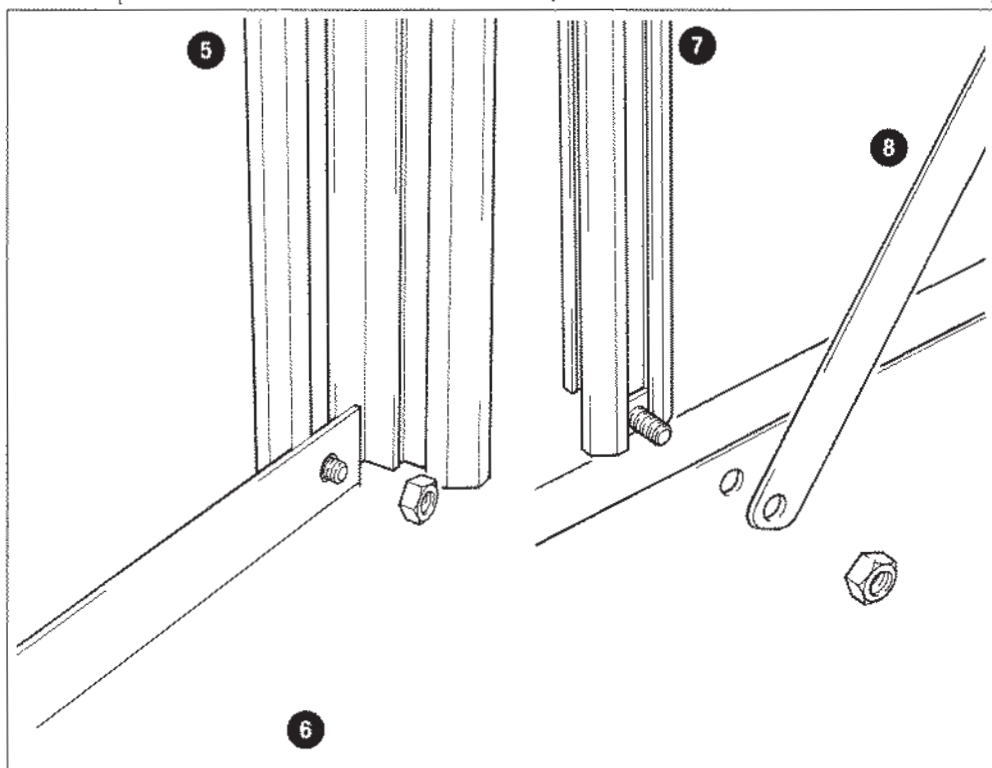
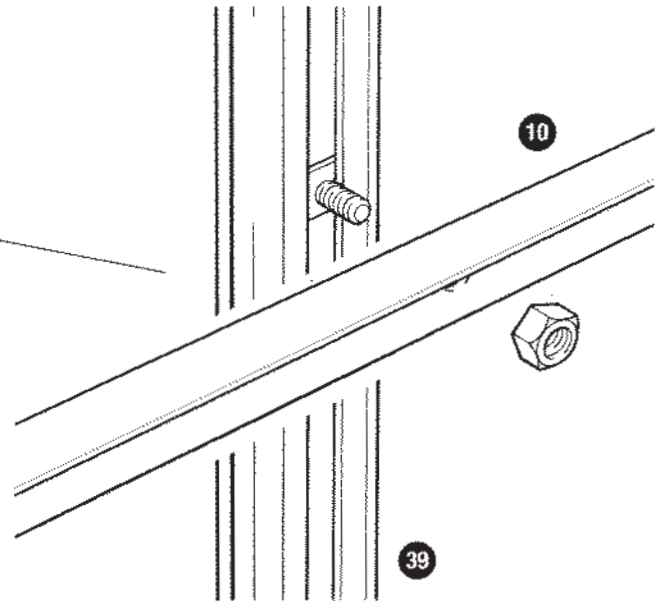
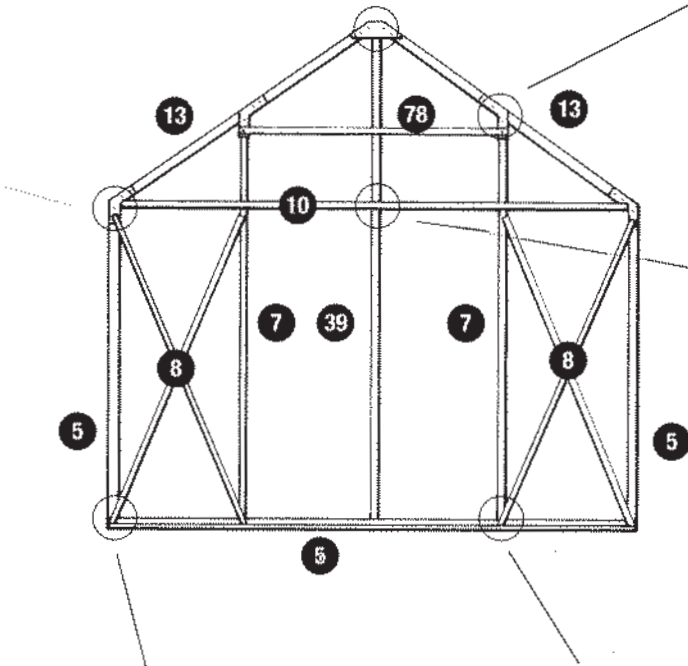
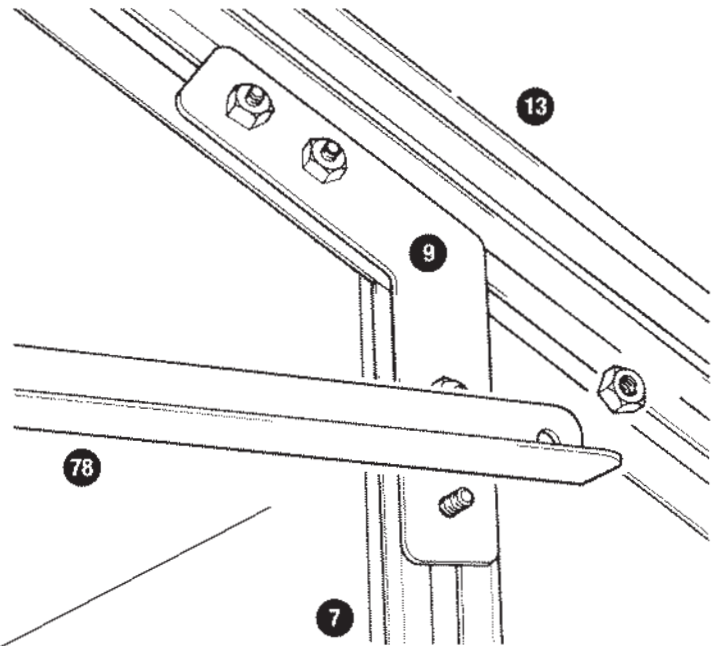
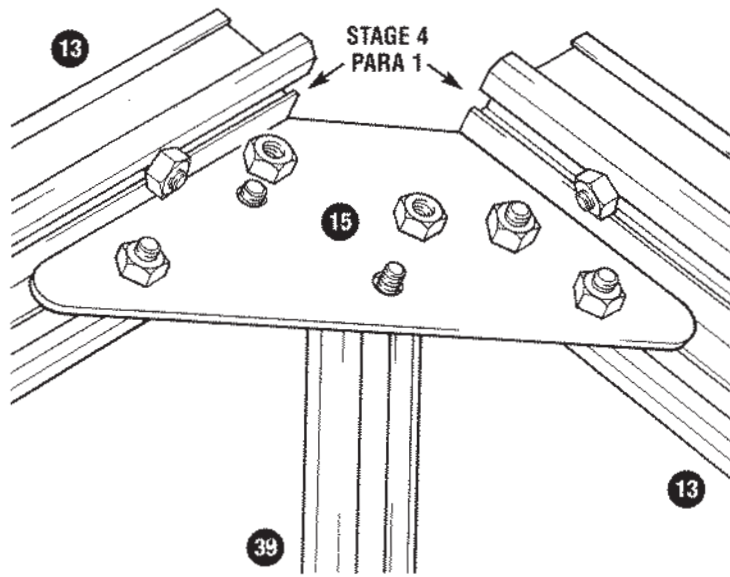
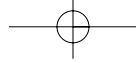
12. Secure the shorter rear horizontal brace (78) to the gusset plates (9) which are already fastened to the intermediate glazing bars (7).

13. Loosely attach the apex gusset plate (15) to the uppermost bolts in each gable bar (13).

14. Connect the centre glazing bar (39) to the shorter rear horizontal brace (78) and to the apex gusset plate (15).

15. Leave all bolts and nuts finger tight until the completion of stage 6. (Then using a set square and spirit level where appropriate, ensure that the gable end is square and true and fully tighten all bolts and nuts.)

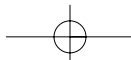
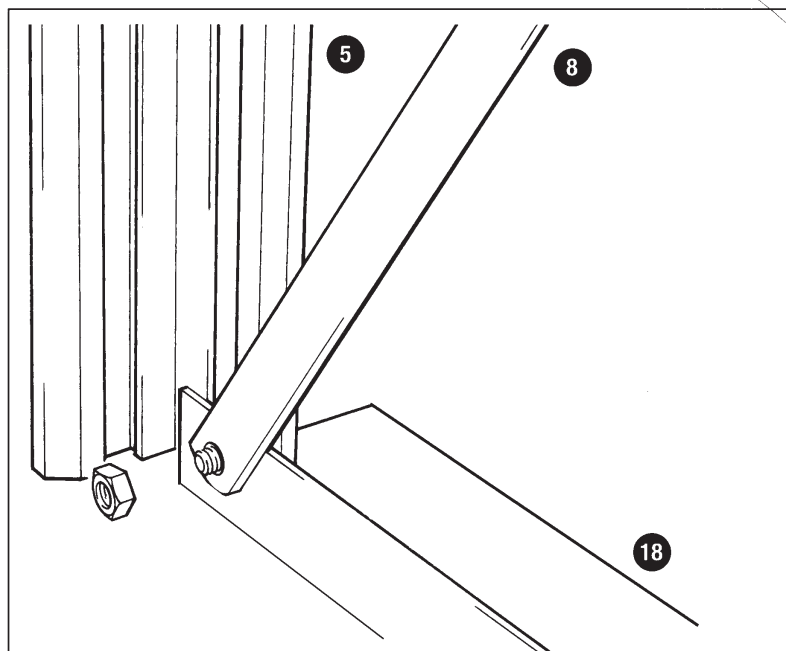
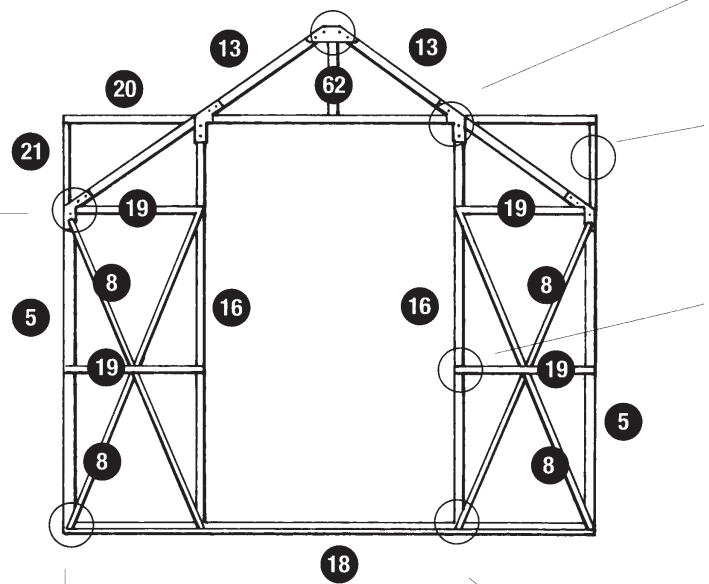
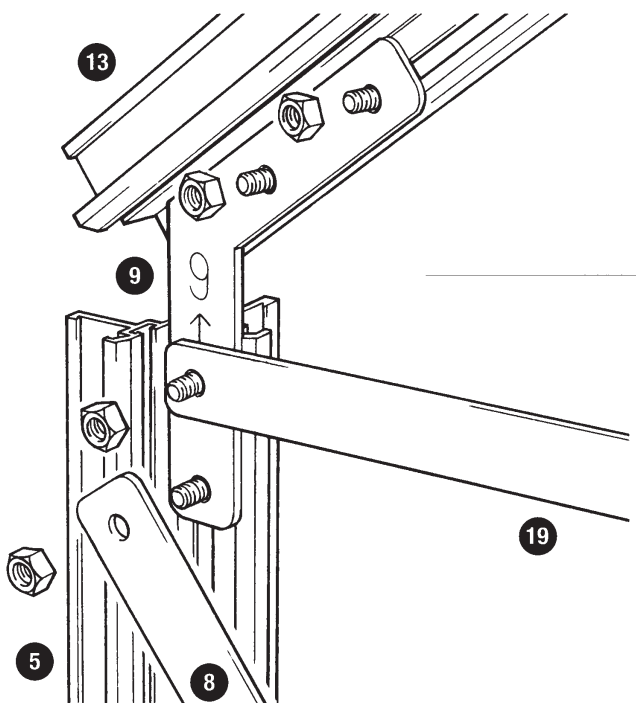
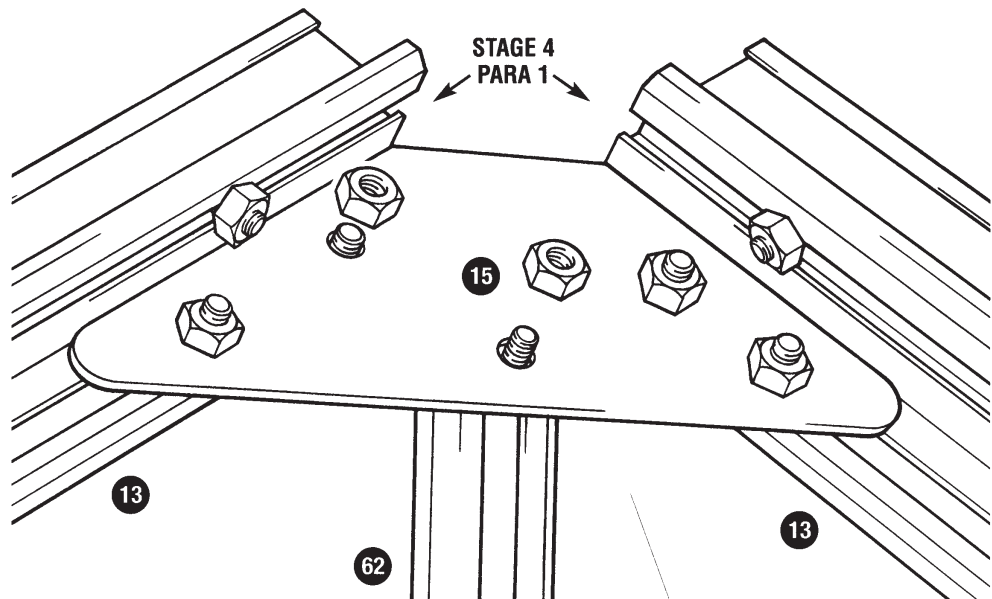
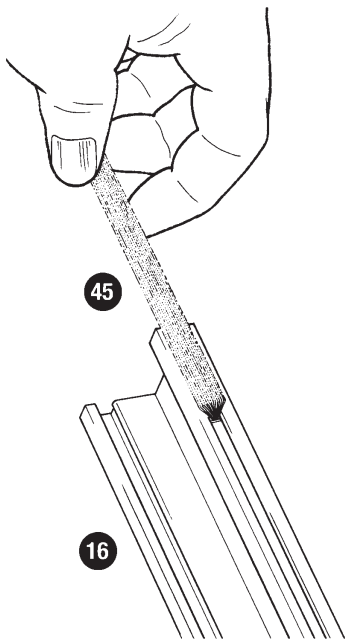


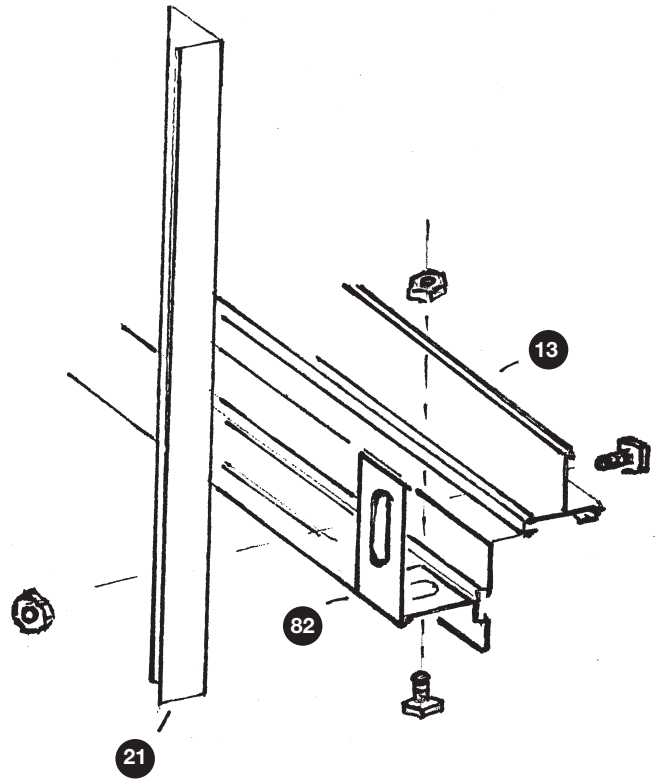
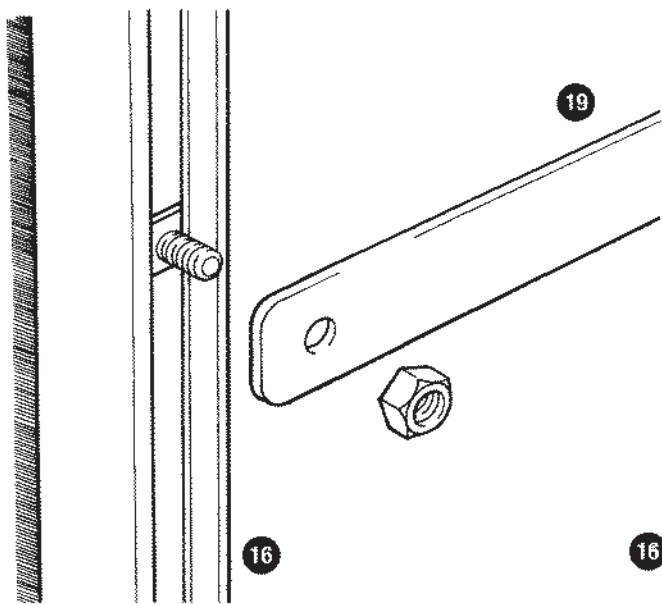
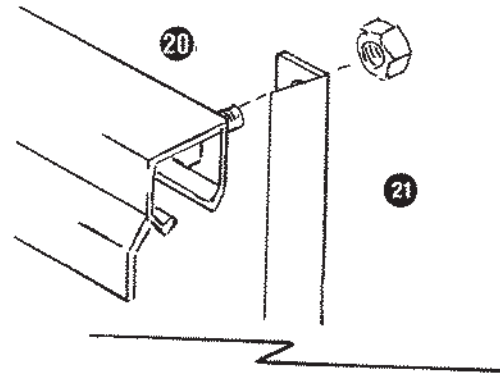
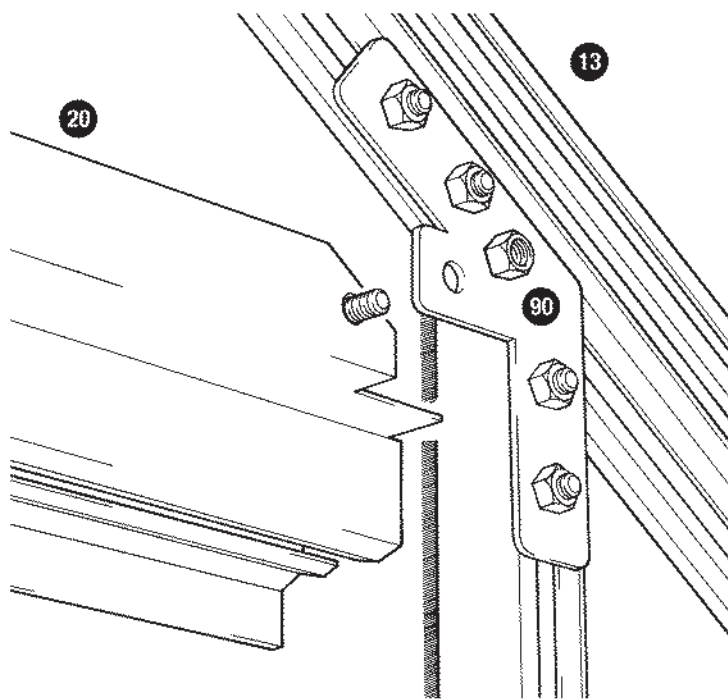


Assembly of Door Gable Double Door

Double Door Assembly Stage 2

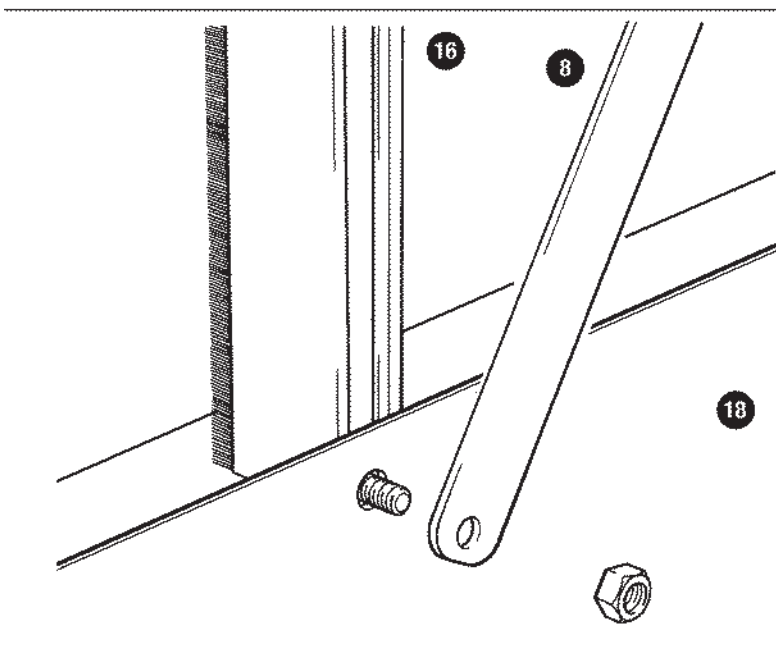
1. Identify and lay out the components on the ground in the configuration shown in the main diagram for this assembly.
2. Slide door sealing strip (45) into door posts (16). Now slide four square headed bolts into one channel of each of the corner posts (5). Connect the lowermost bolt in each corner post (5) to the outer holes of the front sill (18) and at the same time attach a diagonal brace (8) ensuring that the components are positioned as shown in the diagram.
3. Now slide six square headed bolts into the door posts (16). Ensure that the flat face of the door posts (16) is facing into the door opening and connect the lowermost bolt in each door post (16) to the appropriate hole in the front sill (18).
4. Using the two uppermost bolts in the corner posts (5) loosely connect a gusset plate (9) to the top of each, ensuring that the configuration is as shown in the inset diagram.
5. Fasten a horizontal brace (19) to the hole on each gusset plate (9) and to the adjacent door post (16). Use the bolt below that connecting the horizontal brace to the door post (16) to secure the loose end of either diagonal flat brace (8). Two bolts should be left in the door post (16) above the bracing (19). These bolts will later be used to fasten the gusset plates connecting these components to the gable bars (13).
6. Connect a diagonal angle brace (8) to the lower bolt on the gusset plate (9) and the bolt holding the door post (16) to the front sill (18).
7. Now connect the horizontal braces (19) between the corner posts (5) and the adjacent door posts (16). Align the centrally placed hole in the horizontal brace (19) with the corresponding holes in the diagonal braces (8) and secure with a square headed bolt and nut.
8. Attach a gusset plate (90) to each door post using the uppermost two bolts in each component.
 - 8a. Ensure that gable bars are positioned with pre-drilled holes at lower outside edge to enable the fixing of the door track support bracket (82). See page 16.
9. Now slide six bolts into one of the channels of each of the gable bars (13).
10. Position four of the bolts in each gable bar so that you can connect the gusset plates (9) and (90) which are attached to the top corners (5) and the door posts (16).
11. Secure the lintel with door track attached (20) to the 'nose' projecting from the gusset plates (90) which are already fastened to the door posts (16).
12. Loosely attach the apex gusset plate (15) to the uppermost bolts in each gable bar (13).
13. Connect the central glazing bar (62) to the apex gusset plate (15) and door lintel (20).
14. Leave all bolts and nuts finger tight until the completion of stage 6. (Then using a set square and spirit level where appropriate, ensure that the gable end is square and true and fully tighten all bolts and nuts).

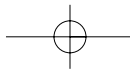




Right Hand Side Illustration

The door track support (21) is connected to the gable bar with small right angled bracket. The smaller leg of bracket fits onto gable bar and the longer leg to track support. The top of track support is fitted to the door track by bolt through pre-drilled hole. This operation should be left until doors are fitted.

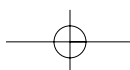


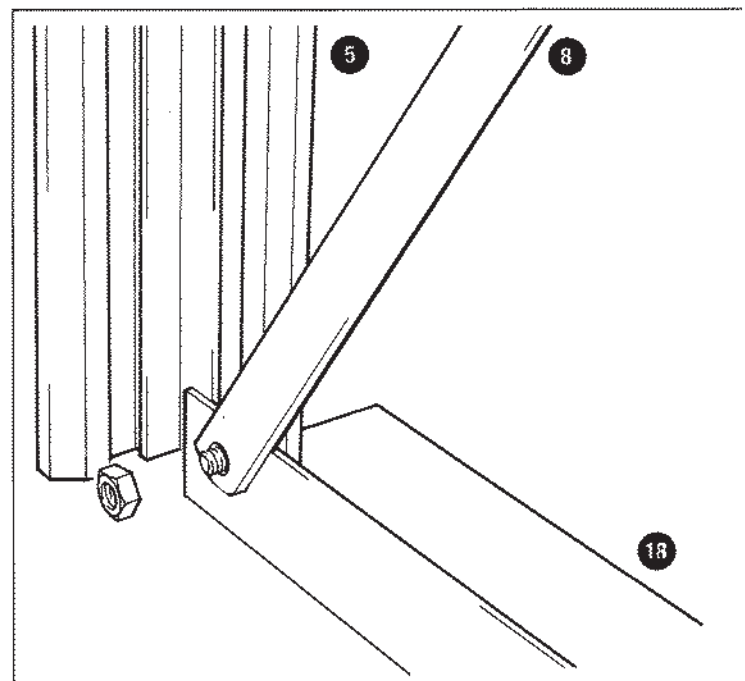
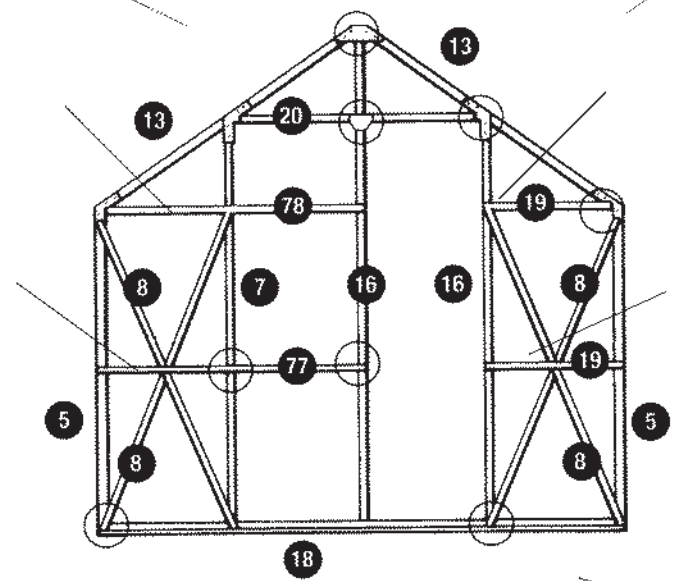
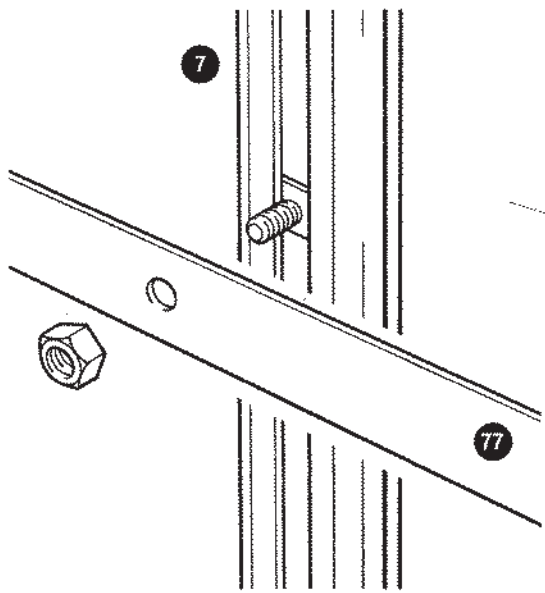
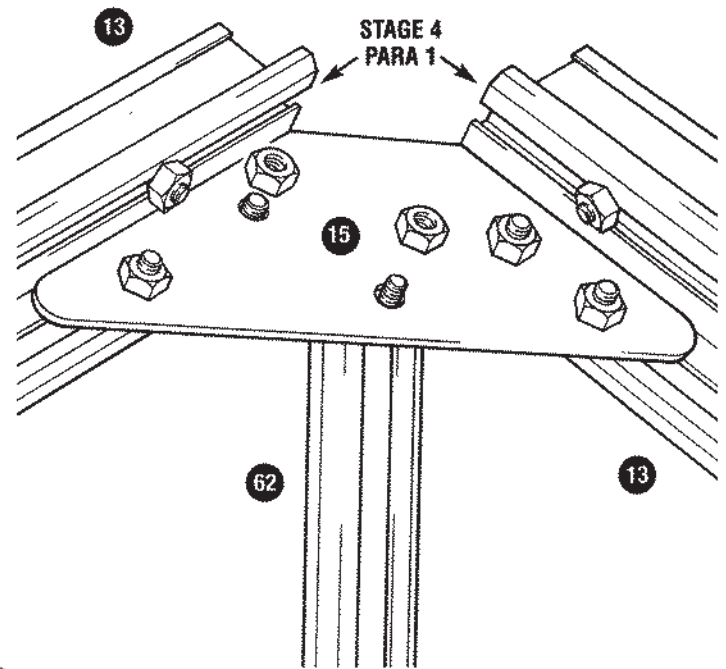
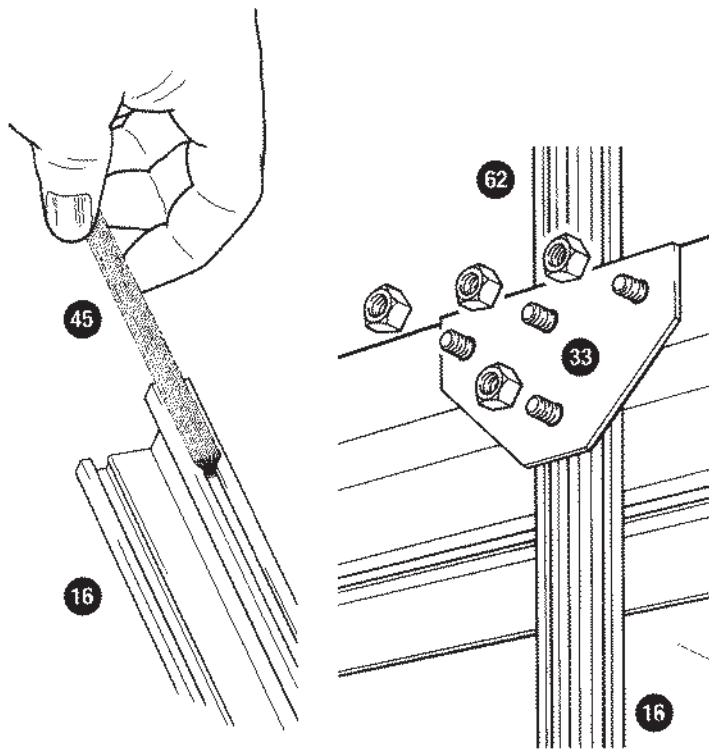


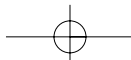
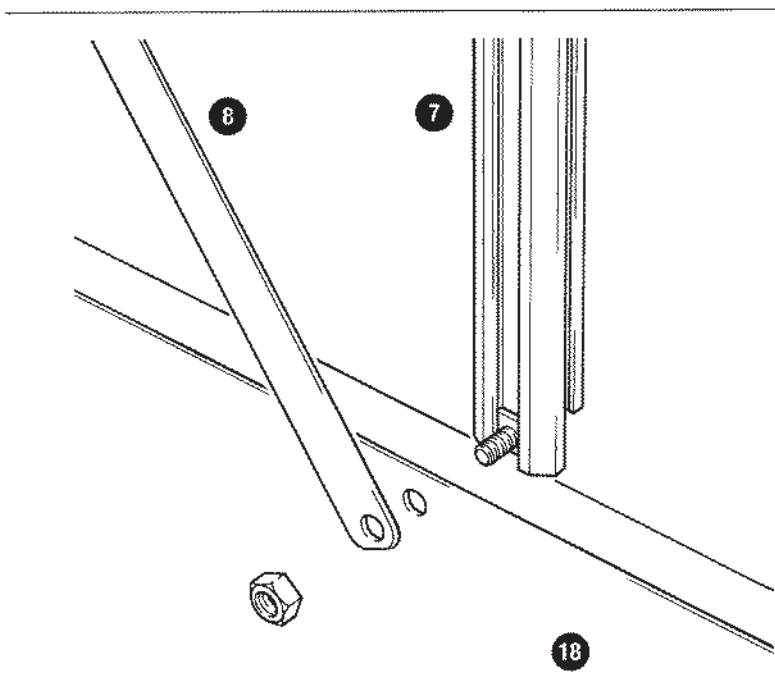
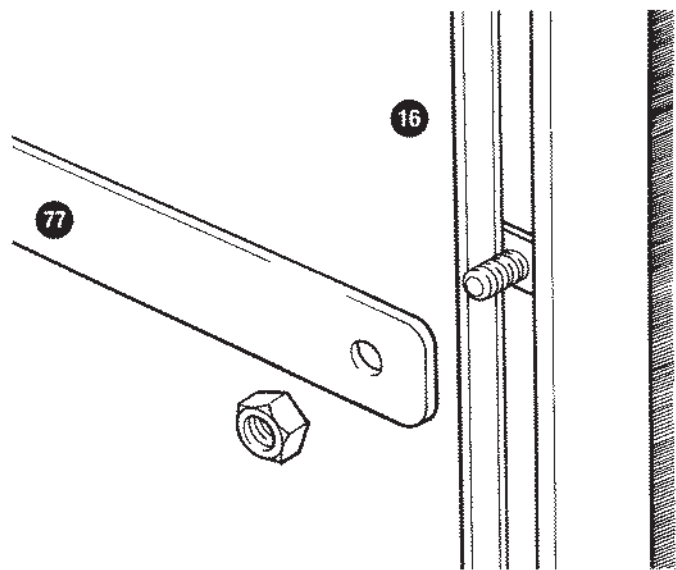
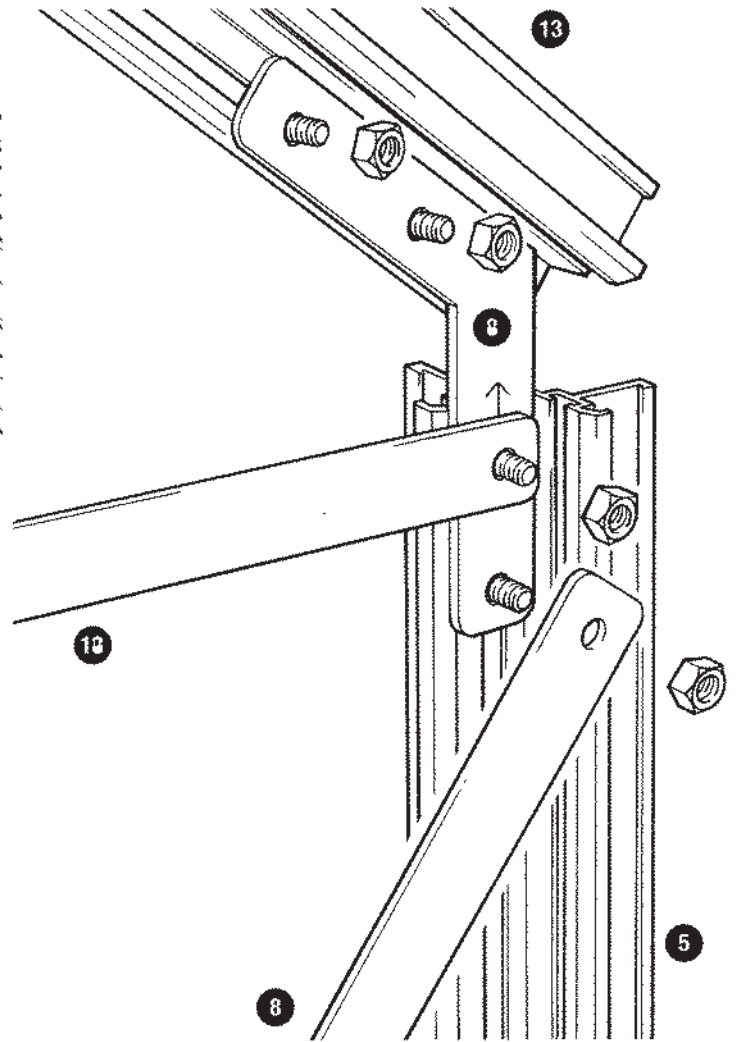
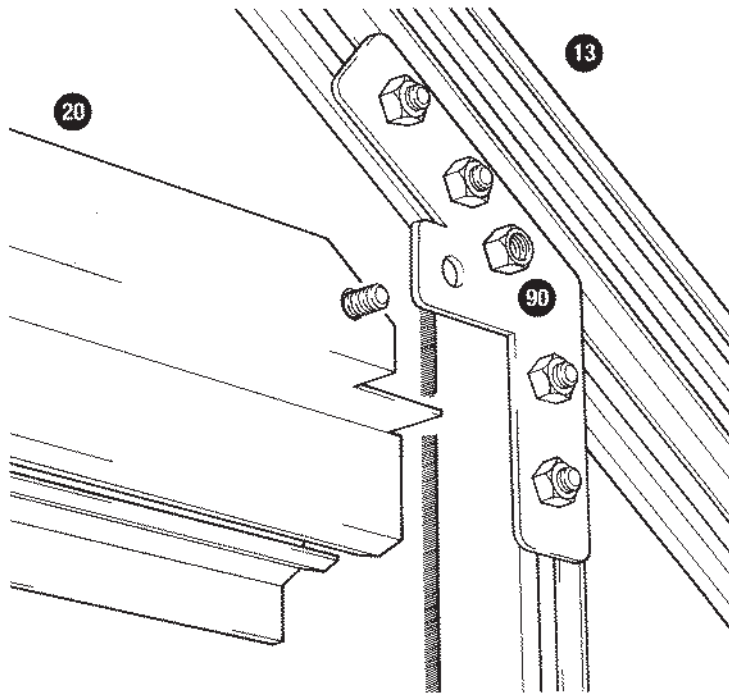
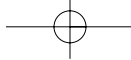
Assembly of Door Gable Single Door

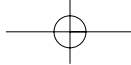
Single Door Assembly

1. Slide door sealing strip (45) into door posts (16). Now slide four square headed bolts into each of the corner posts (5). Connect the lowermost bolt in each corner post (5) to the outer holes of the front sill (18) and at the same time attach a flat diagonal brace (8) ensuring that the components are positioned as shown in the inset diagram.
2. Decide where you wish to position the door opening.
3. Now slide five square headed bolts into the outer door post (16) and the intermediate glazing bar (7) and three bolts into the centrally placed door post (16). Connect the lowermost bolt in the outer door post (16) and intermediate glazing bar (7) to the appropriate hole in the front sill (18).
4. Ensure that the flat face of each door post (16) is facing into the door opening then fasten the central door post (16) to the front sill (18).
5. Using the two uppermost bolts in the corner posts (5) loosely connect a gusset plate (9) to the top of each, ensuring that the configuration is as shown in the inset diagram.
6. Your chosen door position will determine the position of the horizontal (angle) braces (19) and (38) which should now be fastened to the hole on each gusset plate (9) and to the corresponding door post (16) and glazing bar (7).
7. Use the bolt below that connecting the horizontal brace to the door post (16) glazing bar (7) to secure the loose end of either diagonal flat brace (8).
8. Two bolts should be left in the door post (16) and glazing bar (7) above the horizontal bracing (19) and (38). These bolts will later be used to fasten the gusset plates (90) connecting these components to the gable bars (13).
9. Connect a diagonal brace (8) to the lower bolt on each gusset plate (9) and the bolt holding the door post (16)/inter glazing bar (7) to the front sill (18).
10. Now connect the horizontal braces (19) and (38) between the corner posts (5) and the adjacent door posts (16). Align the centrally placed hole in the horizontal brace (19) and off-set hole in the horizontal brace (19) and off-set hole in the horizontal brace (38) with the corresponding holes in the diagonal braces (8) and secure with a square headed bolt and nut.
11. Connect the end of the longer horizontal brace (38) to the central door post (16).
12. Fasten a gusset plate (90) to the outer door post (16) and glazing bar (7) using the uppermost two bolts in each component.
13. Now slide six bolts into one of the channels of each of the gable bars (13).
14. Position four of the bolts in each gable bar (13) so that you can connect the gusset plates (9) and (90) which are fastened to the top of the corners (5), the door post (16) and glazing bar (7).
15. Secure the door track and lintel (20) to the 'nose' projecting from the gusset plates (90) which are already fastened to the door post (16) and glazing bar (7).
16. Connect the lintel support bracket (33) to the door track and lintel and the central door post (16).
17. Loosely attach the apex gusset plate (15) to the uppermost bolts in each gable bar (13).
18. Connect the central glazing bar (62) to the apex gusset plate (15) and door track and lintel (20).
19. Leave all bolts and nuts finger tight until the completion of stage 6.
20. Then using a set square and spirit level where appropriate, ensure that the gable end is square and true and fully tighten all bolts and nuts.





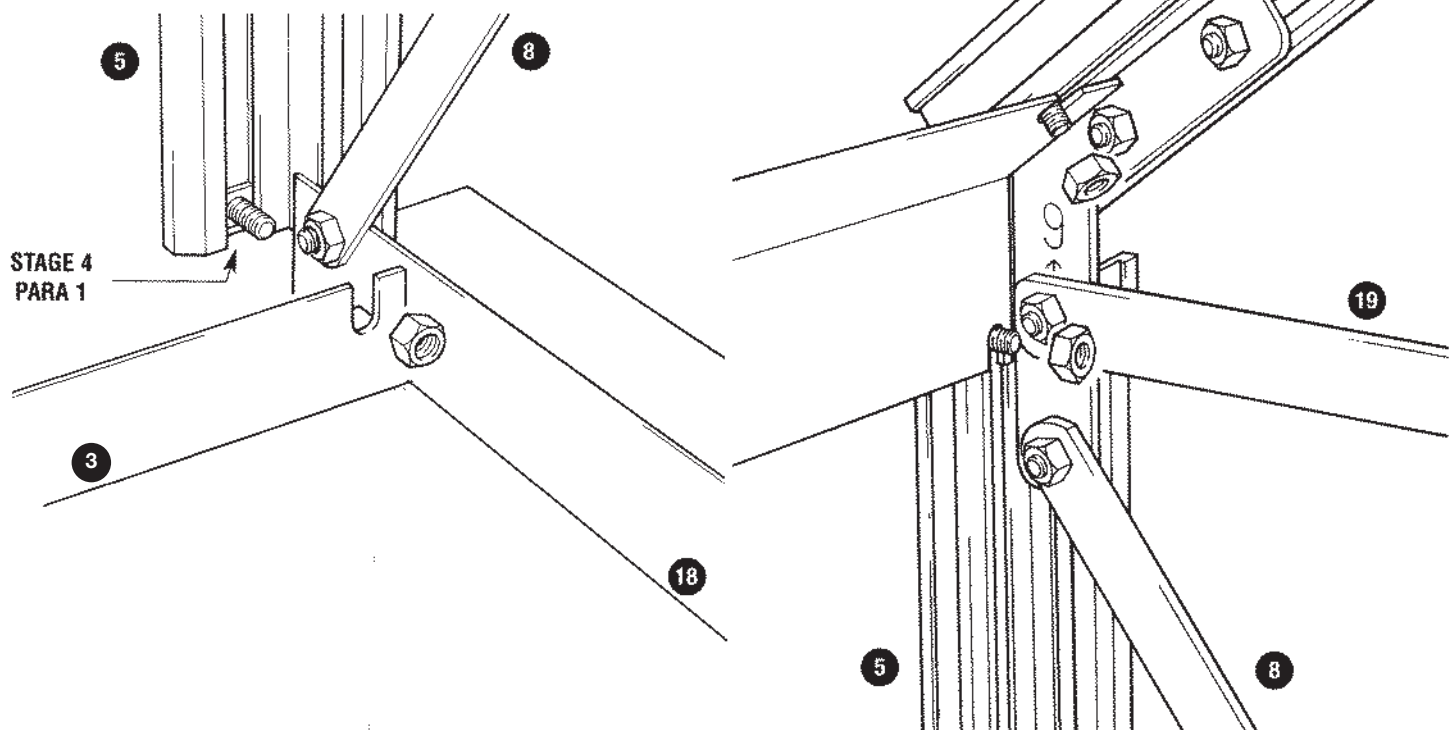




Assembly of gable ends to sides

Stage 4

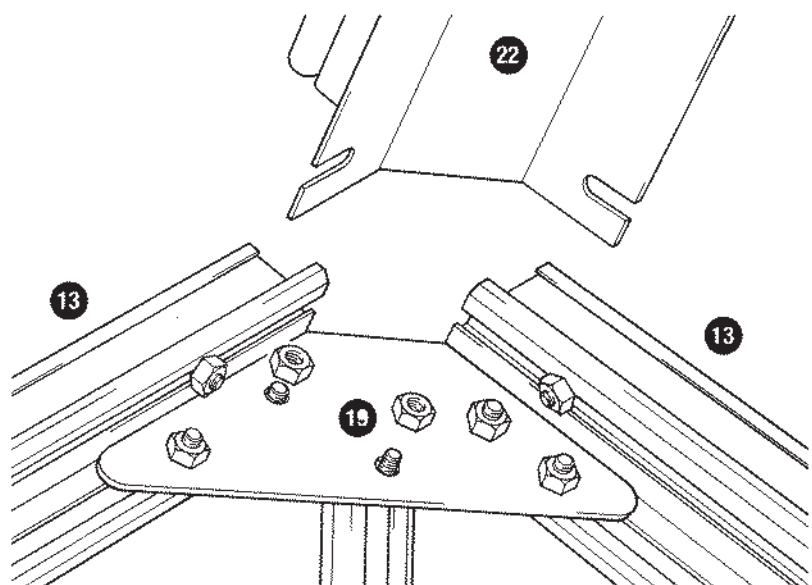
1. Take eight square headed bolts and slide one into the open channel at each end of the gable bars (13) and corner posts (5). Hold temporarily in position approximately 5cm in from the end of each profile with a finger-tight nut.
2. Elevate door gable.
3. Take completed side section and offer the eaves bar (2) into position between the corner post and gable bar and locate side sill (3) beneath corner post.
4. Release finger-tight nuts in corner post and gable bar and slide bolts into locating slots in eaves bar (2) and side sill (3). Tighten nuts to secure the assembly.
5. Repeat procedure to secure rear gable.
6. Repeat for opposite side section.



Fixing of ridge bar

Stage 5

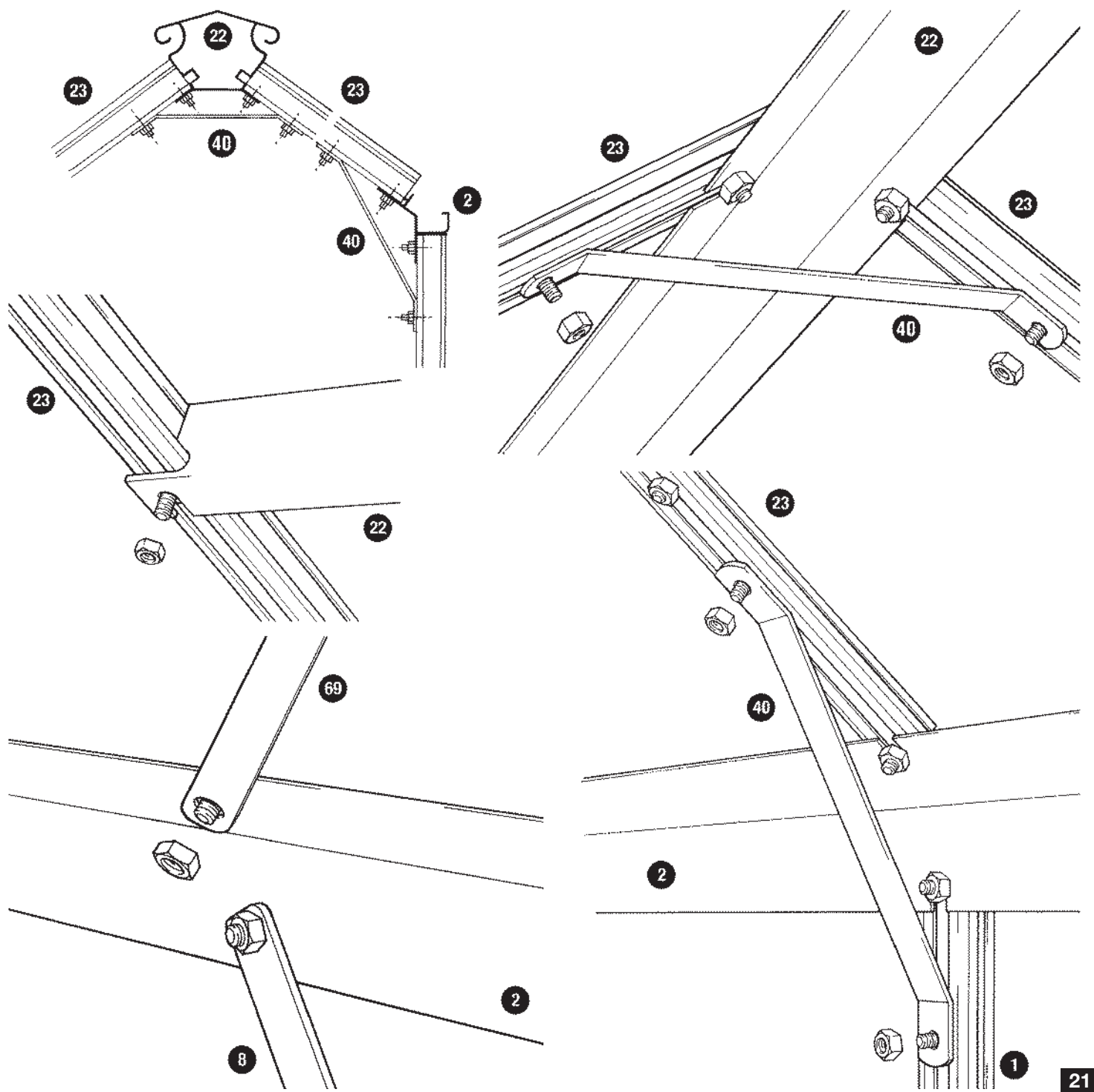
1. Locate ridge bar (22) so that the flanges are underneath the gable bars (13) as shown in the diagram.
2. Release finger-tight nuts on remaining bolts in gable bars (13) and slide bolts into locating slots in ridge bar (22). Tighten nuts to secure the ridge bar in position.



Roof glazing bars and braces

Stage 6

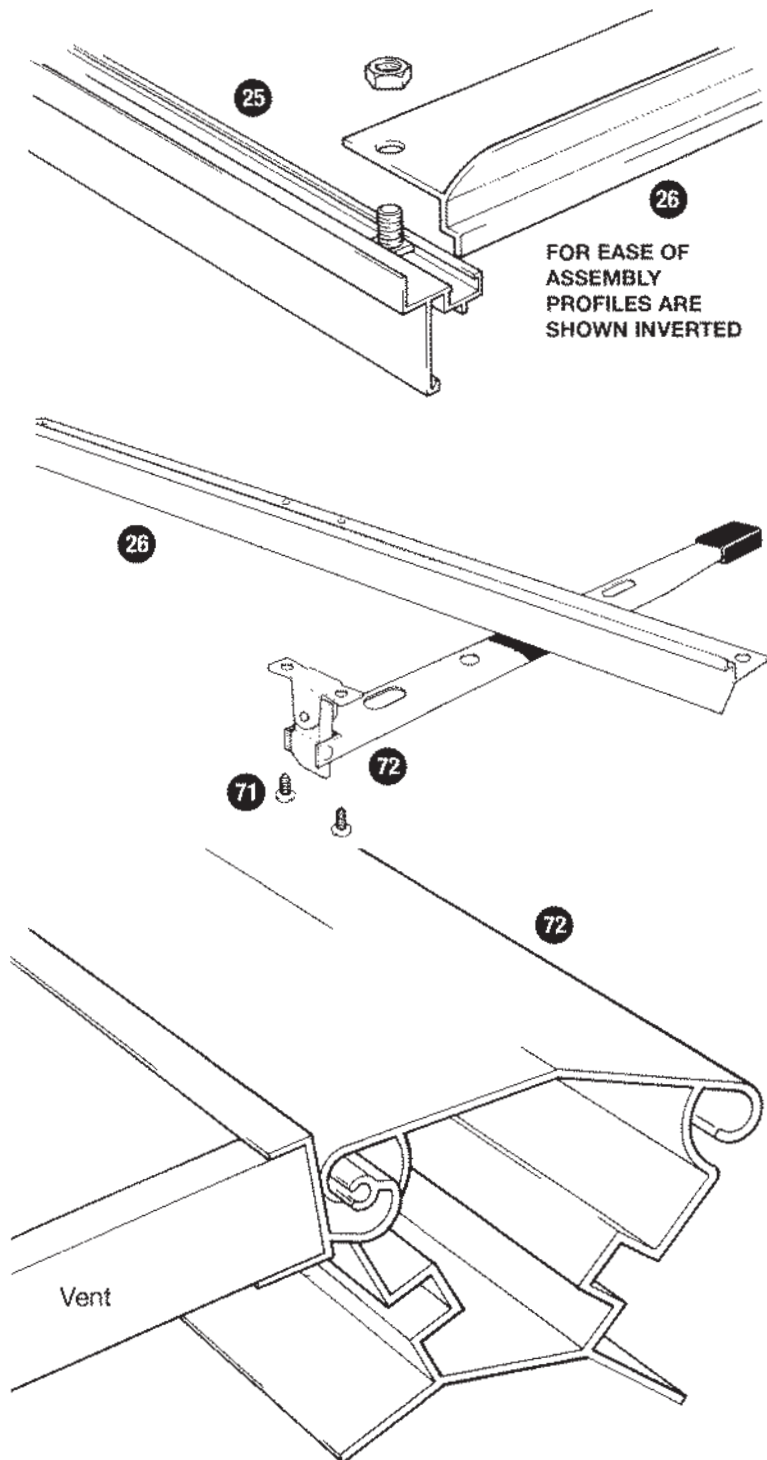
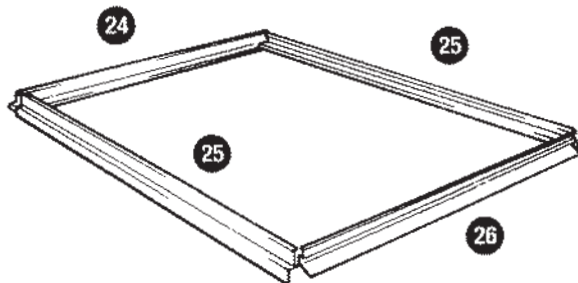
1. Determine at which position you require the roof ventilators and slide five square headed bolts into the roof glazing bars (23) which are to be fastened at either side of this position.
2. Slide four square headed bolts into each of the remaining glazing bars (23).
3. Locate and secure the roof glazing bars (23) to the ridge (22) and eaves bars (2) using two of the pre-positioned square headed bolts and nuts.
4. Locate and secure roof diagonal braces (69) to ridge bar (22) and eaves bar (2) (see diagram).
5. Secure roof braces (40) between each pair of roof glazing bars (23) using two of the pre-positioned square headed bolts and nuts.
6. Secure the eaves braces (40) between adjacent roof glazing bars (23) and side glazing bars (1) using the square headed bolts and nuts which have been pre-positioned in each profile.



Vent Assembly

Stage 8

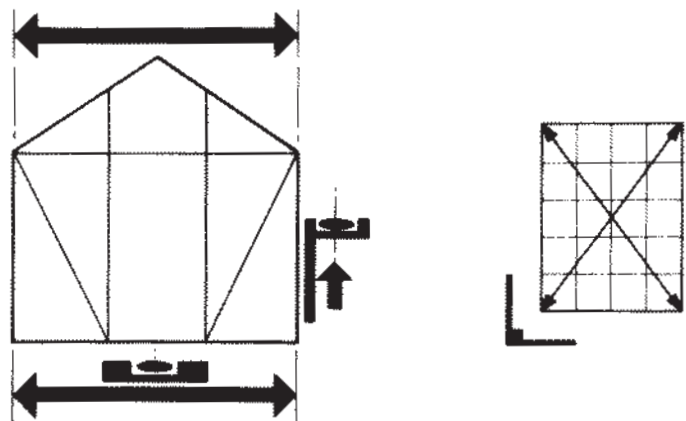
1. The vent assembly is made up of a head (24), two sides (25), a vent sill (26) and is glazed with a sheet of glass 610mm x 610mm.
2. Place two bolts through the pre-punched holes in the vent head, slide both vent sides (25) over the bolt heads and secure with nuts.
3. Place a square-headed bolt into the hole at each end of the vent sill (26) and loosely attach hexagonal nuts. Slide the heads of the bolts into the bolt channel of each vent side (25) and finger-tighten the hexagonal nuts.
4. Fit glazing strip (42) to the vent sides (25) only. Then glaze the vent with a pane of glass 610 mm x 610 mm and secure with four spring wire glazing clips (44) (see illustration on page 23).
5. Assemble casement stay (72) to vent sill (26) using screws provided.
6. Apply grease to the curved hinge joint at the vent head and slide the vent along the ridge bar to the required position. Now slide the vent trimmer (27) into position ensuring that the vent sits on the trimmer and then tighten the trimmer bolts to the roof glazing bars.



Square and True

Stage 7

1. Using a set-square and spirit level where appropriate, ensure that the whole assembly is square and each upright is vertical.
2. It is a useful check that the measurement across each gable end is the same at ground level and eaves height.
3. Tighten all nuts.



Glazing

Stage 9

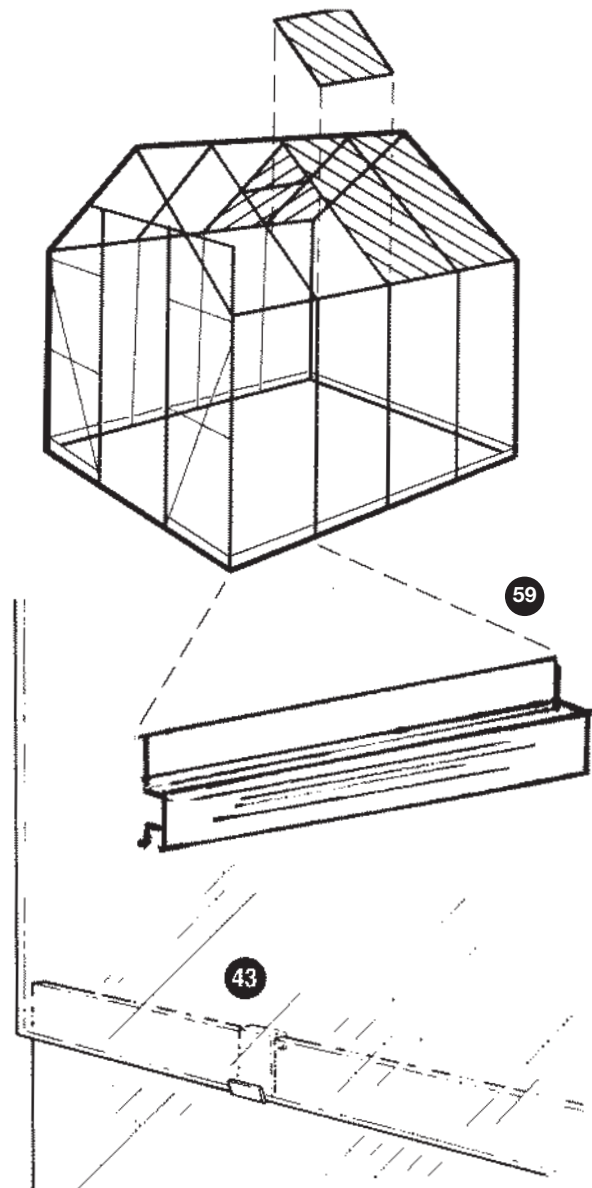
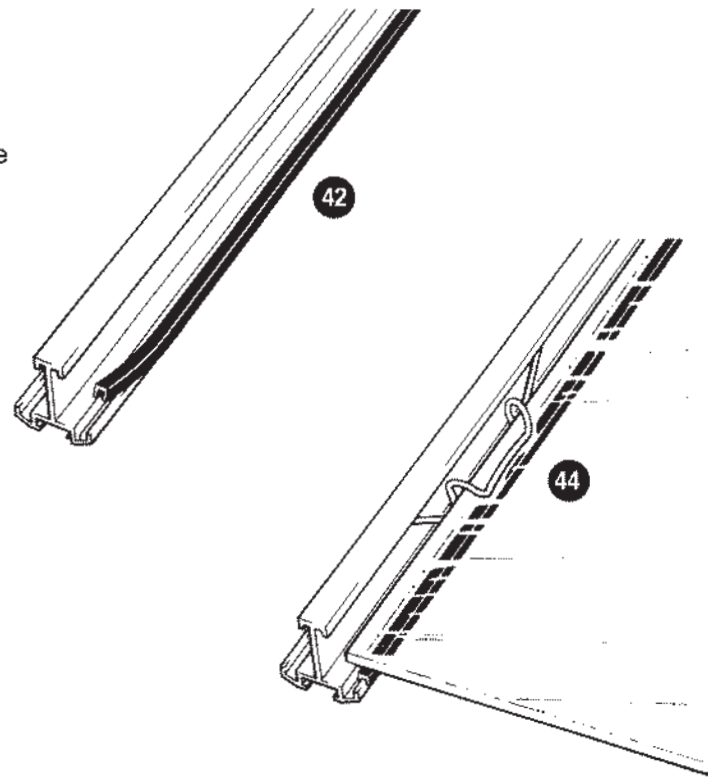
Choose a day when the weather conditions are calm and you have sufficient time to complete the glazing in one operation.

Fit kickplates around bottom of greenhouse by inserting between glazing bars and securing with spring wire glazing clips (as per illustration on right)

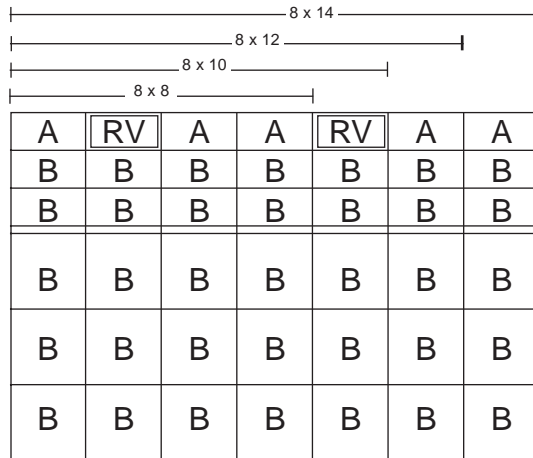
1. **IMPORTANT NOTICE:** The roof and eaves bracing (40) must be fitted and fully secured before glazing is commenced.
2. Extreme care should be taken when handling glass.
3. When glazing it is advisable to wear some head protection, gloves and strong shoes. Safety glasses are strongly recommended.
4. Do not, under any circumstances, climb stepladders whilst carrying glass, get an assistant to hand you each piece in turn.
5. When fixing glass into the aluminium sections using spring wire glazing clips, hold the clip in position with one hand and spring the legs of the clip into the retaining groove with the other.
6. Fit glazing strip (42) as shown in the diagram to all glazing bars, corner posts, gable bars, door posts and vent sides. pos. nos. 1, 5, 7, 13, 16, 23, 25, 39, 62.
7. Begin glazing at one end of the roof. Fit a pane of glass at eaves level first and clip into position as shown in the diagram with four spring wire glazing clips (44)
8. Place two 'Z' clips (43) onto the upper edge of the first pane of glass and clip second pane into position with four spring wire glazing clips (44).
9. Repeat procedure and insert third pane into groove in ridge and locate onto 'Z' clips (43). Secure with four spring wire glazing clips (44).
10. Having completed one section of the roof, now glaze the section on the opposite side. By so doing you will ensure that the roof remains square throughout the glazing operation (note: should the glass appear to 'run off' this indicates that the greenhouse is not square. If this is the case, the greenhouse must be brought into square before continuing).
11. When the roof is completely glazed, glaze the sides and gable ends, commencing at the sill and clipping one pane of glass into position at a time. Always use four spring wire glazing clips (44) per pane.

PLEASE NOTE

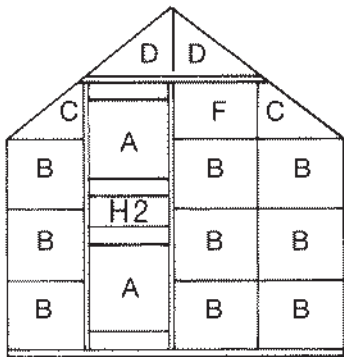
Fit Glazing strip only to the following components:
 Corner posts (5), Gable bars (13), Glazing bars (1), (7), (23), (39), (62), Door posts (16), Door stiles (28) and (65) and Vent sides (25).



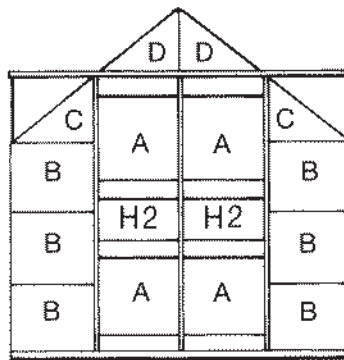
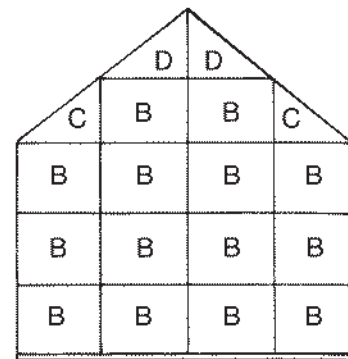
Glazing plan



SINGLE DDDR GABLE

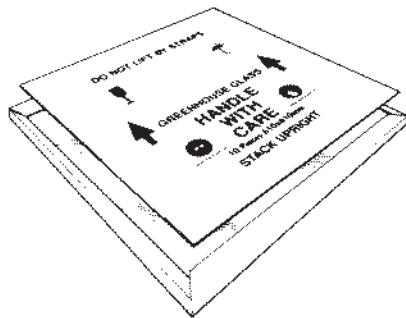


END GABLE



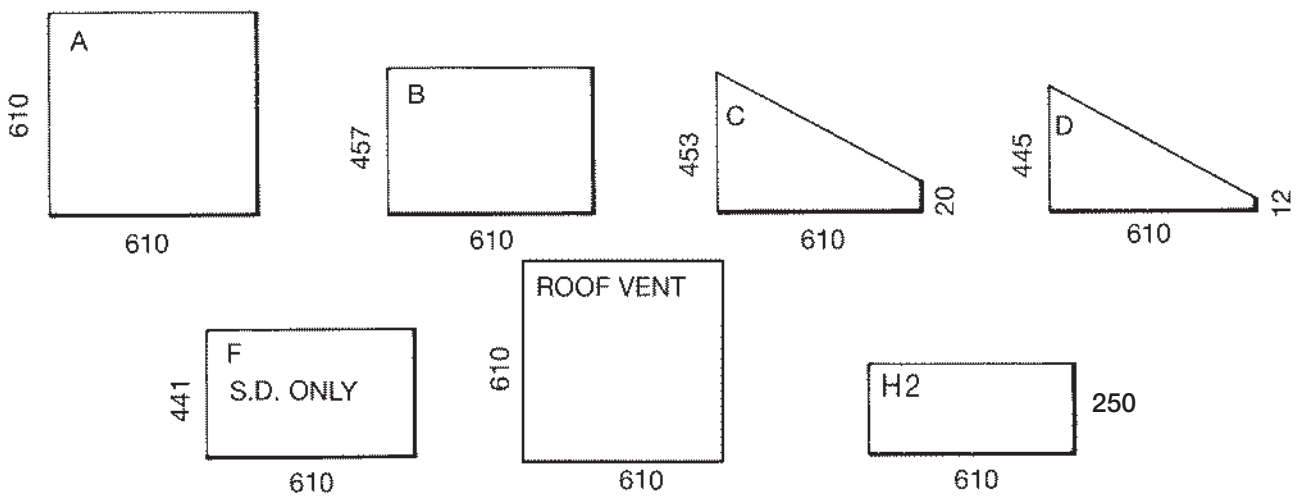
DDUBLE DDDR GABLE

GLASS PACK QUANTITIES



S/D:	LABEL	S/D:	LABEL
1 x 610 x 610	green	1 x 610 x 610	green
7 x 610 x 457	blue	8 x 610 x 457	blue
1 x supplementary	red	1 x supplementary	red
D/D:		D/D:	
1 x 610 x 610	green	1 x 610 x 610	green
7 x 610 x 457	blue	8 x 610 x 457	blue
1 x supplementary	red	1 x supplementary	250

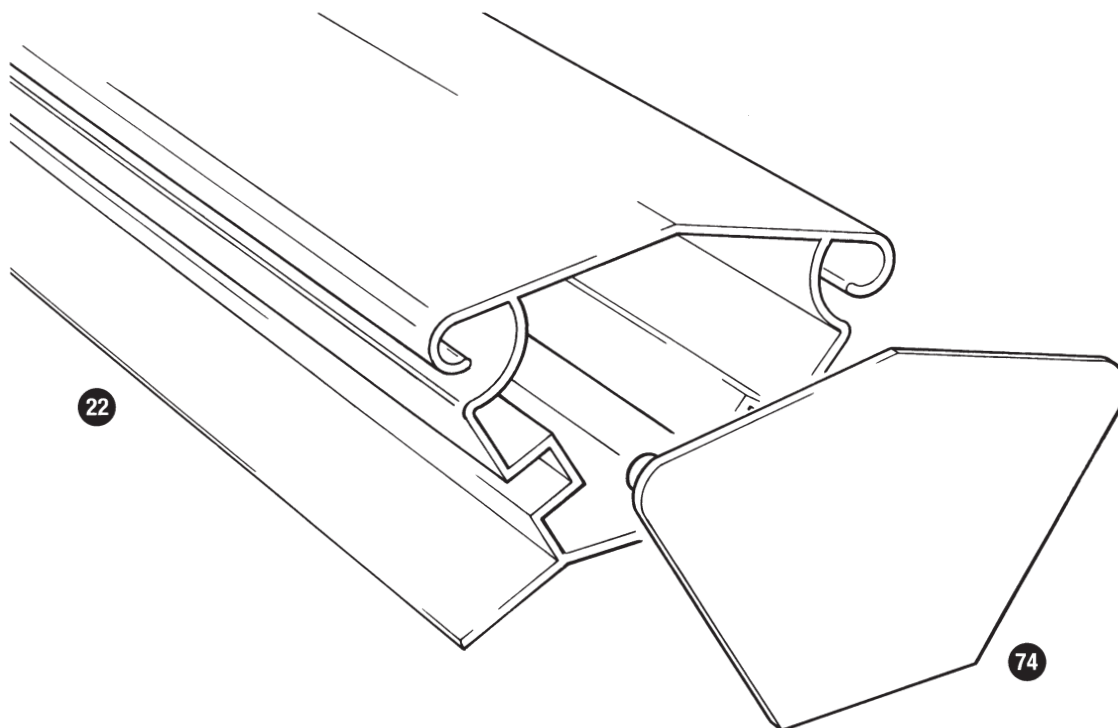
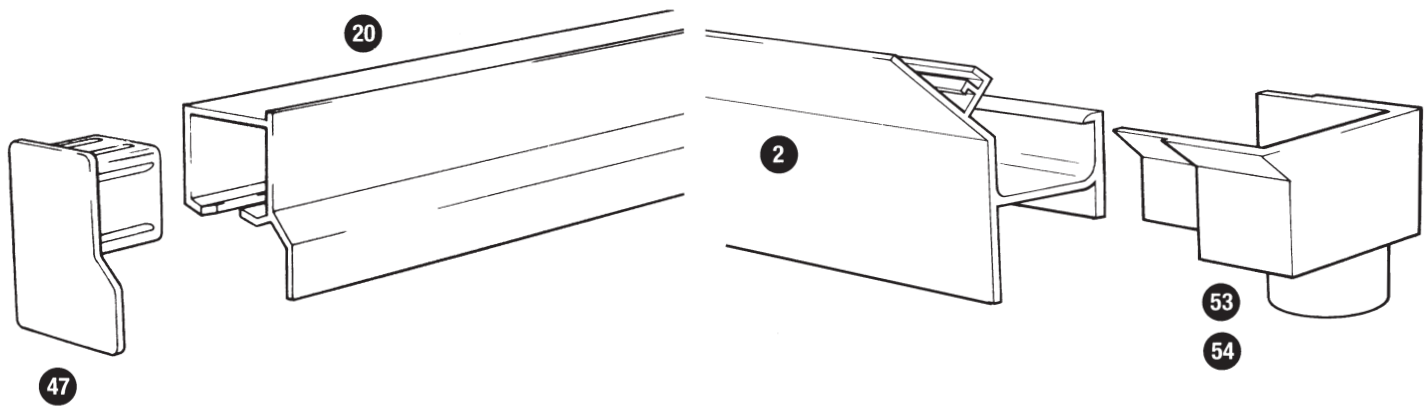
SINGLE AND DDUBLE DDDR



Plastic end stops

STAGE 11

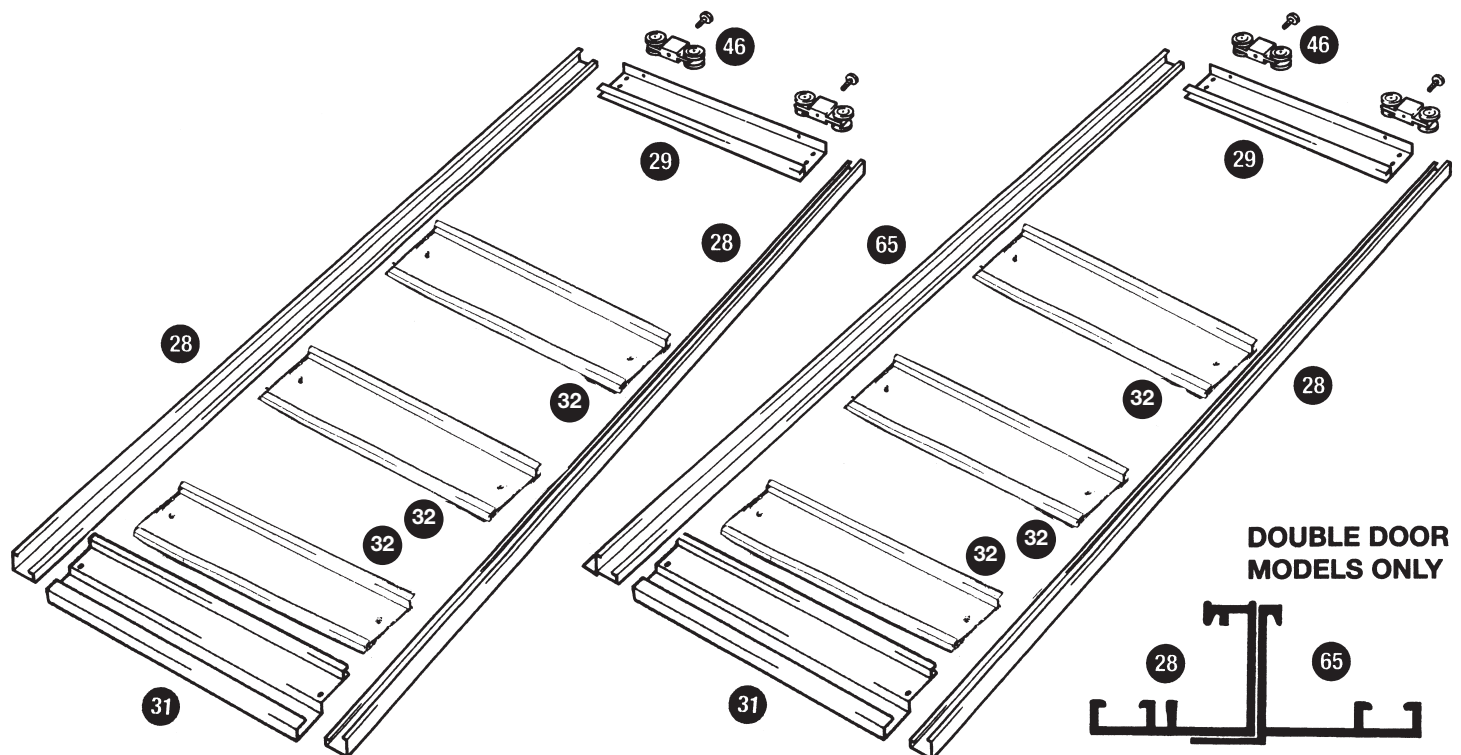
1. Determine at which end of gutter you wish to position rainwater outlets.
2. Take plastic gutter end pieces (53) and (54) and using a dowel or similar instrument, knock out the membrane from one of each (53) and (54) to form a pair of outlets.
3. Fit outlets to chosen ends of gutter (2) and end stops (with membrane intact) to opposite ends.
4. Fit ridge end caps (74) to either end of ridge bar (22).
5. Attach a door track support (21) to each end of door track (20) with square head bolt and nut and bracket (82). (See page 16).

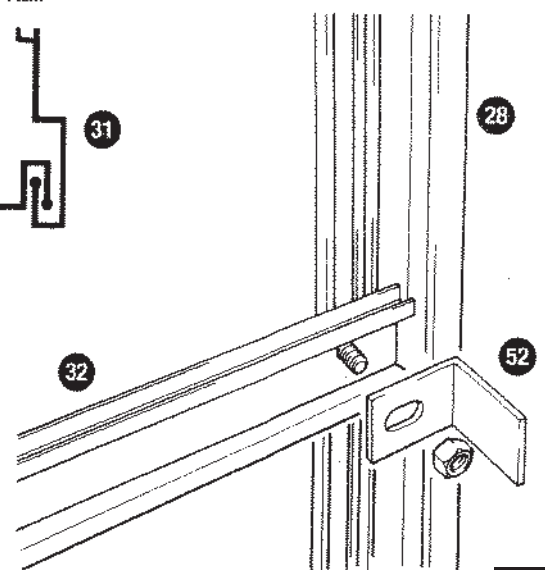
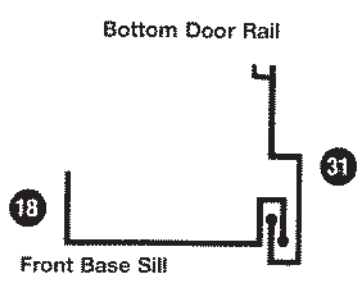
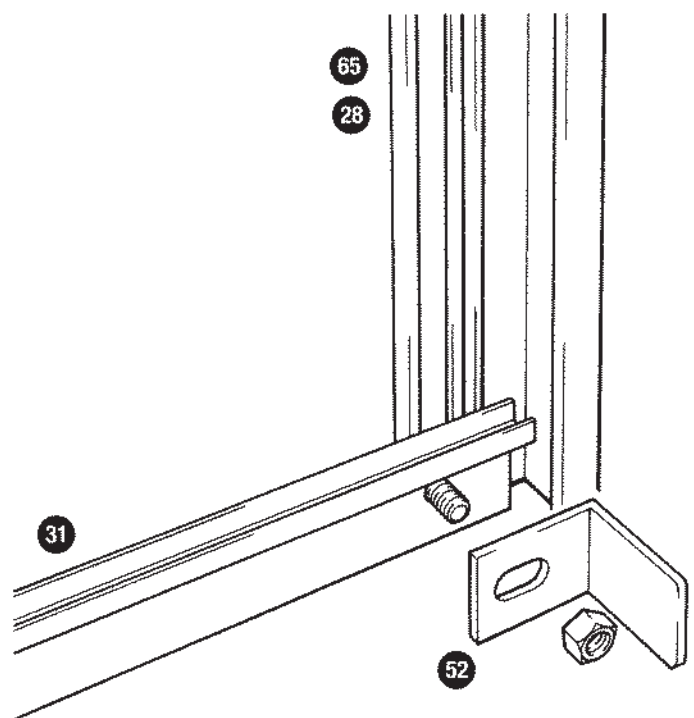
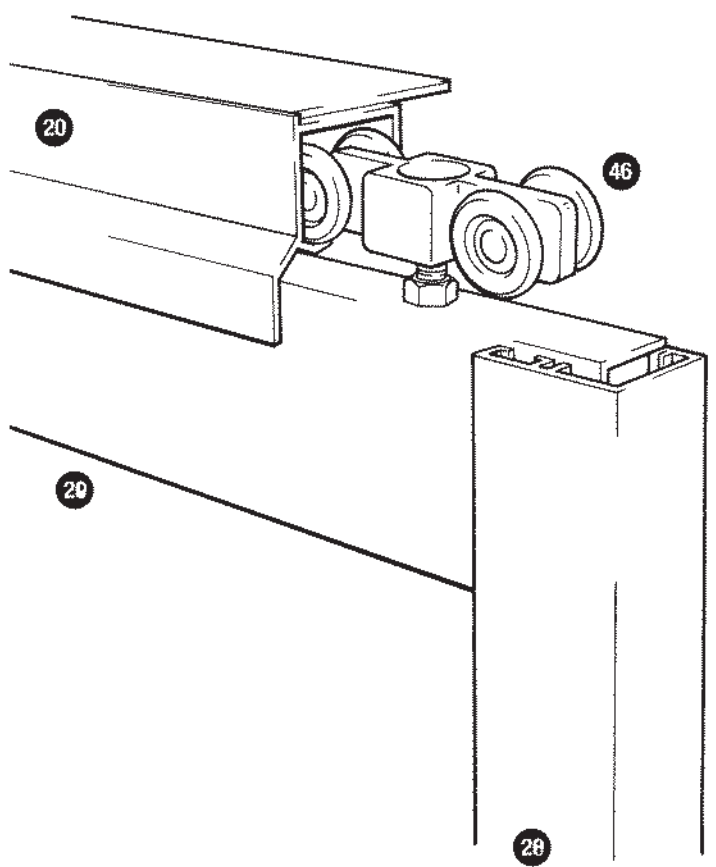
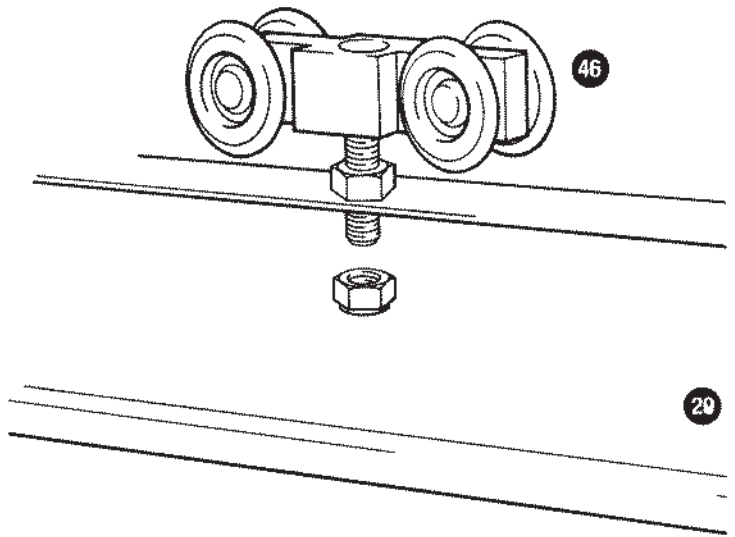
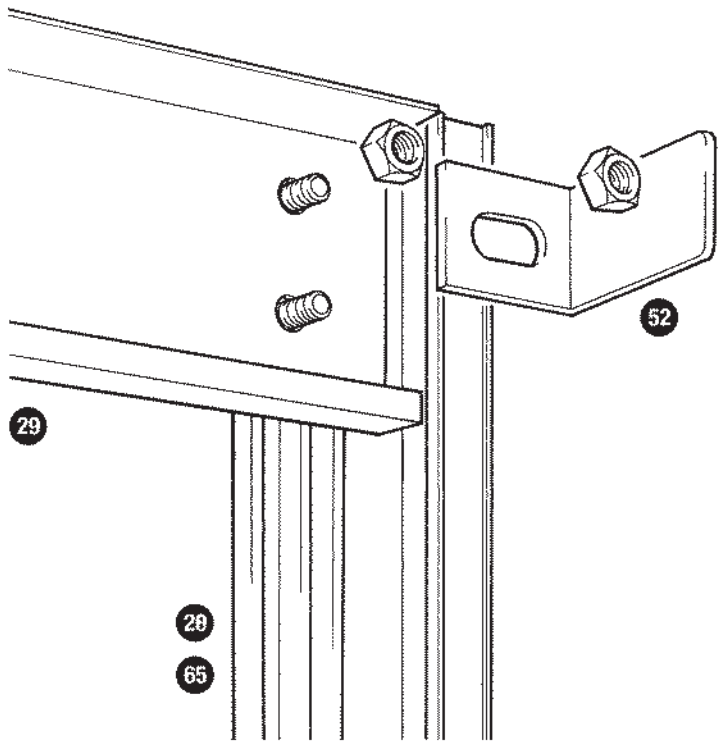


Door Assembly

Stage 10

1. Lay out the door components as shown in the diagram.
2. Ensure that the OVERLAP door stile (65) is placed on the inside edge of either the left or right hand door.
3. Fit two door rollers (46) to each top door rail (29) with the bolts and nuts provided. Apply a little light oil to each roller (46).
4. Slide 9 square headed bolts into each door stile (28) and (65) and loosely fasten the door rails in position. The top door rail (29) should fit closely to the top of the stiles (28) and (65).
5. Fit glazing strip (42) to door stiles and by adjusting the position of the door rails (29), door with two pieces 61cm x 61cm glass and one piece 61cm x 25cm.
6. Check that each door is square and tighten all nuts.
7. Hang doors in position by inserting the door rollers (46) into the door track (20) and by locating the bottom rail (31) onto flange on the front sill (18).
8. Adjust the nuts which secure the door rollers so that the doors hang true and move freely in operation.
9. Fit door stops (52) to top bolt of each door and inter door rail (32) on leading edge, these stop door(s) from overriding opening.
10. At this stage you should now go around the structure making sure all joints are assembled as tight as possible and seal them with a fine bead of silicone. The bolt channels which are exposed on the outside of the front and rear of the gables should also be sealed.





WELCOME TO THE
Gardens
of eden

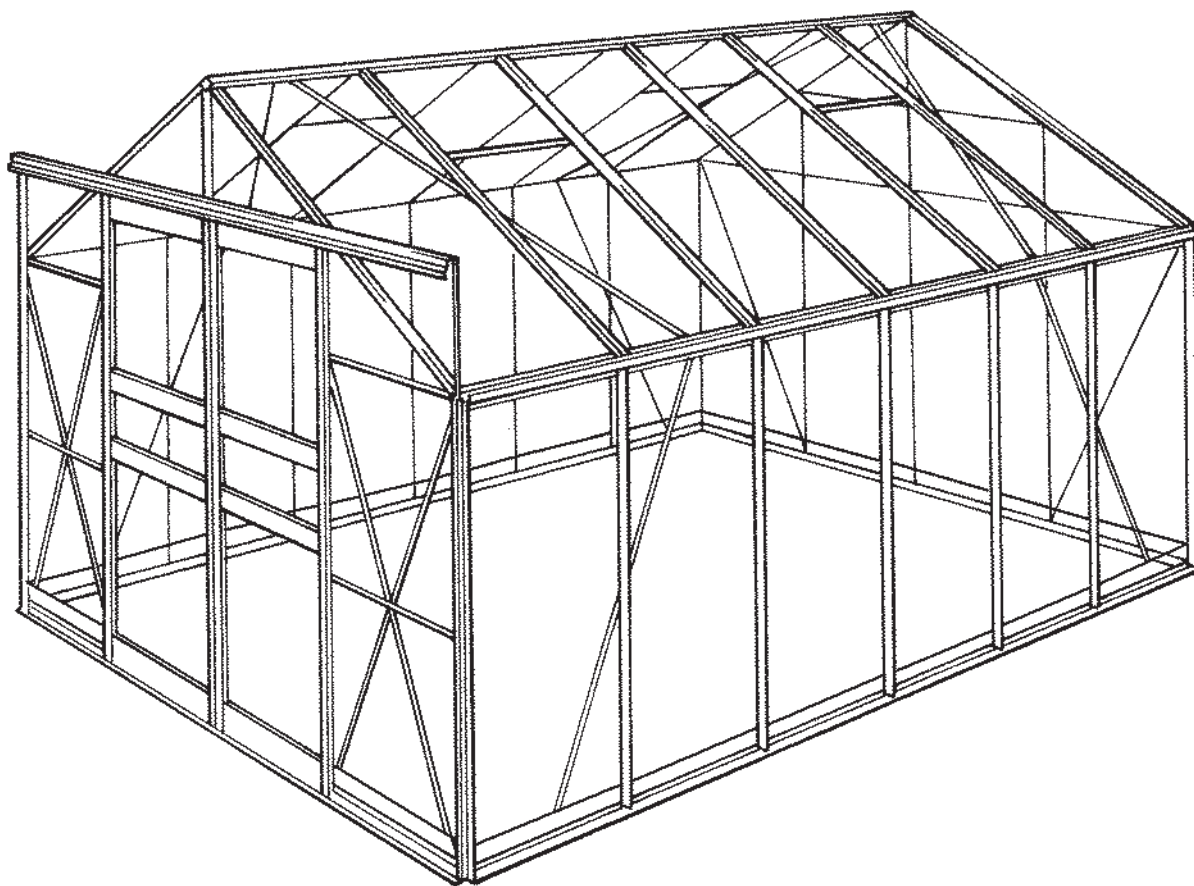
Eden Greenhouses Limited
The Distribution Centre, Stoke Road,
Stoke Orchard, Nr. Cheltenham,
Gloucestershire GL52 7RS
Tel: 01242 676625 Fax: 01242 676626



WELCOME TO THE
Gardens
of eden

THE HIGHLINE

8 x 8 - 8 x 10 - 8 x 12 - 8 x 14



Assembly Instructions

 *eden*

Issue Date: Oct. 04

