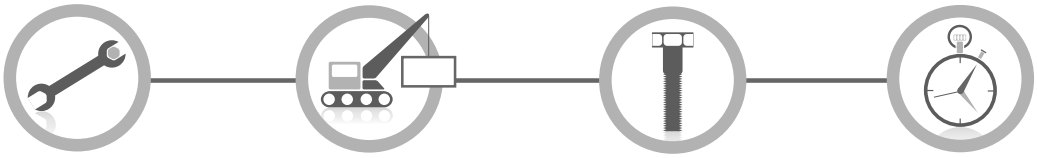
PRISMAFLEX INTERNATIONAL

Outdoor's Leading
Three-Message Sign

QUICK MOUNT
INSTALLATION SYSTEM



Prismaplus XT-J Three-Message Sign
Installation Guide

Version:
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Warnings

WARNING:

1) Read the entire installation guide thoroughly before proceeding. It is imperative to follow all directions.

2) Switch power OFF when working on the sign. Do not simply reset.

3) For safety purposes, you should install an emergency off switch within close proximity to the sign's control unit (BOP).

4) If the sign is within pedestrians' reach, mount a protective device (such as Plexi- glass) preventing people from accessing the prisms and getting injured.

5) All bolts must be used and adequately tightened during the installation process.

1.0 Getting Started

Before installing your Prismaplus XT-J Three-Message Sign, think about the following...

1) The Prismaplus XT-J three-message sign can be mounted to any typical billboard structure, pending your engineer's approval with respect to sign weight, wind-load and various other factors taken into account. **Please consult your engineer**.

2) A poor installation will always result in problems and premature wear of the parts.

   The Prismaplus XT-J utilizes the QUICK-MOUNT Installation System. The included brackets provide complete adjustability. Make certain that your three-message sign is installed plumb, straight, level and square.

3) It is imperative that all provided bolts, nuts, washers and block nuts be used.

4) Always mount a rigid backing (wind-break) behind your three-message sign to prevent wind turbulence and light from shining through the prisms. For standard billboard installations, your existing sign panels will remain in order to serve as the wind-break. Your rear wind-break should cover the entire backside of your three-message sign. Additional material may be required.

   In addition, the ends of your sign should be enclosed (flashing from your three-message sign's vertical beam back to your structure's existing sign panels).

5) If assembling your sign on the ground and lifting in one piece, it is necessary to use a suitable spreader-bar for signs longer than 30'.

Recommended equipment for assembly and installation:

1) Crane with spreader-bar
2) Metric socket set
3) 1 1/4" wrenches (mounting brackets)
4) Levels (laser level, 4-foot level, torpedo level)
5) Impact gun with 1 1/4" socket
6) Cordless drill gun
7) 5-mm T handle Allen wrench
8) 4-mm T handle Allen wrench
9) 10-mm nut driver
10) Phillips head screw driver
11) Small flat head screw driver
12) Volt / Ohm meter
13) Ratchet straps
14) Heavy clamps (bracket positioning, if needed)

1.1 Receiving Your Prismaflex Three-Message Sign

Delivery of your Prismaflex three-message sign will consist of the following:

A. One (1) bundle of sign frame sections with vertical angle supports

B. One (1) pallet box with...
1. Mounting brackets, including bolts, flat washers and nuts
2. Top module(s)
3. Drive module(s)
4. Shaft couplings
5. Corner brackets
6. Spare parts kit

C. Crates containing prisms

Bundled Sign Frame

Pallet Box

Crate(s) of Prisms

2.0 Wind-Break & End Enclosures

Rear Wind-Break:
All three-message signs require a rear wind-break that covers the entire back side of the sign. For a typical billboard, this is accomplished by leaving the structure's existing sign panels (metal sections) in place and mounting your three-message sign in front. Additional material may be required.

IMPORTANT:
Your sign's wind-break should cover the entire back side of your three-message sign. An inadequate wind-break will negatively affect the performance and life of your sign and may void the Prismaflex warranty due to improper installation.

Rear Wind-Break

End Enclosures:
Enclose the ends of your three-message sign from its vertical beams back to the structures wind-break (metal sections). Fabricated end enclosures are provided with your sign.

End Enclosure

IMPORTANT:
When fastening the end enclosure material or any required additional flashing, do not screw into the sign's motor location.

3.0 Quick-Mount Bracket Installation

Each of your structure's I-beam uprights must have a bottom and top mounting bracket.

The bottom bracket connects to the face of your I-beam upright - see sec. 3.2.
The top bracket connects to the web of your I-beam upright - see sec. 3.2.

STEP 1: Attach Bottom Brackets

If working with a new structure with pre-punched bolt holes, loosely connect all brackets to the uprights.

DO NOT TIGHTEN AT THIS TIME - brackets should remain loose in order to level.

If working with an existing structure that does not have pre-punched bolt holes on each upright, temporarily clamp the first bracket to the upright.

See Section 3.2 for bracket positioning.

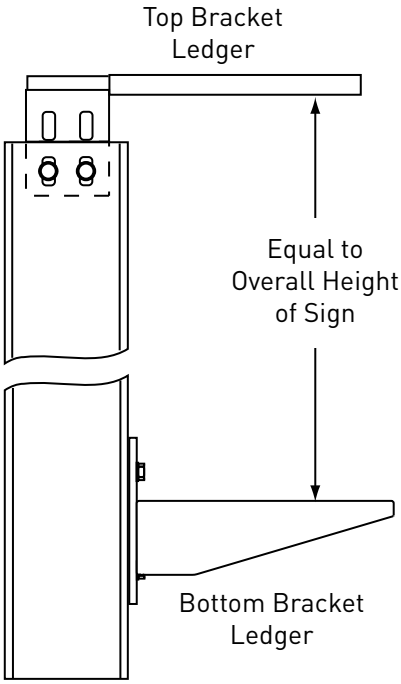
STEP 2: Temporarily Attach First Top Bracket

Temporarily attach the first top bracket.
See Section 3.2 for bracket positioning.

Confirm the correct distance between the bottom and top brackets (= overall sign height).

IMPORTANT:
Do not permanently attach the top brackets at this time.

Top brackets will be permanently attached to each upright after the sign is mounted on bottom brackets.



3.0 Quick-Mount Bracket Installation (continued)

STEP 3: Level Bottom Brackets

Once you have confirmed the correct distance between the bottom and top brackets, attach the first bottom bracket.

If working with a structure with pre-punched holes:
Level the remaining bottom brackets and tighten all bolts.

If working with an existing structure that does not have pre-punched holes:
Temporarily clamp the remaining bottom brackets, level, mark and provide holes, install 3/4" bolts and tighten.

Handy Info

It is recommended to level the first and last brackets with a laser level, string level or water level.

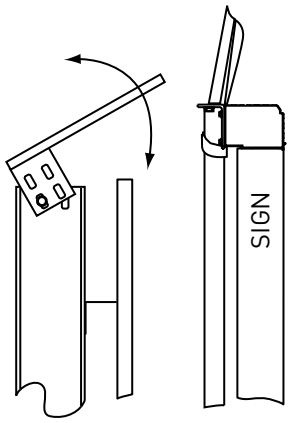
Then pull a string between the first and last bracket. Pull all remaining brackets in between up to the line.

Handy Info

It is helpful to either...

A) wait to attach your top brackets after your sign or sign section is lifted into place, or

B) attach the top brackets using only one bolt so that it can be hinged back (then tighten) to allow for sign clearance.

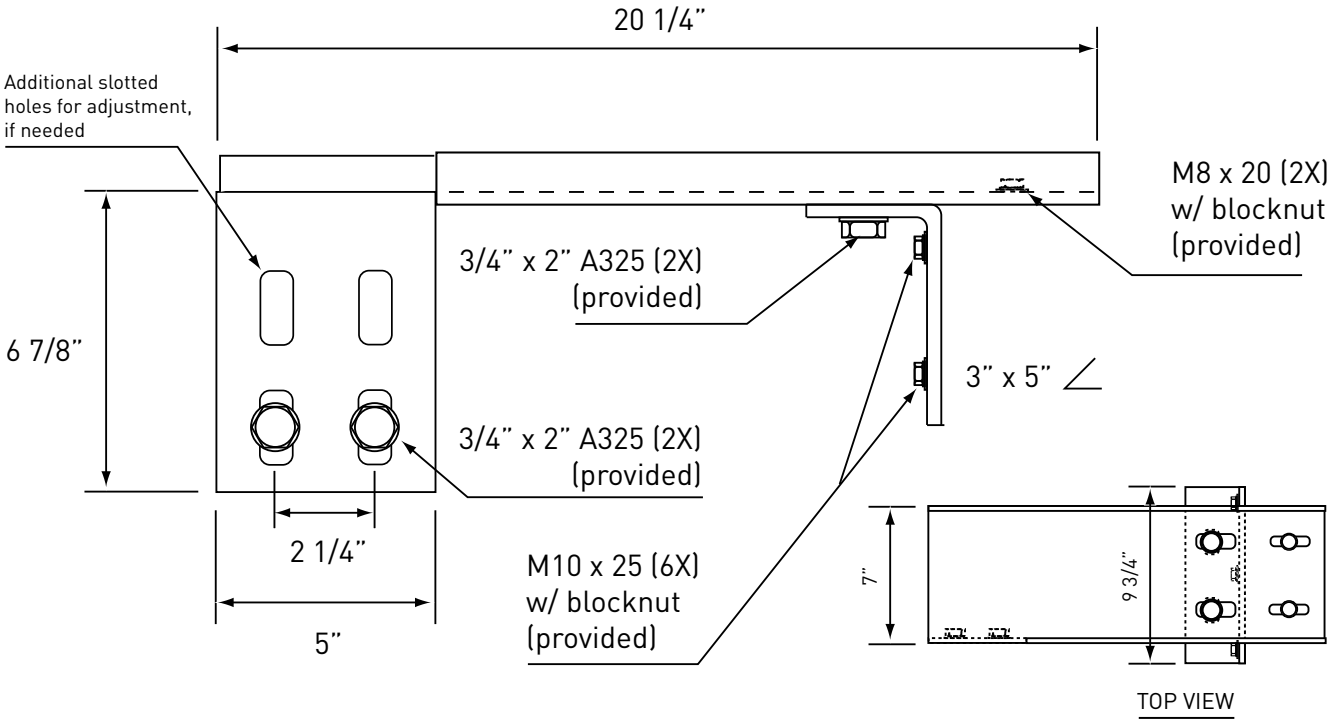


IMPORTANT:
Make certain that your bottom brackets are installed level right-to-left and front-to-back.

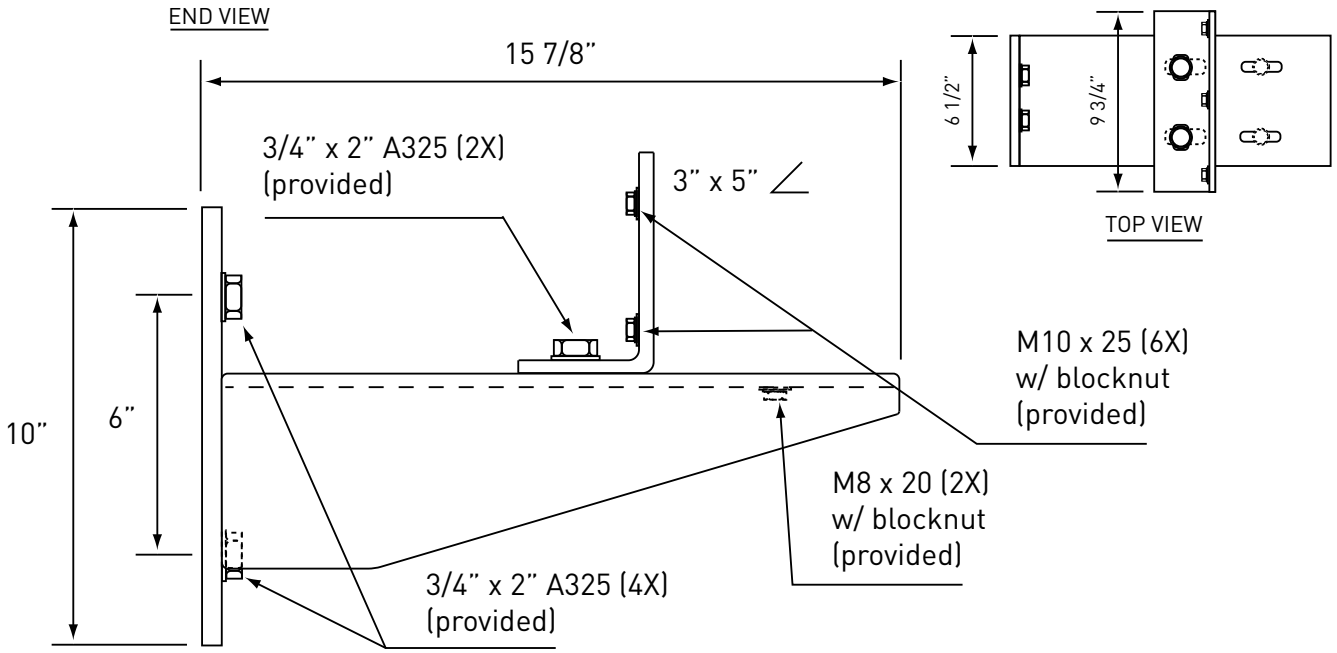
Tolerance for level right-to-left is 1/2-inch for signs 20' to 48' wide (6 to 14.6 M).
Tolerance for level front-to-back (depth of sign frame) is 1/16-inch (1.5-mm).

3.1 Quick-Mount Brackets

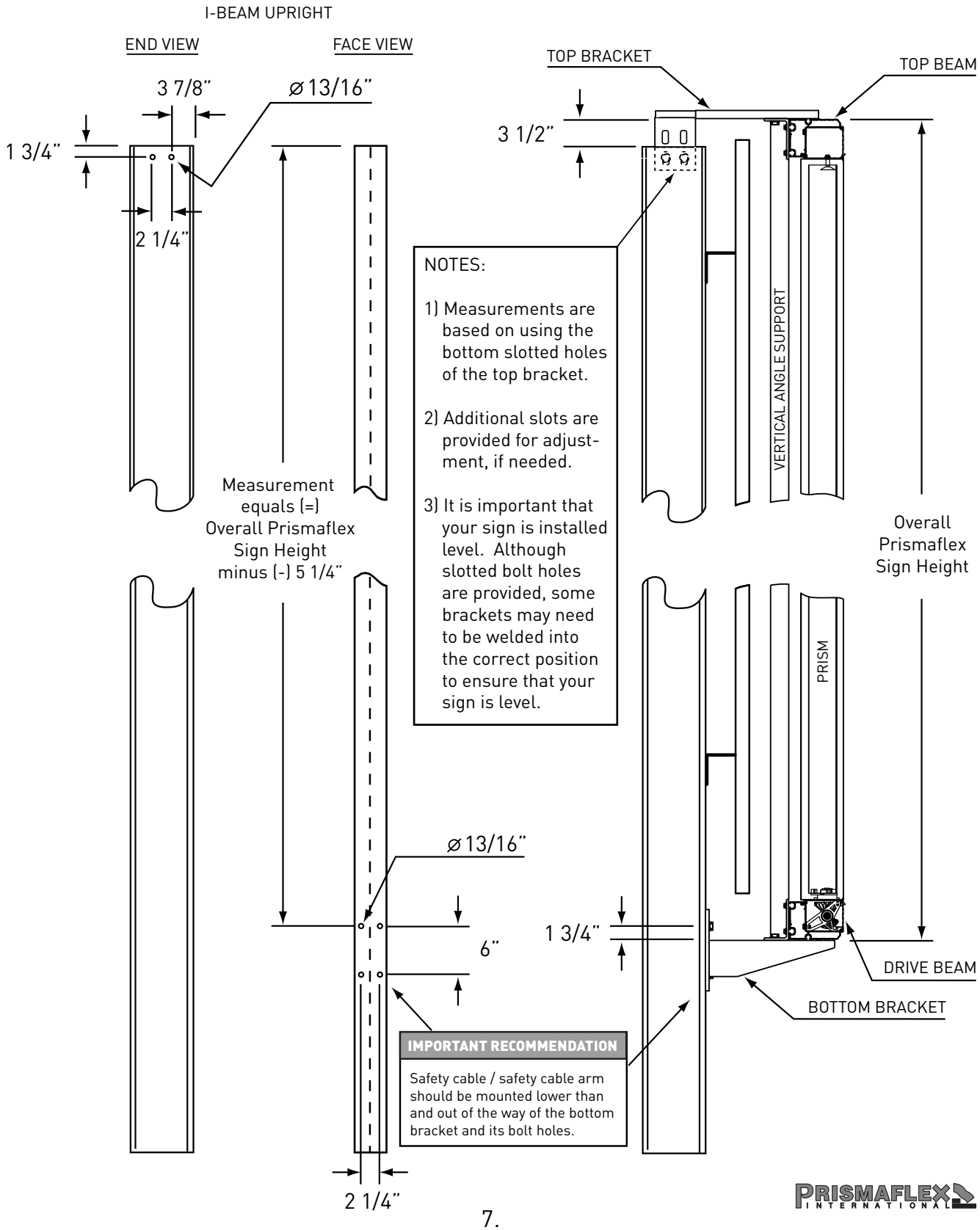
TOP BRACKET



BOTTOM BRACKET



3.2 Quick-Mount Bracket Positions



4.0 Sign Assembly

STEP 1: Laying Your Sign Out

Lay the beam sections of the sign on the ground, ELEVATED BY BLOCKS with the BACK SIDE OF EACH BEAM FACING UP.

If space is limited, one section of the sign can be laid out at a time.

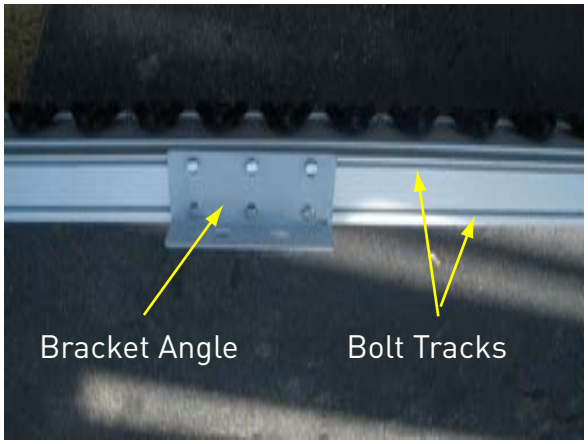
Sign sections layed out on ground

For signs with two sections (36' and shorter), you will have...

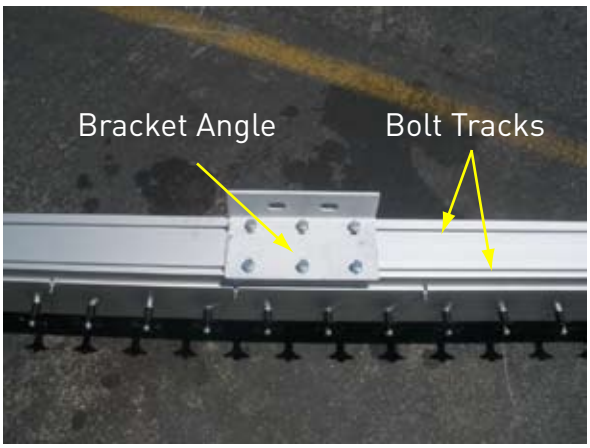
2 Bottom Beam sections
2 Top Beam sections
2 Vertical Beams
4 Vertical Angle Supports (2 1/2 x 2 1/2 x 1/4)
4 Corner Brackets

For signs with three sections (over 36'), you will have...

3 Bottom Beam sections
3 Top Beam sections
2 Vertical Beams
6 Vertical Angle Supports (2 1/2 x 2 1/2 x 1/4)



Bottom drive beam section - back side up



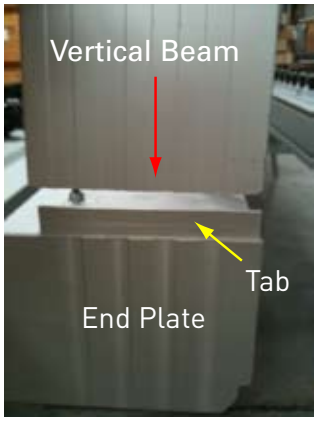
Top beam section - back side up

4.0 **Sign Assembly** (continued)

STEP 2: Vertical Beam

Connect the vertical beam to the bottom drive beam and top beam sections.

This is done by sleeving the vertical beam (extrusion) over the end plate tabs, as shown.



STEP 3: Corner Brackets

Connect the Corner Brackets. There is one corner bracket at each corner of the sign.

Two M-10 bolts (located in the drive beam & top beam) and one M-8 bolt (located in the vertical beam) are used.

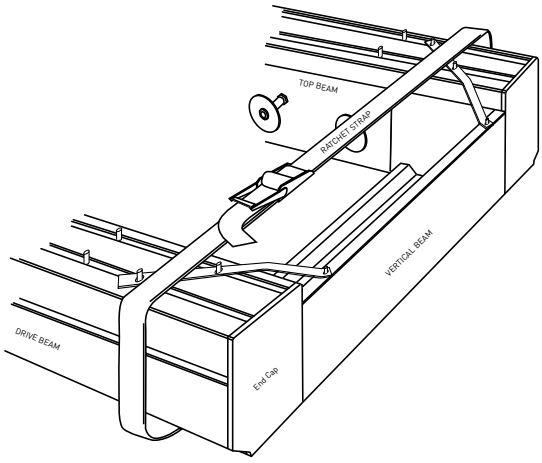
Handy Info

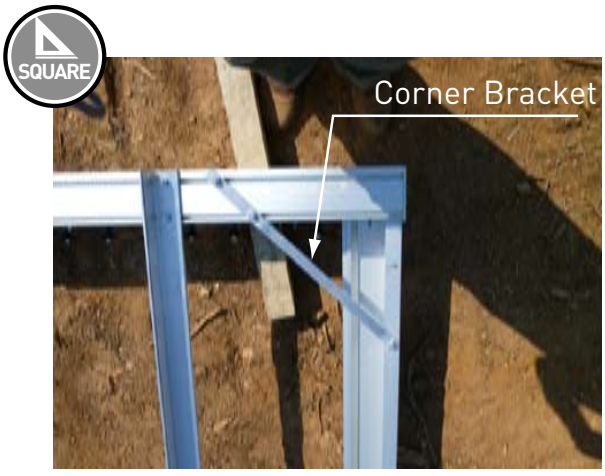
Do not completely tighten each corner bracket until you confirm that the sign section is square.

Handy Info

When attaching the vertical beam to the bottom and top beams at the end plate, it is helpful to use a ratchet strap to pull the sections together for a nice, tight fit.

Keep the strap on and tight until you have completed Step 4 (attach the vertical support angles).





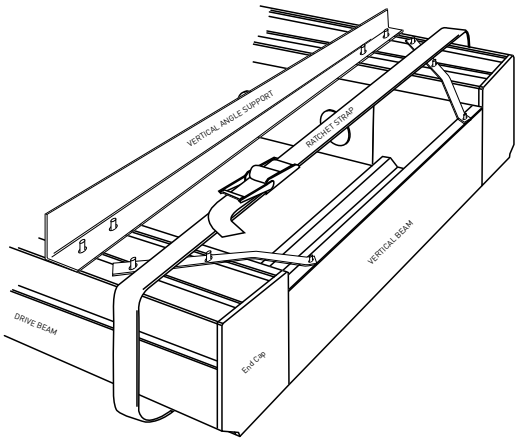
4.0 Sign Assembly (continued)

STEP 4: Vertical Angle Supports (1)

Each sign section will have two Vertical Angle Supports (2 1/2 x 2 1/2 x 1/4 aluminum angle).

Connect the first Vertical Angle Support 20-inches in from the end of the sign (end of sign with vertical beam).

Two M-10 bolts located in the drive beam and two M-10 bolts located in the top beam are used.

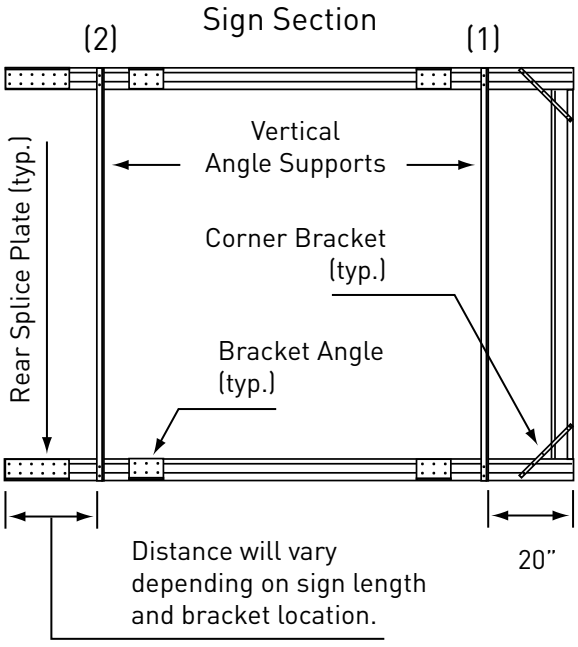


STEP 5: Vertical Angle Supports (2)

Connect the second Vertical Angle Support towards the end of the sign section. The measurement from the end of the section to the second vertical angle support can vary pending bracket locations (usually within16 to 24 inches from the end of the section).

Two M-10 bolts located in the drive beam and two M-10 bolts located in the top beam are used.

TIGHTEN ALL BOLTS.



IMPORTANT:
Make certain that your sign and each vertical angle support is square.

First & Last Vertical Angle Supports

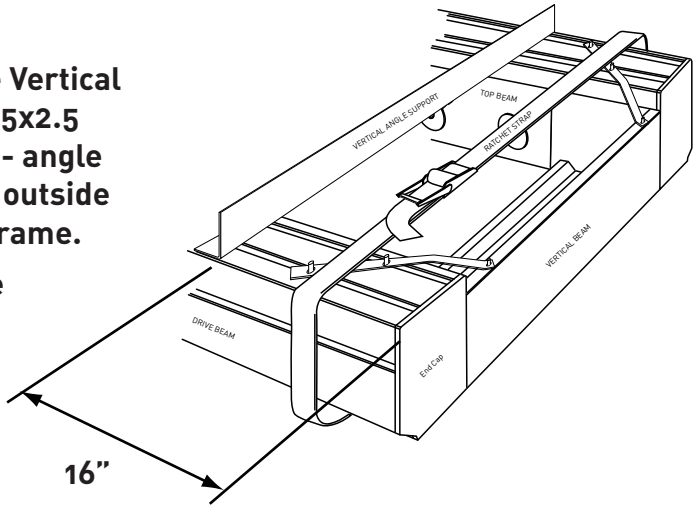
(Rigid Wind Break vs. Flex Wind Break)

Recommended for Signs Using Rigid Rear Wind Break:

NOTE:

Orientation of the Vertical Angle Support (2.5x2.5 aluminum angle) - angle is "closed" to the outside edge of the sign frame.

Distance from the perpendicular flange of angle to the end of the sign is 16".

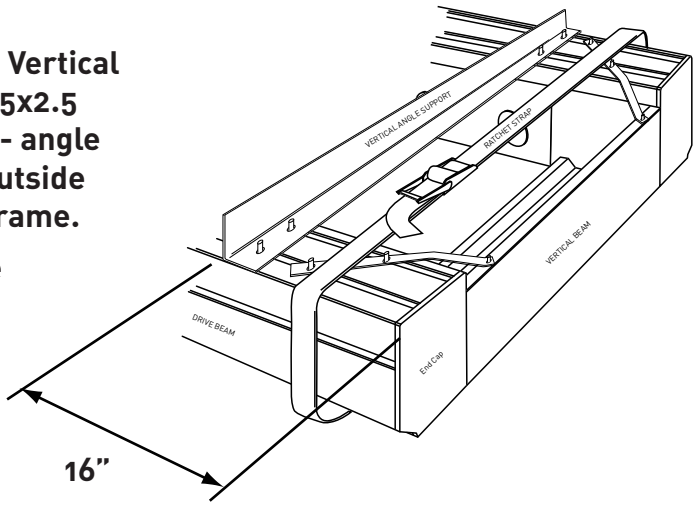


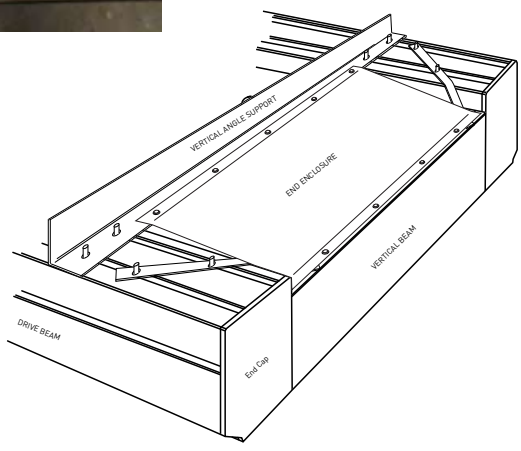
Recommended for Signs Using Flexible Face Rear Wind Break:

NOTE:

Orientation of the Vertical Angle Support (2.5x2.5 aluminum angle) - angle is "open" to the outside edge of the sign frame.

Distance from the perpendicular flange of angle to the end of the sign is 16".





Attach end-enclosure material to the horizontal flange of the angle and to the rear, 1-inch return of the vertical beam.

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STEP 6: Additional Sign Sections

Assemble the remaining sign sections.

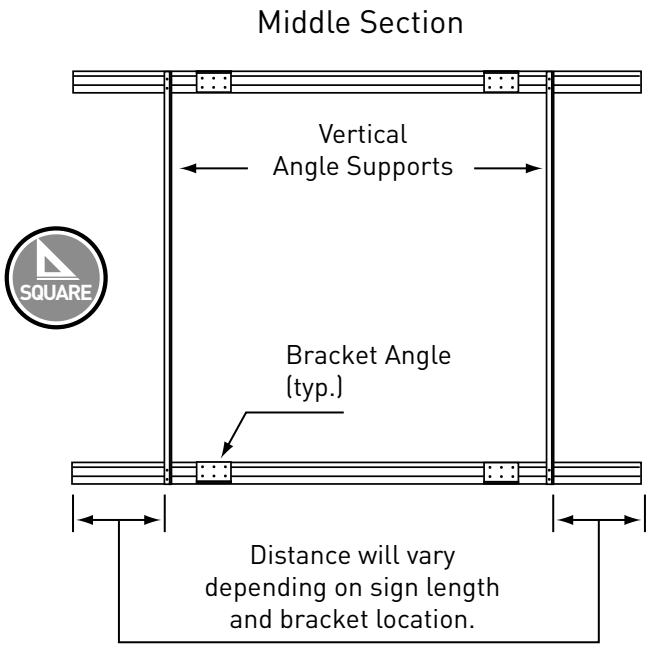
For signs with two sections (end sections only - 36' and shorter)...

Repeat steps 1 through 5 for the opposite end of the sign.

For signs with middle sections (three or more sign sections - over 36' long)...

Repeat step 5.

Place vertical angle supports (2) towards each end of the section.



IMPORTANT:
Make certain that your sign and each vertical angle support is assembled square.

STEP 7: Joining Sign Sections on the Ground

If lifting your sign in individual sections, proceed to Step 10.

If connecting each sign section on the ground in order to lift the sign in one piece...

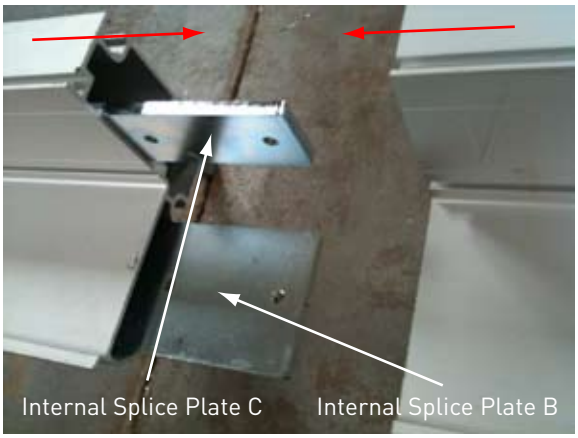
Remove the M8 bolts on the male side of the internal splice in order to sleeve into the adjacent section.

Slide the beam sections together (male / female ends).
Make sure the joint is tight.

Rear external splice plates (version may vary) and its M10 bolts will arrive attached to a beam section.

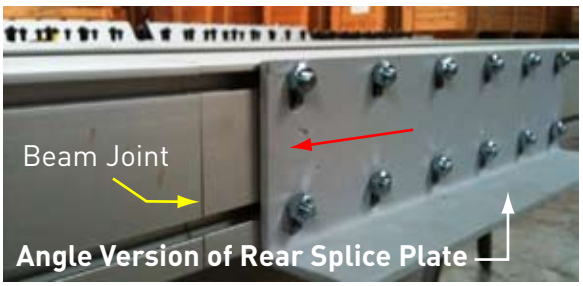
Slide the rear splice plate over the beam joint.
There should be an equal number of bolts on either side of the beam joint.

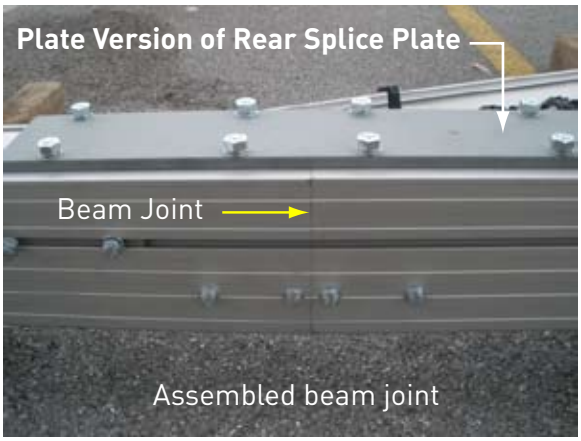
Completely tighten all internal splice plate bolts at this time. Tighten rear splice plate bolts AFTER the remaining modules are installed.



NOTE: Splice plate C is not required if using the Angle version of the Rear Splice Plate.

IMPORTANT:
Always try to place your rear splice plate so there is an equal number of bolts on both sides of the joint (6 & 6 or 4 & 4 pending version).





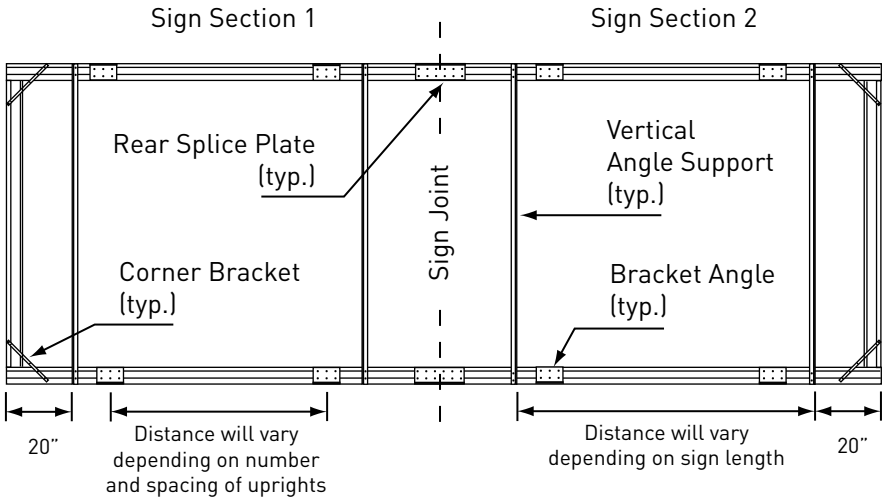
4.0 Sign Assembly (continued)

STEP 7: Joining Sign Sections on the Ground (continued)

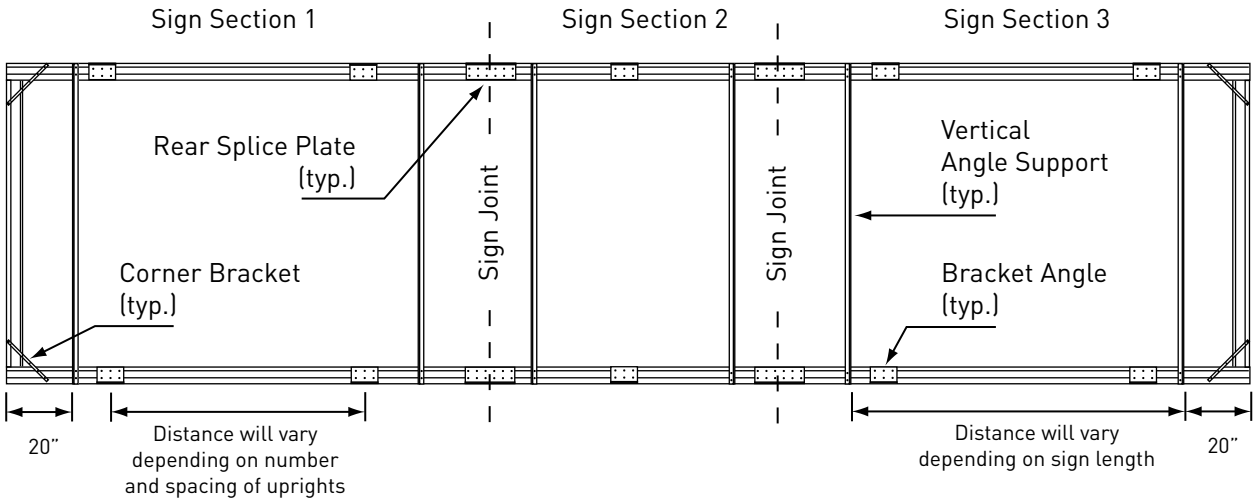
Handy Info

Do not completely tighten the rear splice plates until you have installed the drive module and top module at each splice joint.

Example configuration for a TWO (2) section sign:



Example configuration for a THREE (3) section sign:



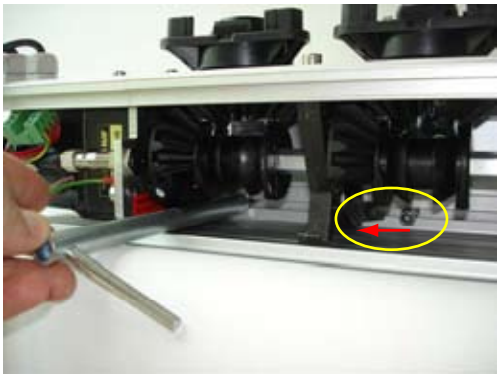
STEP 8: Drive Modules

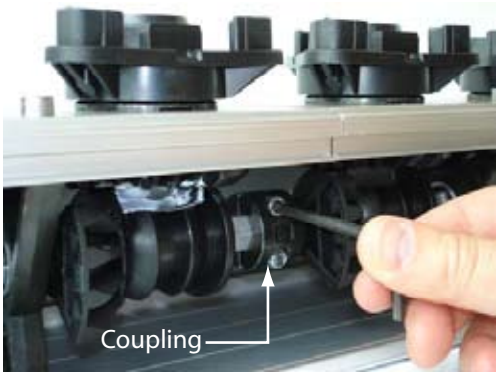
If lifting your sign in individual sections, proceed to Step 10.

Drive modules and top modules must be installed at each splice joint.

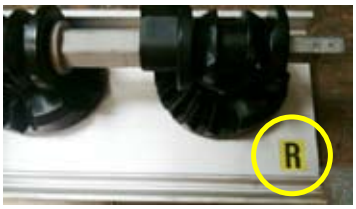
IMPORTANT:
If mounting your sign as a complete unit (one piece), it is imperative to first install all drive modules and all top modules at each splice joint before lifting.

Drive Module





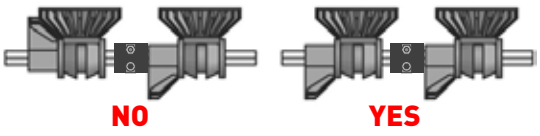
1) Your sign has left and right drive modules. Right side drive modules are marked. Left side drive modules are not marked.



Hinge the correct drive module into place.

2) Losen and slide the M6 shaft support bolts into position at each shaft support and tighten.

3) Using a wrench, align the shaft gears.



4) Securely install shaft couplings.

5) Tighten all M-10 bolts of rear, external splice plate(s).

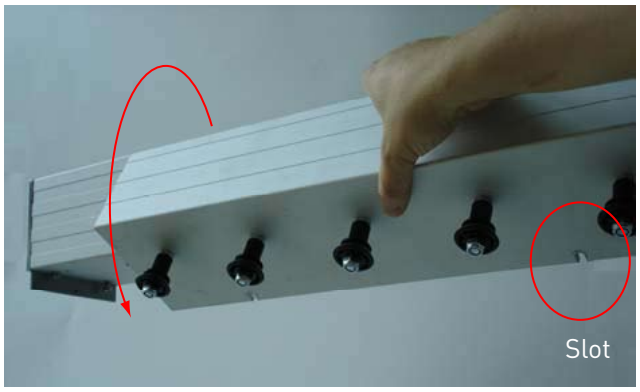
STEP 9: Top Modules

If lifting your sign in individual sections, proceed to Step 10.

Drive modules and top modules must be installed at each splice joint.

IMPORTANT:
If mounting your sign as a complete unit (one piece), it is imperative to first install all drive modules and all top modules at each splice joint before lifting.

Top Module



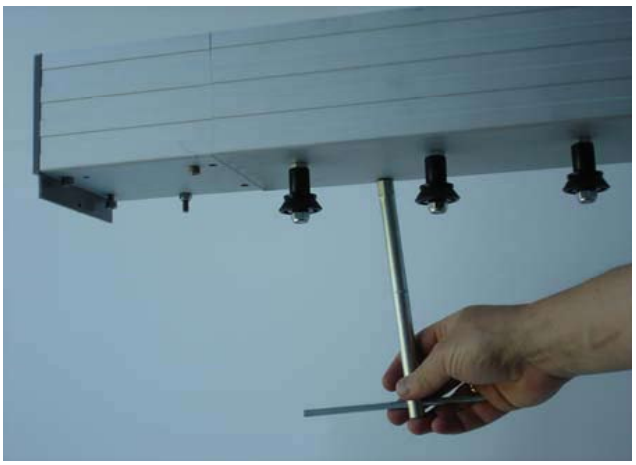
1) Hinge the top module into place.

2) Slide the M6 bolts into position - align with slots.

3) Snap top module into mounting rail.

4) Tighten bolts.

5) Tighten all M-10 bolts of rear, external splice plate(s).



CAUTION:

REMEMBER TO TIGHTEN ALL REAR SPLICE PLATE BOLTS AFTER DRIVE MODULES AND TOP MODULES ARE INSTALLED!

FAILURE TO PROPERLY TIGHTEN EACH SPLICE PLATE COULD SERIOUSLY DAMAGE THE SIGN FRAME AND ITS COMPONENTS WHEN LIFTING.

4.0 **Sign Assembly** (continued)

STEP 10: End Enclosures

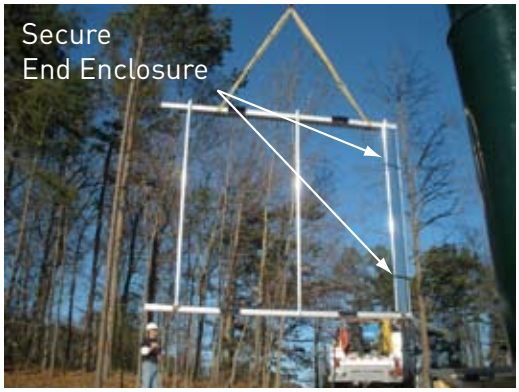
Attach fabricated end enclosures to the 1-inch lip on the backside of your vertical beam.

For signs taller than 8', each vertical beam will use two sections of end enclosure material. Sections may overlap.

End enclosure material is pre-punched for ease of use and guidance. Use all holes.

Self-drilling screws are provided.

Attaching end enclosure



Lifting

End enclosure attached to vertical beam and metal section of structure

5.0 Rigging Your Sign for the Lift

IMPORTANT:

1) Always place straps at vertical support angles when possible.

2) If lifting a sign or sign sections over 30' in length, USE A SPREADER BAR.

3) It is important to have your sign (or sign section) elevated on blocks prior to lifting to prevent crush damage to the electronics.

4) It is recommended to attach tag lines for guidance. Two lines are recommended.

Rigging

Lifting complete sign

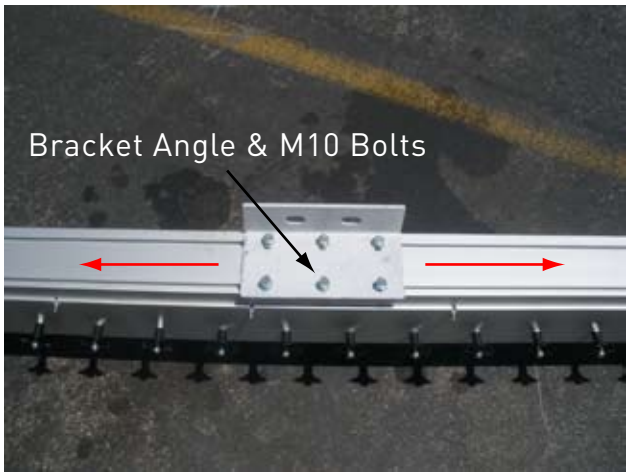
Lifting sign in sections

6.0 Mounting Your Sign

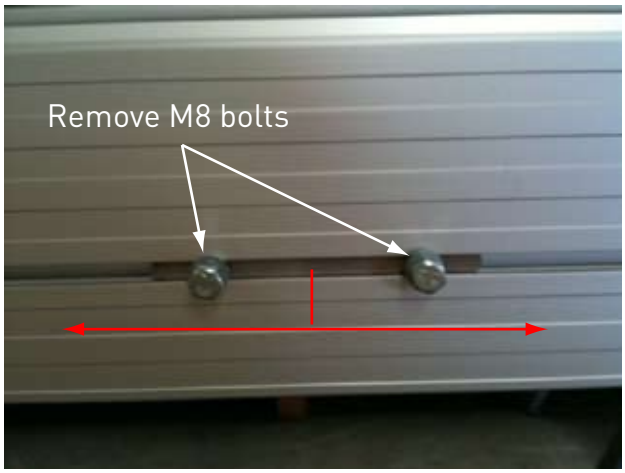
STEP 1: Prepare Your Sign for Mounting

Loosen the bottom and top 3x5 bracket angles that are attached to the rear of the sign (or sign section). This will allow you to move the angle left or right to align with the bracket / upright.

Remove the M8 bolts from the M8 block nuts located in the bottom bolt track of the drive beam AND the M8 bolts located in the top track of the top beam. This will allow you to move the M8 block nuts right or left to align with the bracket / upright.



Bracket angle at top & bottom beams

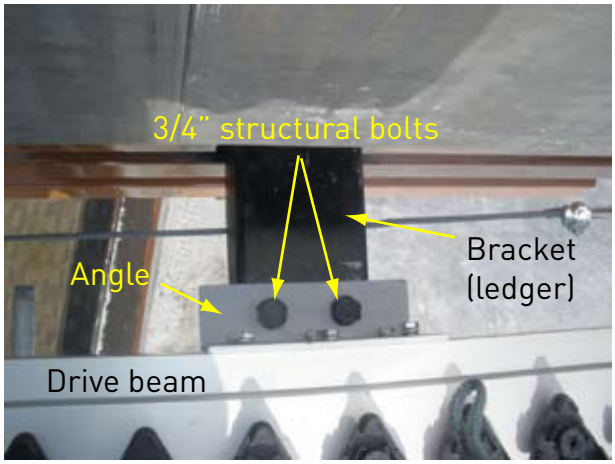


M8 bolts / block nuts in top & bottom beams

IMPORTANT:
Loosen bracket angle bolts (M10) so that it can move freely right to left. Do not completely remove the bolts and angle from the beam.

Make certain you have all required 3/4" structural bolts for attachment.

Each bracket will require two 3/4" bolts, nuts and washers to connect angle (located on sign) to bracket ledger (located on upright).

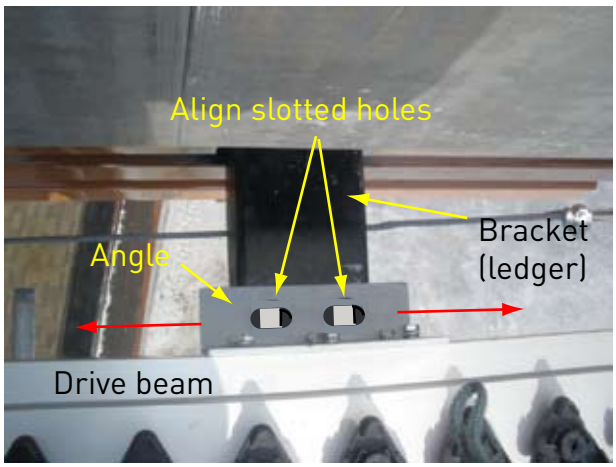


6.0 Mounting Your Sign (continued)

STEP 2: Lift & Mount Your Sign

Lift your sign (or sign section) and set on bottom bracket ledger.

Slide the bottom bracket angle (attached to sign frame) AND M8 block nuts (located in bolt track underneath the drive beam) right or left as needed to align with bolt holes of bracket ledger.



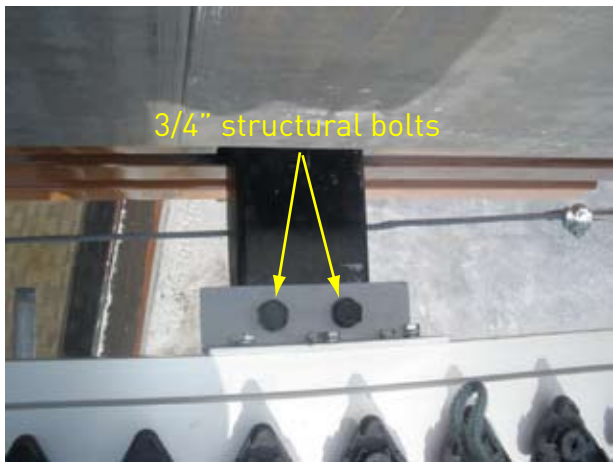
STEP 3: Insert bolts

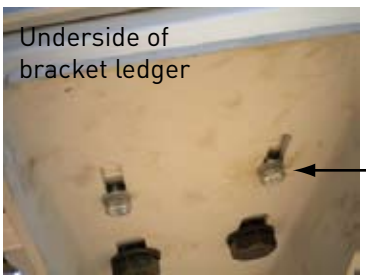
Insert two 3/4" bolts to attach bracket angle to bracket ledger.

Insert two M8 bolts into beam's bottom track / block nuts.

DO NOT TIGHTEN AT THIS TIME.

BOLTS SHOULD REMAIN LOOSE IN ORDER TO ADJUST SIGN FRAME FOR STRAIGHT & PLUMB.





M8 bolts through slotted bracket into M8 block nut

Handy Info

Before permanently attaching top brackets, take a prism and randomly install along face of sign to test for proper spacing.

6.0 Mounting Your Sign (continued)

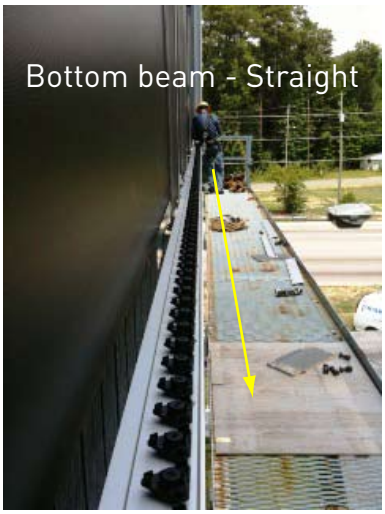
STEP 4: Top Bracket Attachment

Hinge down, or attach, the top brackets.

Slide the top bracket angle (attached to sign frame) right or left as needed to align bolt holes of angle to bolt holes of top bracket ledger.

Insert two 3/4" bolts to attach bracket angle to bracket ledger.

Insert two M8 bolts through the slotted holes of the top bracket ledter into beam's top track / block nuts.



DO NOT TIGHTEN AT THIS TIME.

BOLTS SHOULD REMAIN LOOSE IN ORDER TO ADJUST SIGN FRAME FOR STRAIGHT & PLUMB.

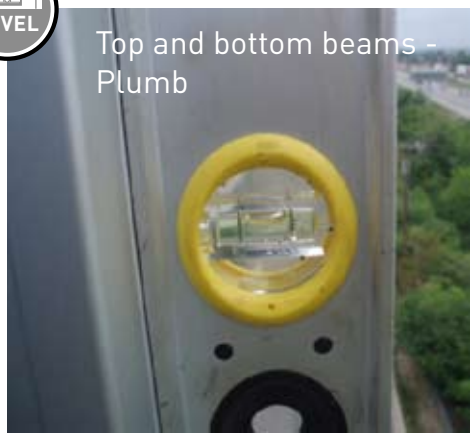
STEP 5: Straight & Plumb

MAKE CERTAIN THE BOTTOM AND TOP BEAMS ARE STRAIGHT.

MAKE CERTAIN THE TOP BEAM IS PLUMB WITH THE BOTTOM BEAM.

Slotted holes on the bracket ledgers are provided for front-to-back adjustment.

Measurements for plumb should be taken at the vertical beams and each vertical angle support.



IMPORTANT:
Make certain your top and bottom beams are straight!
This will directly affect the performance and life of your sign's drive mechanism.

STEP 6: Joining Sign Sections on the Structure

If lifting your sign in individual sections...

Lift the second sign section, **then follow section 6.0 - steps 1 through 5 (pg. 18 - 20)**.

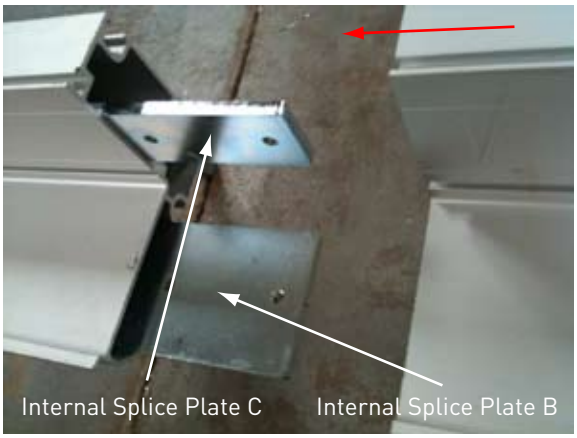
Where applicable, remove the M8 bolts on the male side of the internal splice plates in order to sleeve into the adjacent section.

Slide the beam sections together (male / female ends).

Make certain the joint is tight.
Make certain the sections are straight.
Make certain each section is plumb.

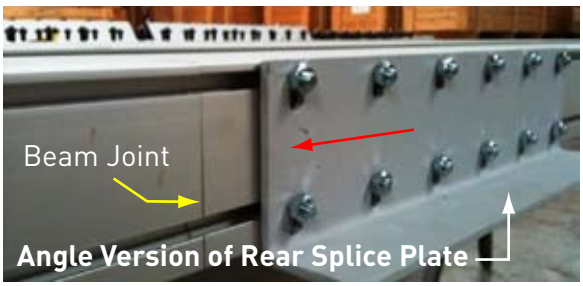
Slide the rear splice plate over the beam joint.
There should be an equal number of bolts on either side of the beam joint.

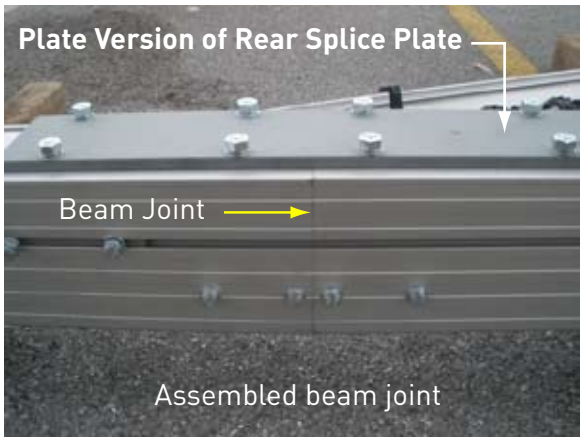
Completely tighten all internal splice plate bolts at this time.
Tighten rear splice plate bolts AFTER the remaining modules are installed.



NOTE: Splice plate C is not required if using the Angle version of the Rear Splice Plate.

IMPORTANT:
Always try to place your rear splice plate so there is an equal number of bolts on both sides of the joint (6 & 6 or 4 & 4 pending version).





6.0 Mounting Your Sign (continued)

Bracket Angles & Splice Plates

If a beam's splice plate is in conflict with the bracket's angle (3x5 angle attached to sign frame), note the following...

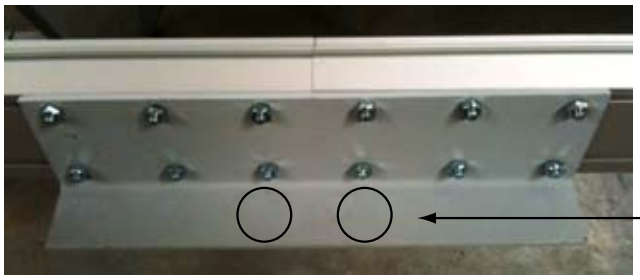
1) If a splice plate is located directly in front of an upright (or only slightly offset), remove the bracket angle (3x5 with 6 holes) and use only the rear splice plate bracket.

2) If a splice plate is slightly offset from an upright but will still come in conflict with the bracket angle, consider moving the sign in the appropriate direction in order to resolve the conflict.

   Remember, it is important to keep the rear external splice plate centered over the joint.

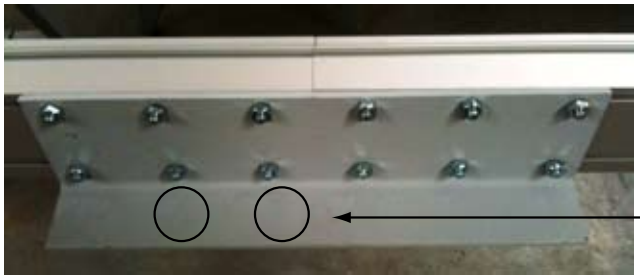
3) If moving the sign slightly is not possible, adjust the splice plate and bracket angle so that both can be used (slide each within bolt tracks of the frame).

   In doing so, you may need to drill new holes for the 3/4" bolts.



If using the rear splice plate to attach to the bracket ledger, as described in item 1 above, you will need to provide two holes to accommodate 3/4-inch bolts in the bottom flange.

Rear - external splice plate



The holes may need to be slightly offset in order to properly align with the bracket ledger. Drill after sign is in place using bracket ledger holes as your guide.

Rear - external splice plate

7.0 Final Connections

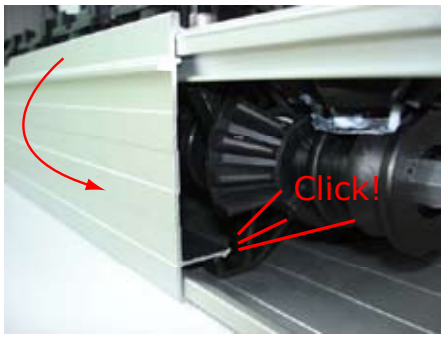
STEP 1: Drive Modules & Top Modules

If you have installed your sign in individual sections, see section 4.0, step 8 and step 9 (pg. 14 - 15) for installing drive modules and top beam modules.

If you have installed your sign in one piece, proceed to step 2.

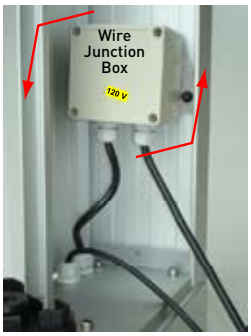
STEP 2: Cover Plates

Install remaining cover plates for the drive beam. Hinge on the rail and push on cover plate until it "snaps" into position.



STEP 3: Wire Junction Box

Mount the wire junction box inside the vertical beam. Align the metal mounting plate (attached to rear of box) with the extruded channels inside the vertical beam. Once aligned, twist into position for a secure fit.



STEP 4: End Enclosures

Using the provided self-drilling screws, attach the end enclosures to the face of the structure's metal sections.

STEP 5: Install Prisms

Install each prism by sleeving the top of each prism over the steering (black cone) of the top beam. Then pull down and securely set on the prism seat (black triangle) of the bottom beam.

IMPORTANT:
Check all bolts and nuts to confirm each are properly tightened before you proceed.

8.0 Electrical

Electrical Demand:

Each Prismaflex three-message sign draws less than 5 amps at 120 Volts AC.

STEP 1: Electrical Service

Provide one, dedicated 20 AMP circuit for each Prismaflex three-message sign.

Handy Info

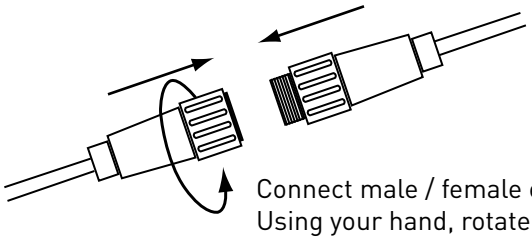
For safety and service purposes, it is recommended to install an ON/OFF switch in line prior to the sign's electronic controller (not provided).

CAUTION:
Do not wire your sign's electronic controller through the structure's lights, timers or any other external device without first consulting Prismaflex.

STEP 2: Motor Wire

Pull the bundled motor wire from the left end of the sign and connect it to the right motor using the provided water-tight, male / female connector.

Motor wire connector

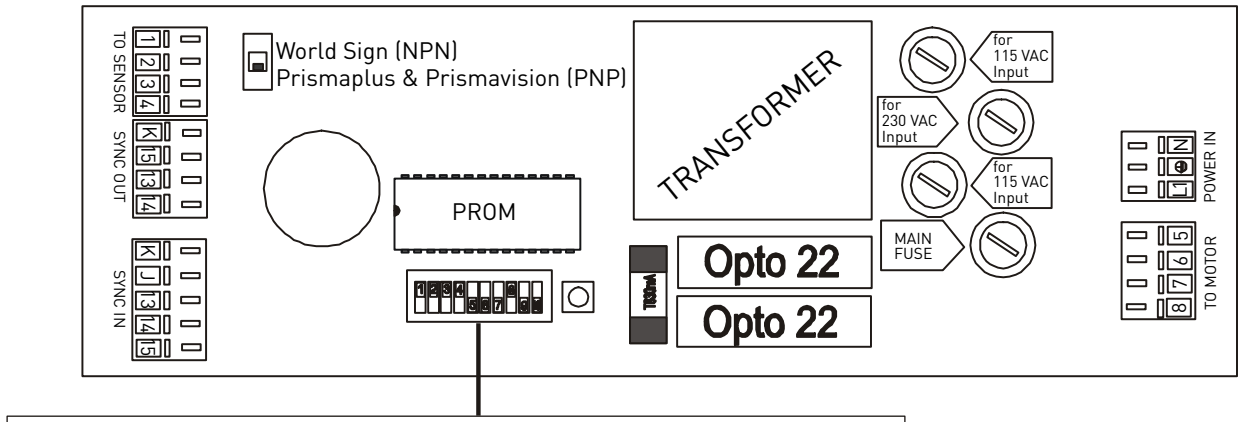


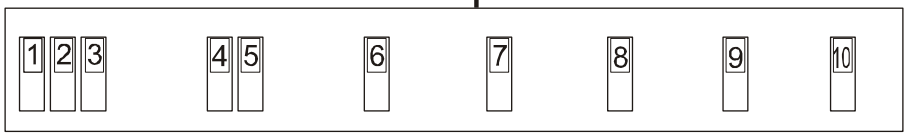
Connect male / female ends. Using your hand, rotate the collar to tighten. Be careful not to cross-thread.

9.0 **Sign Controller** (Basic Option Plus - BOP)

The electronic controller for your Prismaflex three-message sign arrives completely wired, excluding the connection of primary power (120 VAC).

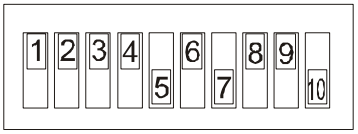
All fuses and controller settings are properly configured for your model sign and 120 VAC. Take a moment to confirm all default controller settings and the fuse configuration prior to cutting the sign on.





RUN MODE	PAUSE TIME	SIGN TYPE	DRIVE TYPE	MASTER/ SLAVE	STOP PULSE	MANUAL RESET
ABC	0s	PLUS	OTHER	MASTER	YES	RESET
AB	2s	OTHER	PLUS	SLAVE	NO	NORMAL
BC	4s					
AC	10s					
ABCB						

DEFAULT SETTINGS FOR PRISMAPLUS XT THREE-MESSAGE SIGNS



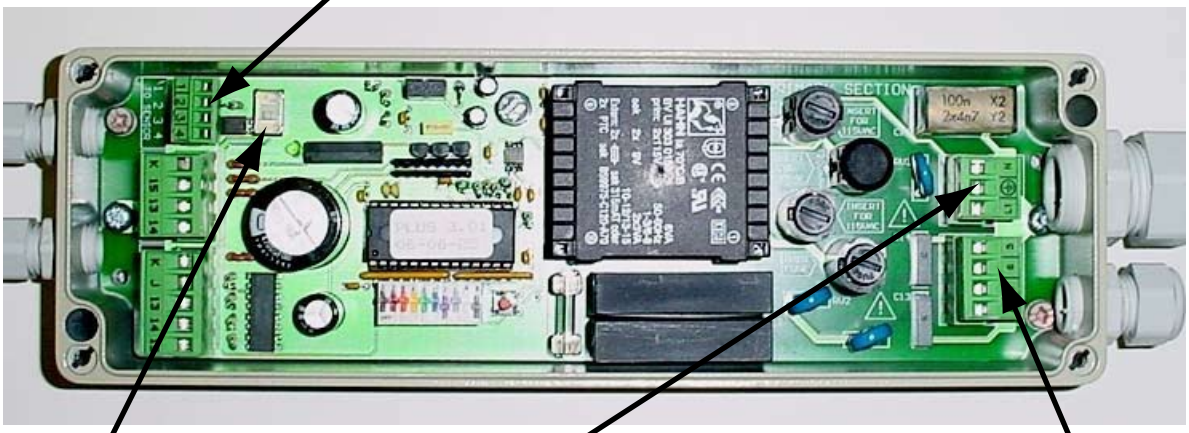
IMPORTANT:
After ANY switch change or sign failure, switch 10 must first be moved to "RESET" and back again to "NORMAL"

9.0 **Sign Controller** (Basic Option Plus - BOP)

Basic Option Plus (BOP) Wiring:

TO SENSOR
(Double Sensor Signs)

(1) Brown - from both sensors
(2) Black - from "face-flat" sensor (clutch)
(3) Blue - from both sensors
(4) Black - from"side A" sensor (bevel gear)



Prismaplus = PNP
(lower position)

POWER IN

(N) White
(⏚) Green
(L1) Black

TO MOTOR

(5) ⏚ Yellow /Green
(6) Red 1
(7) Red 2
(8) Red 3

space for
on/off switch

BOP controller

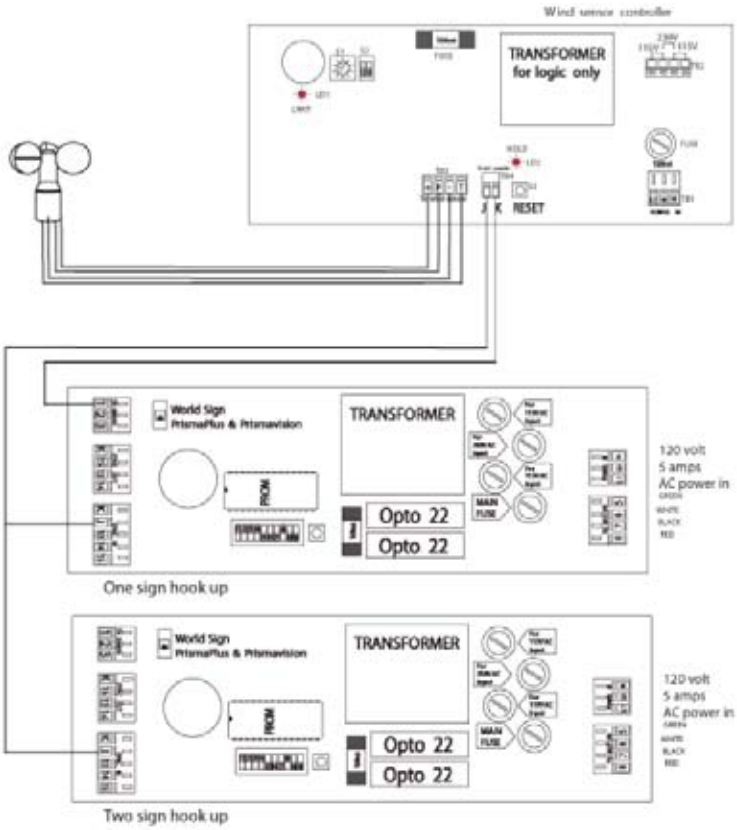
optional
wind sensor

electronics
mounting plate

9.1 **Sign Controller** (Wind Sensor)

Wind Sensor:

Your Prismaflex three-message sign may come equipped with an optional wind sensor. Its function is to stop your sign on a flat face during high-wind conditions and to automatically restart your sign once winds subside. Wind speed threshold is adjustable.



Connections:

TB 1 = Main power input
L1 = Live input
PE = Ground, Must be connected!
N = Neutral

TB 2 = Main voltage selection

115V Or 230V

TB 3 = Wind sensor input
+ = Supply (Brown)
P = Pulse (Yellow)
- = Return (Green)
T = Thermistor (White)

TB 4 = Relay output - To J & 1 timer input in controller
J = Normally open, connect to J in the BOP
K = Common, connect to 1 in the BOP

LED indications
LD1 = Red
ON = Wind speed higher than selected with S1
LD2 = Yellow
ON = TB4 closed and sign stopped.

S1 = Wind speed limit selector, 10 positions
Note! Press Reset (S3) after modification.

0 = Test position (see below)			5 = 14m/s	31mph	27knots (default)
1 = 6m/s	13mph	12knots	6 = 16m/s	36mph	31knots
2 = 8m/s	18mph	16knots	7 = 18m/s	40mph	35knots
3 = 10m/s	22mph	19knots	8 = 20m/s	45mph	39knots
4 = 12m/s	27mph	23knots	9 = 22m/s	49mph	43knots

0 = Test position
Switch to 0, the yellow LED (LD2) will come on and the relay output (TB4) will be closed. Sign will stop. The red LED (LD1) will go ON&OFF depending on the position of the wind sensor. When it turns will it go ON and OFF all the time if connections are correct and the sensor is working.

S2 = Wind speed unit selector, 2 dip-switches
Note! Press Reset (S3) after modification.

ON OFF m/s mph knots optional ON OFF

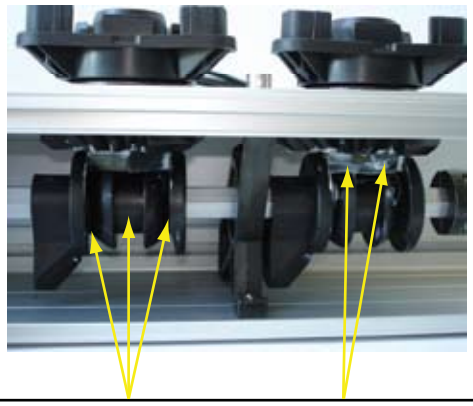
S3 = Reset button S3
Resets during operation

10.0 Servicing Your Sign

Lubrication:

Your Prismaflex three-message sign is greased during production with a silicone based lubricant. To help ensure a good working condition, we recommend lubricating the sign's drive mechanism every 12 months.

IMPORTANT:
Never use a petroleum based lubricant. Never use a lubricant from an aerosol. Petroleum based and aerosol lubricants will damage the gears.
Only use silicone based Molykote 33L or 33M that is applied with a brush.



Apply Silicone Based Grease with Paint Brush
It is not necessary to lubricate teeth of gears

Molykote 33 L or 33M by Dow Corning
Available through Prismaflex or Grainger

Grainger part number: 6Y763

Manual Rotation:

When the power is switched off and you need to turn the sign, use a 19-mm wrench (or adjustable) on the hexagonal spacer between each shaft gear to turn the shaft around.

IMPORTANT:
Never attempt to rotate the drive mechanism by turning the prisms. Always use a wrench on the drive shaft.

BASIC OPTION PLUS (BOP) SIGN CONTROLLER - BASIC PROGRAMMING
FOR SIGNS WITH TWO (2) SENSORS

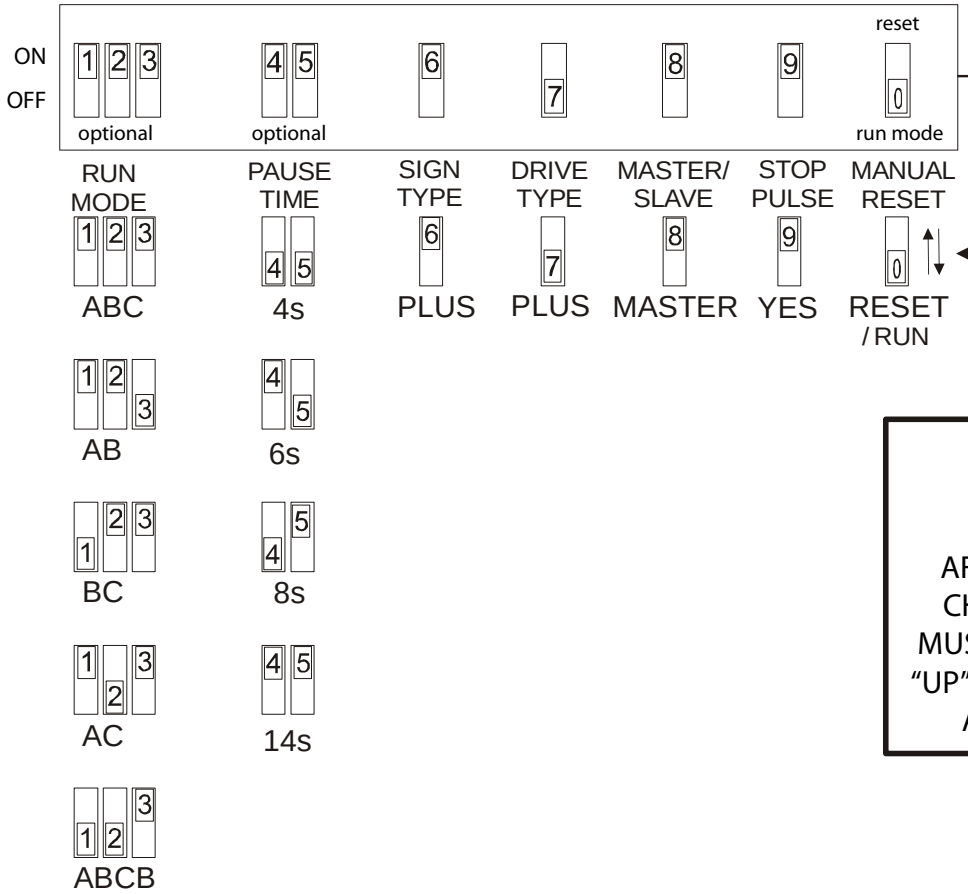
REMOVE A FACE FROM ROTATION:

1. Your sign's rotation is controlled by DIP switches 1, 2 & 3. While the sign is running, select which face you would like to remove from rotation. Choose from DIP switches 1, 2 or 3.
2. Move the desired DIP switch to the OFF position.
3. Reset your sign by moving DIP switch 0 to the up position, wait a second, then move it back to the down position (which is run mode for switch 0).
4. Your sign should start rotating. It may take a revolution for your adjustment to be acknowledged. Then, your sign should begin to skip the selected face.
5. If the face you have selected from DIP switches 1, 2 or 3 does not correspond to the desired advertisement you wish to remove from rotation, simply repeat steps 2 & 3.

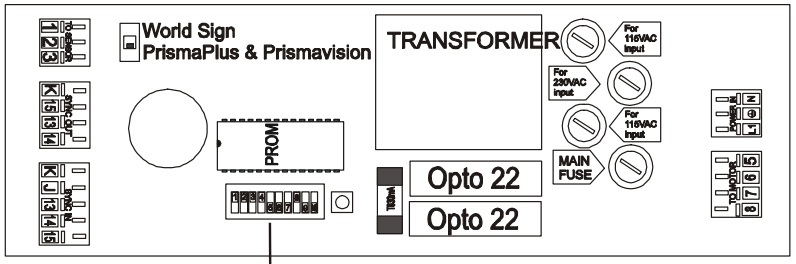
CHANGE PAUSE TIME:

1. Your sign's pause time is controlled by DIP switches 4 & 5. While the sign is running, adjust 4 & 5 according to any combination listed below.
2. Reset your sign by moving DIP switch 0 to the up position, wait a second, then move it back to the down position (which is run mode for switch 0).

DIP Switches 6-9: Default Settings for Prismaplus XT



BASIC OPTION PLUS (BOP) CONTROLLER



IMPORTANT !
"RESET"

AFTER ANY SWITCH CHANGE, SWITCH 0 MUST FIRST BE MOVED "UP" AND BACK "DOWN" AGAIN TO RESET

PRISMAFLEX INTERNATIONAL

BASIC OPTION PLUS (BOP) SIGN CONTROLLER - BASIC PROGRAMMING
FOR SIGNS WITH ONE (1) SENSOR

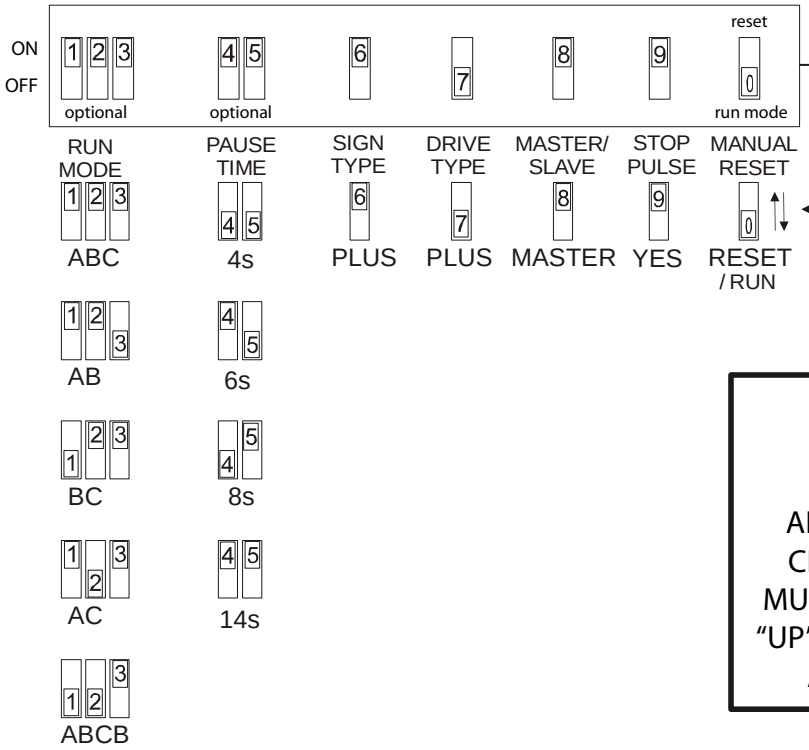
REMOVE A FACE FROM ROTATION:

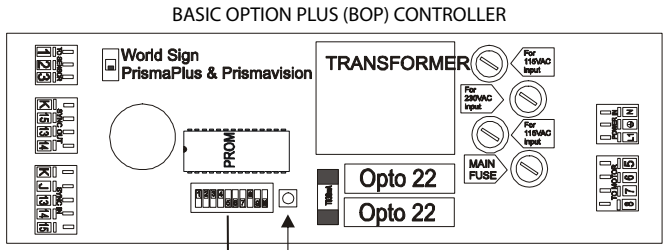
1. First, you need to give your controller a reference point. This is accomplished by defining face "A". First, allow your sign to rotate (move DIP switch "0" to the down position). To define face "A", simply push and hold down the RED button located to the right of the DIP switches. Your sign will begin to rotate without pause. Keep the RED buttom pressed. Allow the sign to rotate through all three sides. When the face of the sign is flat, release the RED button on the face you would like to remove from rotation. That face is now defined as face "A" which corresponds to DIP switch 1 (A = 1; B = 2; C = 3).
2. Your sign's rotation is controlled by DIP switches 1, 2 & 3. Select which face you would like to remove from rotation. Choose from DIP switches 1, 2 or 3.
3. Move the desired DIP switch to the OFF position.
4. Reset your sign by moving DIP switch 0 to the up position, wait a second, then move it back to the down position (which is run mode for switch 0).
5. Your sign should start rotating. It may take a revolution for your adjustment to be acknowledged. Then, your sign should begin to skip the selected face.
6. If the face you have selected from DIP switches 1, 2 or 3 does not correspond to the desired advertisement you wish to remove from rotation, simply repeat steps 2, 3 & 4.

CHANGE PAUSE TIME:

1. Your sign's pause time is controlled by DIP switches 4 & 5. While the sign is running, adjust 4 & 5 according to any combination listed below.
2. Reset your sign by moving DIP switch 0 to the up position, wait a second, then move it back to the down position (which is run mode for switch 0).

DIP Switches 6 - 9: Default Settings for Prismaplus XT





IMPORTANT !
"RESET"

AFTER ANY SWITCH CHANGE, SWITCH 0 MUST FIRST BE MOVED "UP" AND BACK "DOWN" AGAIN TO RESET

FACE "A" DEFINITION (RED BUTTON)

COMPRESS AND HOLD ALLOW SIGN TO ROTATE THROUGH THREE SIDES RELEASE BUTTON ON DESIRED FACE "A"

PRISMAFLEX INTERNATIONAL

Troubleshooting Guide

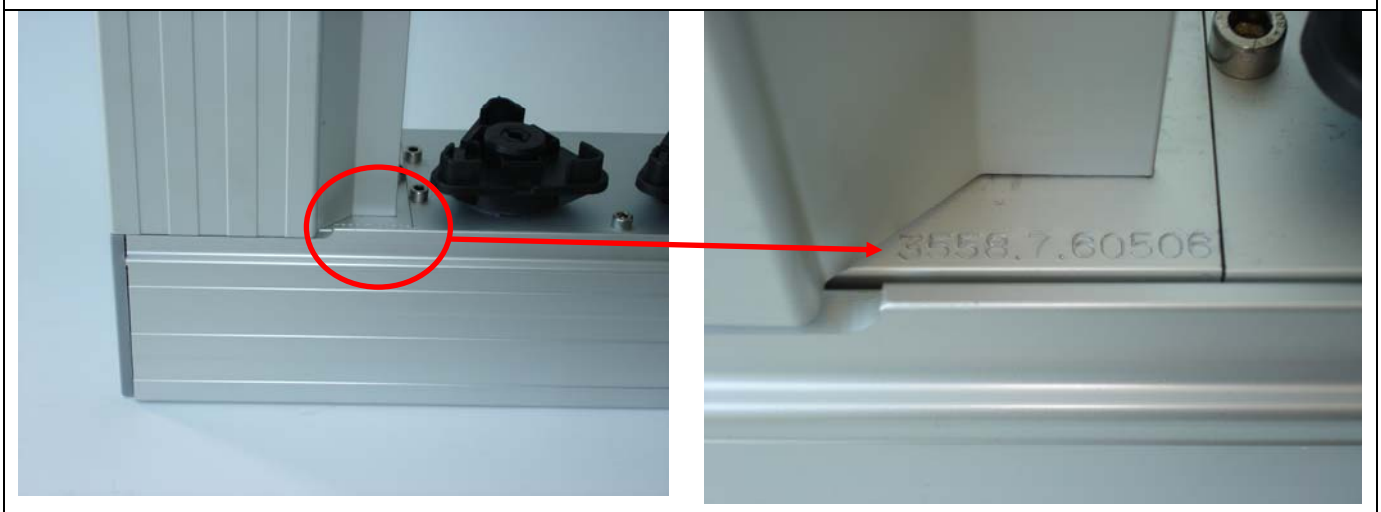
PRISMAPLUS / PRISMAVISION with BASIC OPTION PLUS (BOP) Controller

TYPE OF FAILURE	POSSIBLE REASONS FOR FAILURE / ITEMS TO ADDRESS					
	1.	**2.**	**3.**	**4.**	**5.**	**6.**
Sign stops without a visible reason. It starts after a reset.	Check distance between sensor and pause reference assembly for Prismaplus signs. Should be less appr. 2-3 mm.	Check if the LED back of the sensor comes on when it passes the pause reference assembly.	Check wire conditions. The sensor terminal block no. 1, 2, 3 & (4). Motor terminal block no. 5, 6, 7 and 8.	Check for friction. Is the lower beam straight? Measure cross section. For split prisms, are all blades snapped in?	Measure power to the motor. Check motor label to see if power is correct.	Check if all switches are in the correct positions. Standard = 5, 7 and 0 down for Prismaplus.
Motor continues to run without stopping for more than 1 minute.	Check if all switches are in the correct positions. Standard = 5, 7 and 0 down. The rest in the upper position for Prismaplus.	Relay in the BOP controller is likely damaged. Change controllers.				
Display turns ABC also while in AB mode	Check if all switches are in the correct positions.	Has the sign been reset after switches have been changed?	Check distance between sensor and pause reference assembly. Should be appr. 2-3 mm.	Check if the LED back of the sensor comes on when it passes the pause reference assembly.	Check wire connections. The sensor terminal block 1, 2 3 & (4).	Relay in the BOP controller is likely damaged. Change controllers.
SINGLE SENSOR SIGN: Sign showing wrong face, for example when in AB mode.	Check if all switches are in the correct positions.	Is face A defined with the red button (BOP)?	Has the sign been reset after switches have been changed?	Check distance between sensor and pause reference assembly. Should be less than 0.5mm.	Check if the LED back of the sensor comes on when it passes the pause reference assembly.	Check wire connections. The sensor terminal block 1, 2 and 3.
Display does not start.	Measure if you have correct main power input to L1 and N in the controller.	Check if all switches are in the correct positions. Standard = 5, 7 and 0 down. The rest in the upper position for Prismaplus.	Check fuses in the controller.	With power on, check for correct power at motor terminal.	Just for TEST: Bypass the controller and connect main power to 6 and 7 on the terminal block.	
Display turns 3 faces and stops.	Check distance between sensor and pause reference assembly for Prismaplus. Should be appr. 2-3 mm.	Check if the LED back of the sensor comes on when it passes the pause reference assembly.	Check if all switches are in the correct positions. Standard = 5, 7 and 0 down for Prismaplus.			
Display turns in wrong direction.	Reverse wire 7 and 8 in the controller, for Basic Option Plus.					

Motor seems too hot (too hot to hold your hand on).	Measure power to motor. Check motor-label. Make sure is correct version.	Check for friction. Is the lower beam straight? Tilting? Measure cross section for square. If features split prisms, are all blades in properly?				
Display will not change pause time.	Check if all switches are in the correct positions.	Has the sign been reset after switches have been changed?	Make sure that the motor stops and is not continuously turning.			

PRISMAPLUS PARTS LIST

Every sign has a specific sign number. Use this number when ordering spare parts. The sign number can be found in front of the left side beam on the lower corner plate.



PART No. & Name

Parts for drive module	
1063	Prism seat
1064	Prism bevel gear for clutch
1064-CG	Prism bevel gear cog grip
1085-A	Shaft gear assembly
1083-X-A	Bearing housing assembly with seal
1093-A	Shaft support assembly including bushing
1106-A	Shaft coupling assembly

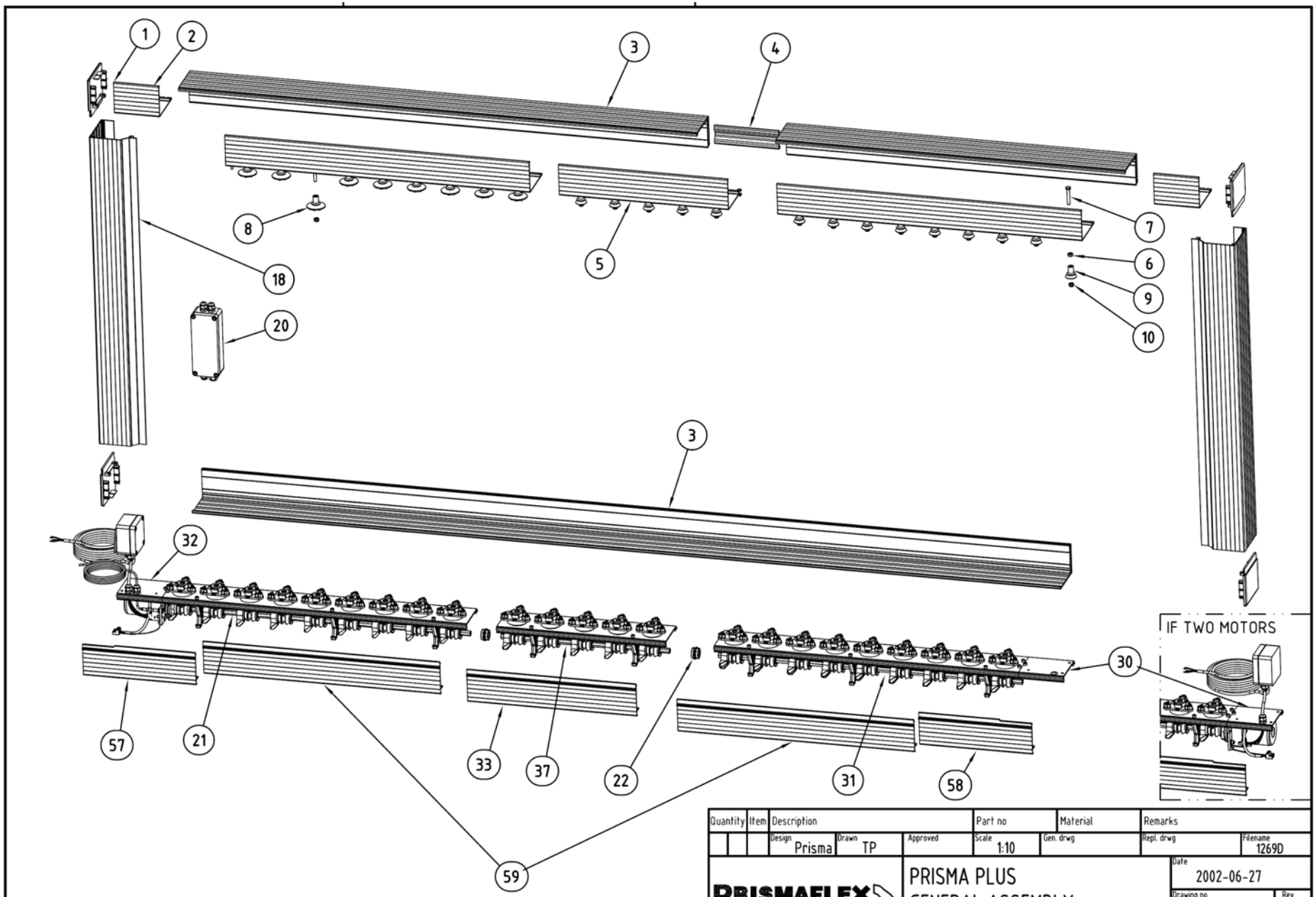
Parts for motor module	
1357-A	Clutch left
1358-A	Clutch right
2011-230	Motor 230 V
2013-A-L	Gearbox 150 left (230 V)
2013-A-R	Gearbox 150 right (230 V)
2111-115	Motor 115 V
2113-A-L	Gearbox 180 left (115 V)
2113-A-R	Gearbox 180 right (115 V)

Electronics	
2034-115	Control unit BOP 115 V
2034-230	Control unit BOP 230 V
0404	Fuse 200mA (power setting)
0406	Fuse 3,15 mA slow (main fuse)
1532-A	Sensor with sensor cable

Screws and nuts	
2007	Screw MC6S M5x20
0247	Screw MC6S M6x10
2006	Screw MC6S M6x16
0007	Screw MC6S M6x25
2008	Lock-nut M6M M5
2003	Lock-nut M6M M6

Complete modules (x = number of prisms)		For c/c 108 mm
1097-x-L	Drive module x prism c/c 104,9 mm left	1505-x-L
1097-x-R	Drive module x prism c/c 104,9 mm right	1505-x-R
1172-x-SO	Top module x prism c/c 104,9 mm Ø=55 mm solid	1503-x-SO
1172-x-SP	Top module x prism c/c 104,9 mm Ø=33 mm solid	1503-x-SP
1291-115	Motor module 9 prism c/c 104,9 mm left 115 V	1348-115 (5 prism)
1292-115	Motor module 9 prism c/c 104,9 mm right 115 V	1349-115 (5 prism)
1291-230	Motor module 9 prism c/c 104,9 mm left 230 V	1348-230 (5 prism)
1292-230	Motor module 9 prism c/c 104,9 mm right 115 V	1349-230 (5 prism)
1307	Corner module top	
1002-A	Lower corner plate left assembly (1 or 2 motors)	
1003-A	Lower corner plate right assembly (1 or 2 motors)	
1158-A	End plate assembly	

Exploded view		
1	30-1158-A	End plate assembly
2	30-1307-A	Corner module top assembly
3	10-1066	Mounting rail
4	10-1219	Mounting rail joint
5	30-1172-x-SO/SP	Top module assemlby
6	80-2069	Nut ML6M M8
7	80-2068	Bolt M6S M8x50H
8	20-1196	Steering solid
9	20-1195	Steering split
10	80-2010	Lock-nut M6M M8
18	10-1220-x	Side beam
20	50-2034-x	Control unit BOP
21	20-1291-x	Motor module left assembly
22	20-1106-A	Shaft coupling assembly
23	20-1063	Prism seat
24	20-1083	Bearing housing assemlby
25	80-2005	Seal 45x1,5
27	20-1064-CG	Prism bevel gear CG
28	20-1085-A	Shaft gear assembly
29	20-1095	Shaft
30	30-1003-A	Lower corner plate right assemlby
31	30-1292-x	Motor module right assemlby
32	30-1002-x	Lower corner plate left assemlby
33	20-1116-x	Cover plate
37	30-1097-x	Drive module assemlby
39	80-2028	Screw MC6S M6x12
42	40-2013/2113-A-L	Gearbox left
43	40-1359-A	Clutch left
44	20-1098-A	Shaft support assembly with bushing
48	40-1360-A	Clutch right
49	40-2013/2113-A-R	Gearbox right
50	40-2011/2111	Motor
51	50-1532	Sensor E2A-M12KS04-M1-B1
52	40-1296	Motor console left
53	40-1297	Motor console right
54	50-2039-A	Ground cable assembly
55	80-2006	Screw MC6S M6x16
56	80-2003	Lock-nut M6M M6
57	20-1566-L	Motor cover plate left
58	20-1566-R	Motor cover plate right
59	20-1563	Cover plate motor module
60	40-1382	Motor bracket
61	20-1064	Prism bevel gear for clutch



Quantity	Item	Description	Part no	Material	Remarks

Design	Drawn	Approved	Scale	Gen. drwg	Repl. drwg	Filename
Prisma	TP		1:10			1269D

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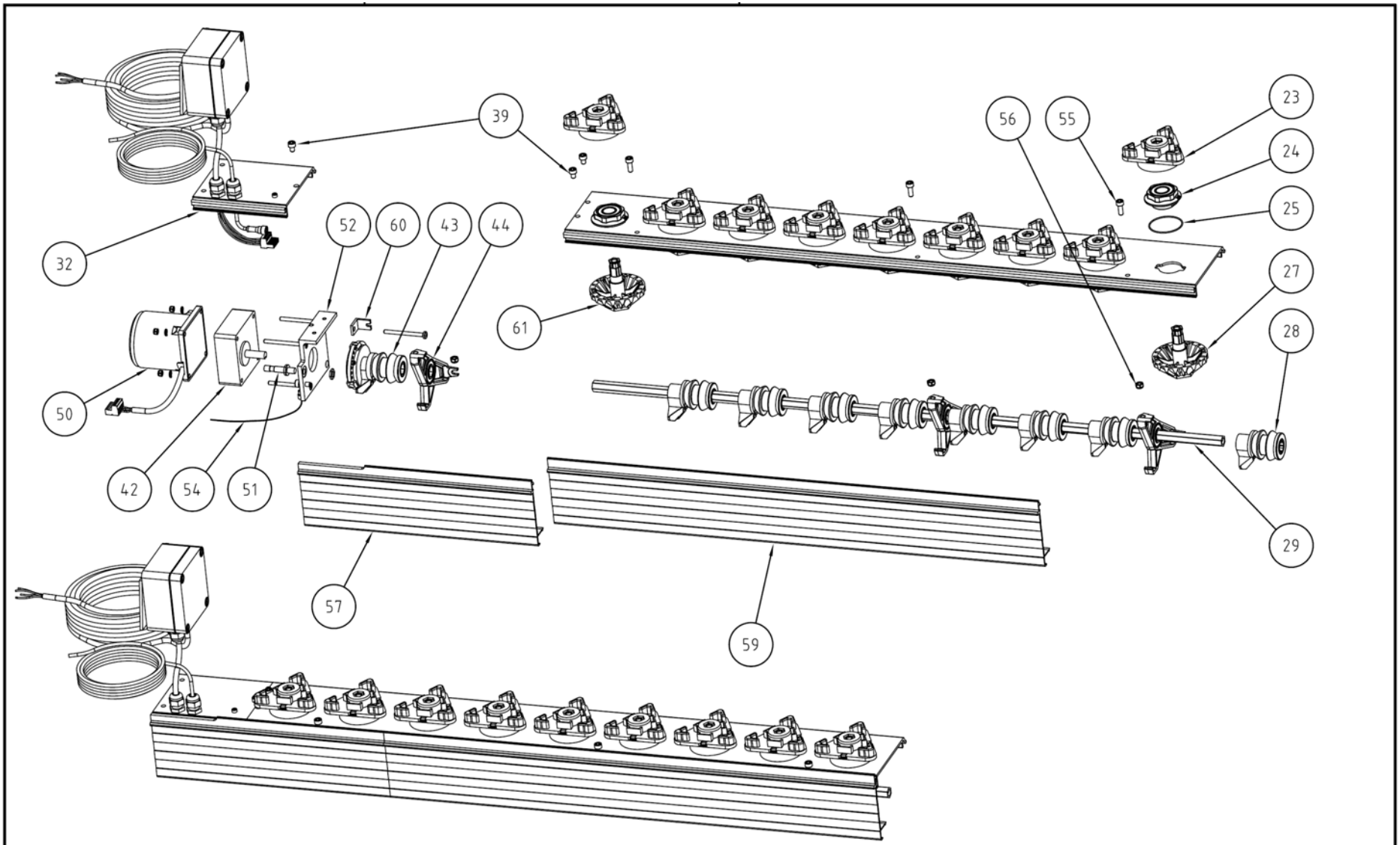
PRISMA PLUS
GENERAL ASSEMBLY

Date: 2002-06-27
Drawing no: 3-1269
Rev: D

Nr	Ant	Ändring och/eller ändrings nr	Datum	Ändr	Godk
D		Alteration 110	070821	RP	

PRISMAFLEX INTERNATIONAL



Item	Quant	Description	Part no	Material	Remarks
		Design: Prisma / Drawn: TP / Approved	Scale: 1:5	Gen. drwg	Repl. drwg / Filename: 1291C

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PRISMA PLUS
MOTOR MODULE
LEFT

Date: 2002-05-15
Drawing no: 3-1291
Rev: C

Nr	Ant	Ändring och/eller ändrings nr	Datum	Ändr	Godk
C		Alteration 110	070822	RP	

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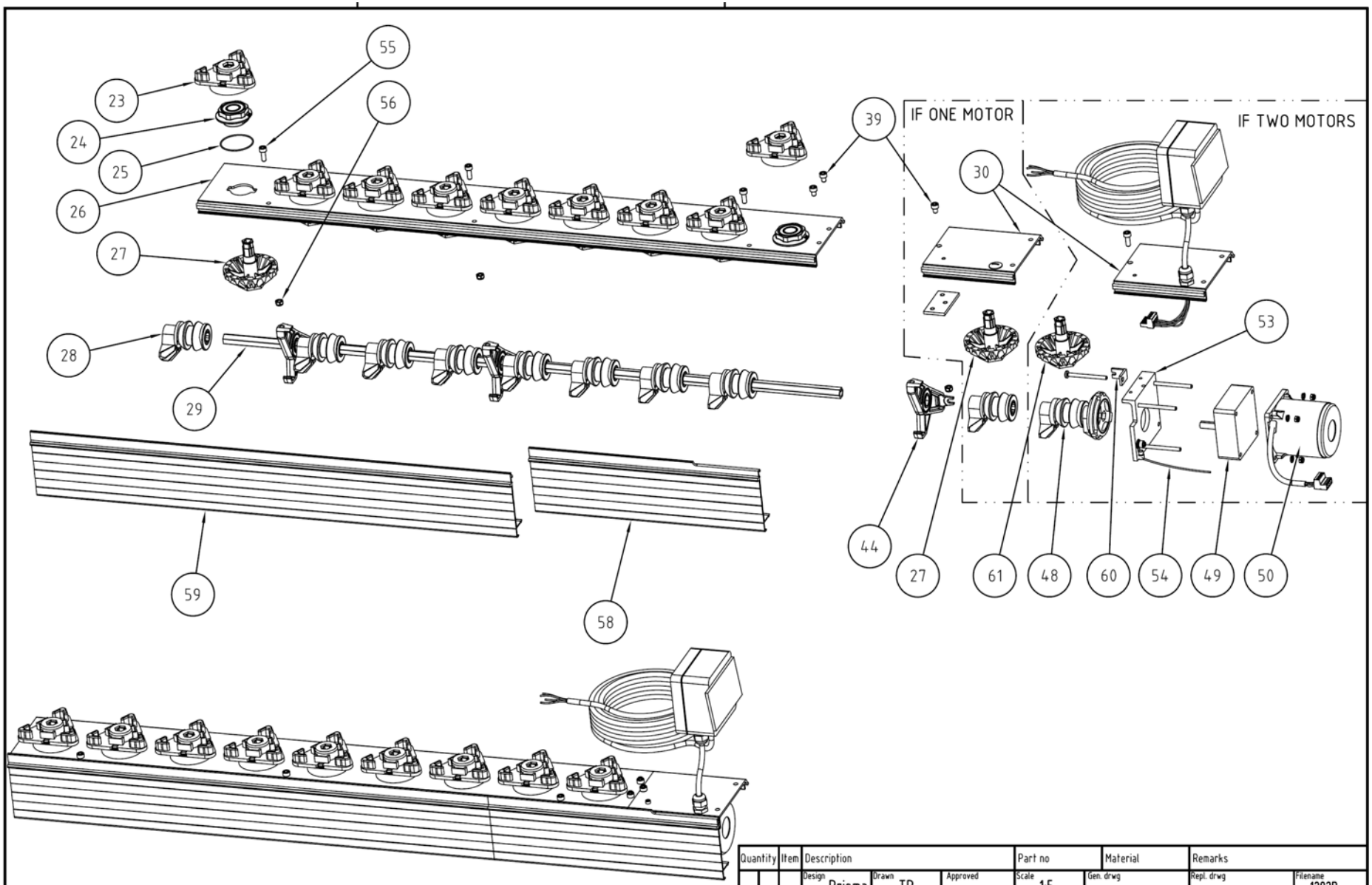

B		Alteration 110	070822	RP	
Nr	Ant	Ändring och/eller ändrings nr	Datum	Ändr	Godk

Quantity	Item	Description	Part no	Material	Remarks

Design	Drawn	Approved	Scale	Gen. drwg	Repl. drwg	Filename
Prisma	TP		1:5			1292B

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PRISMA PLUS
MOTOR MODULE
RIGHT

Date: 2002-05-28

Drawing no: 3-1292 Rev: B

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