Ted Gosstyla's
Specifications/Wish List

Background
The boat will be used to live aboard and cruise the Caribbean and southeastern seaboard of the US. However, I may also cruise the coasts of South America and some day sail to Australia.

Home port will be around N9 17 W82 06 on Isla Bastimentos off the Caribbean coast of Panama. That area receives over 100 inches of rain per year and the average temperature and humidity are in the mid to high 80s year round. Due to the water depth in the area a shallow draft is very important.

I sail primarily for the propulsion efficiency not "the enjoyment of sailing". When effective VMG to destination drops below 10 knots I turn on the motors, unless batteries are being charged. When effective VMG drops below 6 knots motors definitely go on. Therefore, most of my sailing will probably be motor sailing. I am interested in safety and ease of sail handling in general and therefore interested in a self tacking jib. I am not interested in "light air" sailing.

I have seriously looked at these boats:

1. Voyage 440 and 500 (www.voyageyachts.com)
   The 440 doesn't have sufficient payload capacity for living aboard. The 500 probably has the payload capacity and space, although it is not efficiently designed for live aboard. I believe I can find a smaller boat with as much or more payload capacity and useable space.

2. Rainier 470 (www.cmiys.com)
   I liked this boat a lot, however it has a payload capacity problem.

3. Lagoon 470 (www.cata-lagoon.com)
   I like this boat's hulls, galley down owner's layout, and the fact they now offer the Solomon Technologies electric motors as an alternative to diesels. I don't care for the cockpit, believe the escape hatches are too close to the waterline and doubt they will do all the customizations I would want.

4. Fountaine Pajot Bahia 46 (www.fountaine-pajot.com)
   Comparable to the Lagoon 470 although I expect it sails better. However, I would require even more customization to this boat than I would to the Lagoon 470. It also seems overpriced relative to the other boats.

Using “Living The Dream” specs on your web site as a starting point here are my preliminary thoughts of the modifications I would want. I describe a layout with galley and guest cabin in the port hull and master cabin and nav/office station starboard. This can be “flipped” if necessary. What is important is relative position of things. For example, the helm is to be on the same side as the galley.

Also, through out I make reference to Hella fans, it seems many people prefer Caframo. I am open to your recommendations about this and all other items mentioned.

Cockpit

1. In order to free up some space in the cockpit I would like the arch/targa to be moved aft and extended from the transoms. It would be used for the Main traveler and to support a hard bimini. I would like the bimini to cover most of the cockpit similar in design to that on the Voyage 500. I will also want detachable, mesh, sandfly proof sidecurtains. I intend the top of the arch/targa to be positioned appropriately to handle the Main traveler without requiring modifying the boom’s length. Rather it is the arch/targa base I want moved so it does not encroach on the cockpit area. See Exhibit 1 (Admiral 50) for an example of a arch/targa design that I like.

2. All control lines should lead to the helm which will be on the port side. The cabin top at the helm should be clear of everything except winches, lines, and brakes. Right of the helm on the cabin top will be an electric winch and one or two manual winches to the left that can be worked from the helm and by crew standing on the port hull deck.

3. The helm seat should be at a level so only the helmsman’s head extends above the cabin top when seated. If possible, the decks around the helm and the winches should be one continuous, flat area.

   If the helm seat is low enough that it is practical to use as cockpit seating when not underway, I will want the seat to be double wide and able to pivot 90 to face starboard and/or the backrest able to “flip” so one can sit facing aft.

4. Living aboard in the tropics, I believe the cockpit and salon will be the most “lived in” areas of the boat. I would like them to “flow” into each other. Therefore, I want a door and connected large opening window as on some Lagoons and Cantanas. See Exhibit 2 and 3 (Cantana 580). With the helm on the port side I would want the window on the starboard side of the door.

5. The sink in the cockpit is not needed.

6. I estimate the salon to be about 12 ft deep and the cockpit 9.3 ft. If feasible I would like to shift about a foot from the salon to the cockpit.

7. There cannot be too many handholds. One by the door, some on the sides of the arch/targa and maybe some overhead attached to the hard bimini. See Exhibit 13 (Voyage 580)

Transom

1. One swim ladder and a shower with pressurized (hot and cold) water on either the port or starboard transom.

2. A swim platform between the transoms, it will primarily be used for stowing the dinghy. Your standard aluminum mesh at cockpit level is appropriate.

3. I intend the dinghy to be a 12ft Aquapro www.aquaprousa.com powered by a Yanmar 27 hp outboard diesel www.yanmar.nl/products/outboard.htm (I do not want any gasoline or propane on board). I estimate this combination weighs about 350lbs.

4. Instead of davits I want to use a "boom-derrick" system like that used by Voyage. If feasible I will want the ability to swing the boom to either port or starboard to lower and raise the dinghy from the side when a stern anchor is deployed.

Deck Equipment

1. Fresh water deck wash system.

2. Non-slip paint and life lines on underside of wingdeck (maybe).

3. Sunbrella type "tent/awning" to fit over boom, covering the cabin and secured on the port and starboard stanchions or cleats. This should extend forward enough to at least shade the forward windows, it will not be used while underway.

4. With port lights in the salon's forward windows, see Salon section, the hatches around the mast will not be needed. I want steps around the mast leading up to the Salon cabin top see Exhibit 4 (Leopard 47) for an example.

5. There cannot be too many handholds. Need at least one on both the port and starboard side of the cabin top for use when going forward. See Exhibit 13 (Voyage 580)

6. I will rely on Alwoplast to recommend most equipment taking into consideration my objectives as summarized in the Background section above.

Mooring Gear and Ground Tackle

I want gear more than adequate to handle transiting the Panama Canal and extensive anchoring in the eastern Caribbean. I will want to be able to set 2 bow anchors and a stern anchor.

1. Bridle with thimbles for anchoring. Is bridle for stern anchor necessary or appropriate?

2. For bow: 2 anchor rollers with tippers, 2x60 lbs Bruce, 2x300 ft 3/8" chain.

3. For stern: 1x40 lbs Danforth with 250 ft 3/8" chain.

4. 1 grapnel (size ?) 150 ft 3/8" 3 strand twisted nylon, with trip line.

5. Electric windlass with safety circuit breakers, and manual override, and remote control at helm.

6. Large cleats on bows and crossbeam, and at stern for stern anchoring. Deck cleats must be large enough to easily handle 7/8 inch lines without figure eights slipping off while constantly being paid out or hauled in. All cleats must be through-bolted to backing plates below decks. Also need 4 sturdy closed chocks and 4 sturdy bitts.

7. Dock lines: 4x150ft 7/8" 3 strand twisted nylon, each with eye splice with 3ft opening at one end. Fenders: 6 large spherical or "tear-drop" balls each about 3ft across. This combination should be adequate for transiting the Panama Canal.

8. I will rely on Alwoplast to recommend most equipment taking into consideration my objectives as summarized in the Background section above.

I prefer anchors be deployed from the chain locker, aft of the tramps, see Exhibit 4 (Leopard 47). Fontaine Pajot also uses this approach. If there are good reasons not to do this I am willing to listen, but it seems this approach keeps the anchor weight farther aft of the bows and probably is more comfortable for the person working the anchors.

Rigging and Sails

1. Storm jib

2. “Light air” sails not needed.

3. Retractable lazy jacks (www.harken.com/mainsail/4060lzjk.pdf)

4. All control lines lead back to helm area.

5. Masthead tri-color light.

6. Masthead strobe light (maybe).

7. Specifications indicate the mast height off the water is 66.5 ft. Can this be reduced without significantly hurting performance, remember I don’t care about “light air” sailing. Can the sail head then be “fattened” to minimize reducing “effective sail area”. The southeastern coast of the US will be one of my sailing areas. Fixed bridges along the Intracoastal Waterway have a maximum height clearance of 65 ft with some as low as 56 ft.

   I would think a lower mast height would also mean a lower center of effort which might improve performance. I will rely on Alwoplast’s recommendations on this matter, although it would be convenient to have a mast height off the water of less than 60 ft, it is not absolutely necessary.

8. Is a crow’s nest below the first spreader feasible? See Exhibit 14. I believe one would be very handy when navigating through reefs. I would want a remote dual throttle in the crow’s nest. What are the advantages and disadvantages? An alternative approach is to just have steps up the mast to at least the first spreader. At the spreader have handholds and a way to secure a harness. With this approach I would not want the remote dual throttle.

9. A self tacking jib with roller furling. I am willing to have the forward windows modified slightly to accommodate this, however I do not want to give up the window space over the head of the beds. Since I would prefer a shorter mast, radar on the mast, and I may have a crow’s nest is it feasible to:
   a. Not use a fractional rig
   b. Place the jib traveler at the bottom edge of the windows
   c. Cut the jib for maximum effectiveness given the above constraints.

   Approximately what will I be giving up in sailing performance in 10 knots to 20 knots winds by having a self tacking jib instead of Genoa? Is a Genoa even feasible given the radar and crow’s nest on the mast?

10. I will rely on Alwoplast to recommend most equipment taking into consideration my objectives as summarized in the Background section above.

Salon

1. As mentioned above the boat will be sailed primarily in the tropics. Good ventilation, durability in high humidity, and ease of maintenance are very important. I will want "wood" flooring if it doesn't add too much weight or expense and is not too hard to maintain and if it doesn't reduce traction too much. Otherwise just painted non-skid floors – I do not want carpets. A little "wood trim" will be nice to add color, otherwise I will be satisfied with the Voyage type "stark white plastic" interior see Exhibits 5 & 6 (Voyage 580).

2. I believe a cabin insulator lining will be useful see (www.heatshieldmarine.com)

3. I want sandfly proof screens on all hatches and opening ports. For example see Oceanair at www.maritimetrading.net. It is very important the screens be a very fine mesh in order to keep sandflies out.

4. Starboard steps to hulls should be across from daggerboards. Area forward of stairs should be a bar area that extends to the mast next to the bean bag chairs. A bar area will also be along the aft salon bulkhead below the large opening window to the cockpit. If feasible, for maximum useable surface the bar areas should be "split level". The bottom level, the actual bar surface, will be about 1.5ft to 1.75 ft deep. About 0.75ft to 1.0 ft. about that surface will be a 1ft. deep shelf or "mini bar surface". The bar stools will be tall Director chairs.

5. Port steps to hull should be across from daggerboards. I want the galley down in port hull. A railed opening to the galley should extend from the aft bulkhead to the stairs. See Exhibits 7 & 8 (Lagoon 570). Forward of the steps will be 2 large bean bag chairs (www.ahhprods.com) . Against the aft salon bulkhead will be the "entertainment center".

6. I very much like the Rainier approach of having escape hatches under the steps going from the salon into the hulls. However, I can be convinced not to have escape hatches – in that event I will want an opening port light on the inner hull above the galley sinks that opens under the wing deck.

7. The large windows should be reflective to reduce sun penetration. I would like opening hatches in the large forward windows and possibly sliding openings on the large side windows. See Exhibit 9 (Catana 580).

8. I want spots from which 2 hammocks can be hung that will support adults. The hammocks will be used as extra beds when needed.

9. No hatches are needed on the salon cabin top.

10. There cannot be too many handholds, especially around the bar area, the door to the cockpit, and the steps to the hulls. See Exhibit 6 (Voyage 580)

11. One Hella turbo fan port and one starboard.

Galley

1. In port hull extending from stern up to the steps to the salon. Forward of the stairs will be the guest cabin. I am concerned the hulls do not have sufficient beam to comfortably allow for a galley down design. I believe it would help immensely if the hulls could be "flared" above the water line to add another foot of beam in each. If this extra foot is evenly split between the inner and outer sides it would have the added advantage of adding an extra foot to the overall deck beam and an extra foot available for salon width.

2. I will only have diesel fuel on board, no gasoline or propane. I will want a microwave oven, all other cooking appliances will be small individual AC units, e.g. electric pressure cooker, electric skillet, electric coffee pot, etc. I will want several AC outlets in the galley to accommodate these appliances and also fiddles and rails on most counter tops to secure these appliances when in use.

3. I will want a washer/dryer, probably placed against the aft bulkhead. I am considering the Equator EZ1612V from Italy see (www.warehouseappliance.com). See Appendix 1.

4. If possible I would like a large port light/hatch opening into the cockpit, outerside of salon bulkhead next to helm. It will be used for ventilation, communication and passing items back and forth between the galley and cockpit.

5. I will want at least 2 top loading freezer and refrigerator units, maybe more, in the counter tops. None of the units should be more than 1.5ft deep, to provide ease of access. The units should be thickly insulated for efficiency. I am considering the water cooled Glacier Bay (www.glacierbay.com) compressor that can do multiple duty as the compressor for the various freezer/refrigerator compartments and also for the Artic Air air condition unit in the master cabin. I am not sure it is feasible to capture the heat from the compressor to make hot water but I will research this idea. You mentioned that you have not had good experience with Glacier Bay. I mentioned your complaints to them at the Miami Boat Show. They agreed with your comments but said their new model solves most of your complaints. I am not concerned about having an air conditioner that "super cools". The idea is to get some cooling from under used equipment thereby saving on space and weight.

   Alternatively, Rainier recommends using regular household refrigerators since they are now very efficient and cheaper than marine systems, so they can be replaced frequently if they don't standup to the marine environment and still save money. If they are right, and the air exhaust can be vented outside, I would like to consider this alternative. However, I estimate the Glacier Bay Micro HP with an additional freezer zone costs about $5,000 and 1 Arctic Air blower (for the Master Cabin) about $700 for a total of $5,700. A Sun Frost (www.sunfrost.com) DC 16 cubic ft unit with 2 separately controlled compartments is about $2,700 and their DC 10 cubic ft freezer is about $1,700 for a total of $4,400. I estimate a separate 6,500 BTU air conditioning system will cost about $1,500. Therefore, I don't see much difference in price. If the air conditioning is eliminated, which is only for the Master Cabin, there does seem to be a slight cost advantage to using the Sun Frost. I am satisfied that if all the opening port lights and hatches I want are installed there will be sufficient ventilation for all the boat except in the Master and Guest cabins so air conditioning would not be needed. Therefore, although I prefer not to have openings above bunks, I believe opening port lights in the over head front windows above the bunks would provide the additional ventilation needed. That and the "tent/awning" covering this area when at anchor should be sufficient. If I take this approach I will defer purchase of the Sun Frost freezer, I may decide it is not needed. I welcome any advice Alwoplast has to offer.

6. I want a pressurized hot and cold water system with a manual pump back up. A saltwater system is not needed. I will want a Spectra (www.spectrawatermakers.com) watermaker. I will probably want a small PUR electric/manual watermaker as a backup. I believe 50 gals of water tankage should be adequate, however if we don't gain much savings in cost, weight, or space by reducing the water tanks size I will stay with your standard and only fill them above 50 gals when entering an anchorage where it isn't appropriate to run the watermaker. Although I will want to use a heat exchanger on the genset I doubt that alone will produce enough hot water daily therefore the calorifier(s) (probably two 9 gal units) will also need heating elements see (www.isotherm.com).

7. One large opening port light on the outer hull across from the sinks. See Exhibit 10 (Catana 580).

8. One opening port light on stern bulkhead. No overhead hatches should be necessary.

9. Only if traction might be a problem I will want a carpet fully covering the galley sole, in sections, with Velcro backing that can be easily removed for shaking and cleaning.

10. If feasible, I might want the galley sole raised to give persons standing in the galley a better view into the salon.

11. All unused space throughout the boat should be readily accessible for use for stores. For example, under the raised galley sole could be used for stores.

12. There cannot be too many handholds.

13. One white Hella turbo fan in the aft section of the galley and one in the sink area.

Guest Cabin

1. In forward section of port hull. Bed should be king size or as close as possible. Instead of the foundation being a solid panel of wood or fiberglass is it feasible to use webbing similar to that used for the tramps? In addition to providing some "spring" I believe the airflow around the mattress might reduce moisture buildup.

2. The head will be a Sun-Mar Ecolet compost toilet, see (www.sun-mar.com), and should be in a separate compartment from sink/shower. Only a very small holding tank is needed to handle any excess liquid overflow exceeding the toilet's evaporator capacity. See Appendix 3.

3. Shower can be eliminated if necessary. If shower is installed, I want the drain above the waterline so as to avoid the need for a sump. Maybe a combination tub/sit down shower will work.

4. The guest cabin will not be used all the time. It should be comfortable as possible, but should not compromise any of the other areas. If compromises are needed this is where they should first be made.

5. If feasible, for additional ventilation an opening port light on the inside hull wall would be nice, either in the head or bunk areas.

6. One large opening port light on the outside hull in the bunk area. See Exhibit 11 (Catana 580). No overhead hatches should be required.

7. I want at least 1 AC outlet in the sink area and 1 in the bunk area.

8. One white Hella turbo fan in the head compartment, one in the sink area and one in the bunk area.

Master Cabin

1. The bed would be forward and similar to that in the Guest Cabin, including the webbing and opening port lights on the inside and outside hull walls. Also, no overhead hatches should be necessary in the starboard hull.

2. The head, also a Sun-Mar Ecolet, in its own compartment and a sink area would be forward. As mentioned in the Galley section a small holding tank is needed to handle any excess liquid overflow from the toilet.

3. A walk in shower and an additional sink area will be all the way aft, see Exhibit 12 (Catana 580). As in the Guest Cabin I want the drain above the waterline so as to avoid the need for a sump. Maybe a combination tub/sit down shower will work. At least 1 AC outlet should be in each of the sink areas. Also, if feasible, I want a large opening port light just forward of this area, see Exhibit 11 (Catana 580) and a port light on the inside hull wall opening under the wing deck and one opening to the stern.

4. In or near the bunk area I want a 12V DC outlet, and a 120V AC outlet.

5. Drawers and hanging areas can be open to allow for air circulation, instead of enclosed with doors. Very little hanging area is needed/wanted.

6. Area aft of steps on inside hull will be the nav/office center. Similar to the galley, a railed opening should extend from the aft bulkhead to the stairs. When seated at the desk at least the person's head should be above the Salon sole level for a view into the Salon. The chair will be a regular size Director chair. See Exhibits 7 & 8 (Lagoon 570). In addition to circuit breaker panel in this area I will want at least 1x120V AC outlet, 1x12V DC outlet, a SeaTalk socket for the ST600R Raymarine autopilot remote control, and network connection for a laptop computer. As in the galley, if no escape hatch under the steps, I would like an opening port light on the inside hull in this area if it can be placed so that spray is unlikely to be a problem. Of course, the port light is expected to be closed while underway.

7. One white Hella turbo fan in the head compartment, one in each of the sink areas and one in the bunk area.

Motors and Electricity

1. I will use twin Solomon Technologies ST74s (www.solomontechnologies.com) as my motors see Appendix 4. When sailing without using the motors the spinning props generate electricity to charge the batteries. If you or Solomon Technologies recommends the new larger motors, equivalent to 80hp diesels, for the boat I will go with them. Following are the various components I expect will be purchased from Solomon Technologies:
   a. ST74 2 Solomon ST74 motors, 2 Controllers, and Delrin shaft coupling.
   b. MDB-TW 1 Main Distribution Box
   c. SPMD 2 Safety Power Management & Distribution Panel
   d. BBD-TW 1 Battery Breaker & Disconnects
   e. MTS-RBR 2 Motor Mounts (set of 4)
   f. E-Meter 1 Digital Readout
   g. CA-01 Battery Cable Assembly
   h. MN-CTRL-NS 2 Throttle controls - Mini Electronic with rubber boots.
   i. LL4DL 12 Batteries (motor) - AGM Group 4D
   j. LL31T 2 Batteries (House & genset) – AGM Group 31
   k. DDH300V15 1 DC/DC Cross charger/Converter 144V to 12V 30 amp
   l. AMMD 2 Digital Ammeter
   m. Gen 15 1 HFL 15KW 144V DC Generator with breaker and muffler. If I ultimately go with the new larger motors I will increase this to the 20KW unit and "house" power will probably be 24V instead of 12V since that motor uses 240V instead of 144V. Either way I believe a 200 gals diesel tank should be sufficient.
   n. INV6 1 Inverter (true sine) 144V DC to 115V AC 6KW with breaker.

   Glacier Bay has started a new division specializing in marine electrical equipment (see Appendix 2) and is consulting with Solomon Technologies to make sure their equipment will be compatible. A 28KW DC genset and an inverter are two of their first products on the market. I will want to determine if their products should be used instead of HFL's.

2. The following additional items not available from Solomon Technologies are needed to complete the motor installation.
   a. 2 Propellers. Alwoplast will need to consult with Solomon Technologies to select appropriate props. Solomon usually recommends a minimum of 18" 3 blade props be used. Do you recommend grass cutters be installed?
   b. 2 Prop shafts
   c. 2 Stuffing boxes
   d. 2 #410 (or flex) prop shaft couplings
   e. Ventilation system for battery storage area
   f. Ventilation system for motor compartment
   g. Main 12 volt power switch for house batteries

3. I expect clogged filters for raw seawater and diesel fuel will be one of the high maintenance concerns on the boat. Therefore, I want easy access and systems designed for easy maintenance. See Appendix 5.

4. I want a very good lightning arrestor system. I expect this to be very important considering all the electrical power and equipment that will be on board.

5. Shore power system not needed.

Instrumentation

1. Compass

2. Raymarine ST7001 plus autopilot with 400G course computer

3. Raymarine ST60 Tridata & Wind. I want the depth sounder's transducer as far forward in the hull(s) as feasible.

4. Raymarine ST600R autopilot remote control with SeaTalk deck sockets in Nav/office center and crow's nest.

5. Raymarine RL70CPlus Radar/GPS/Chart Plotter 2KW 24NM (color screen). Will use a Garmin GPSmap 76S as backup GPS.

6. Raymarine Raystar 120 GPS sensor

7. Raymarine Ray230 VHF radio

8. Raymarine Ray230 VHF handset remote and speaker

9. Raymarine RNS1500 monitor – only if it will reduce the number of displays needed at helm.

10. Raymarine Pathfinder PC software.

11. ICOM M710 SSB transceiver with PTC-IIe pactor modem see www.marinecomputer.com .

12. Globalstar satellite phone.

13. If feasible, an electronic radar echo magnifier, to enhance the radar image of the boat to other boats.

14. I selected Raymarine for most instruments because of their "networking" and ability to communicate with a laptop computer. I am open to recommendations of alternative instruments, however connecting to a laptop is very important.

Hulls

1. I want as few thru-hulls as possible. I certainly want to minimize below waterline thru hulls.

2. As previously mentioned my primary concern with the 95MKII design is that the hulls' beam and overall beam may not be sufficient to provide the amount of "living" space I want. Therefore, if the hulls could be slightly flared above the water line I believe the increase in beam might produce significant improvements for my purposes.

Miscellaneous

I have not mentioned general plumbing, safety equipment, spares, tools, redundancy equipment and systems, and probably many other items. In all of these areas I expect to rely on Alwoplast for recommendations. Actually, everything I have mentioned above, except the Solomon Technologies electric motors, is open for discussion. I am willing to change anything for which I am shown a better or more cost effective alternative.

Exhibit 1

Exhibit 4

Exhibit 2

Exhibit 5

Exhibit 3

Exhibit 6

Exhibit 7

Exhibit 8

Exhibit 9

Exhibit 10

Exhibit 11

Exhibit 12

Exhibit 13

Exhibit 14

Appendix 1

Clothes Processor

The ***EQUATOR Clothes Processor*** is a combination washer-dryer that washes and dries clothes in the same unit!! The Clothes Processor is designed to save you **Time, Space, Work and Money**. The combination washer dryer is more energy efficient and takes up much less space than a conventional washer unit alone. *Never transfer your clothes from one unit to another again*. Installs in any room with a water source and drain! Doing laundry is simple...just put the laundry in, choose the settings and press start. You'll return to clean and dry clothes!!

Specifications	Equator EZ 3600	Equator EZ 1500
Size	H = 33 1/2" x W = 23 1/2" x D = 23"	H = 33 1/2" x W = 23 1/2" x D = 23"
Weight	176 lbs.	176 lbs.
Drum Capacity	1.9 cubic feet / 13 lbs.	1.6 cubic feet / 10 lbs.
Electrical	115v, 60hz, 12.8 amps	115v, 60hz, 12.8 amps
Element	1300w / 650w	1300w / 650w
Spin Speed	1000 / 800 / 500 rpm	1000 / 800 / 500 rpm
Drum	Stainless steel	Stainless steel
Dryer Ventilation	Condensing	4"
Built in Water Heater	No	No
Color	White	White
Wash/Rinse settings	3	5
Half load option	No	Yes
Main Motor	300w / 900w	300w / 900w
Warranty	12 months parts/labor within the continental U.S. Extended warranties=one year $75.00 or two years $110.00	12 months parts/labor within the continental U.S. Extended warranties=one year $75.00 or two years $110.00
Pricing	***$1029.99 Free shipping!*** **New Equator Shipping Plan** - Door to door delivery Mon- Fri 8am to 8pm & Sat. 8am to 12pm, Inside delivery to 1st or 2nd floor via stairs or elevator service beyond, unpacking of product, removal of packaging, 48 Contiguous states, Canada add 2 additional days. Alaska, Hawaii, & Puerto Rico = special	***$899.99 Free shipping!*** **New Equator Shipping Plan** - Door to door delivery Mon- Fri 8am to 8pm & Sat. 8am to 12pm, Inside delivery to 1st or 2nd floor via stairs or elevator service beyond, unpacking of product, removal of packaging, 48 Contiguous states, Canada add 2 additional days. Alaska, Hawaii, & Puerto Rico = special

	delivery available (please inquire). Installation not included. Door to door delivery Mon- Fri 8am to 8pm & Sat. 8am to 12pm, Inside delivery to 1st floor. Delivery via stairs = $10 per floor extra. Elevator service free. Unpacking of product, removal of packaging, 48 Contiguous states, Canada add 2 additional days. Alaska, Hawaii, & Puerto Rico = special delivery available (please inquire). Installation not included.	delivery available (please inquire). Installation not included. Door to door delivery Mon- Fri 8am to 8pm & Sat. 8am to 12pm, Inside delivery to 1st floor. Delivery via stairs = $10 per floor extra. Elevator service free. Unpacking of product, removal of packaging, 48 Contiguous states, Canada add 2 additional days. Alaska, Hawaii, & Puerto Rico = special delivery available (please inquire). Installation not included.
Options	***Includes free Quick Connector*** Allows connection to sink faucet for quick and easy connect and disconnecting. A $14.95 value.	***Includes free Quick Connector*** Allows connection to sink faucet for quick and easy connect and disconnecting. A $14.95 value.
Optional Caster Kit	Four wheel casters to make unit portable for storage out of the way. $49.95	Four wheel casters to make unit portable for storage out of the way. $49.95

Ventless Drying: The EQUATOR Clothes Processor is ventless, which means no vent hose is needed to vent the hot air outside. The hot air used to dry the laundry is water cooled internally and the condensation created is flushed from the machine by the water pump. Install the Clothes Processor under a counter or in an enclosed area and never heat up the room with hot exhaust air.

Great for RV's

Great for Apartments

Great for Mobile Homes

Features: There are 5 wash cycle settings: Pre-wash, Regular, Permanent Press, Knits/woolens, and Delicate. There are also 5 Wash/Rinse water temperature combinations. The door is locked during the wash cycle, but can be opened during the dry cycle. The drying cycle can be set to a maximum of 120 minutes.

Quick-Dry Technology: The Clothes Processor uses several state of the art tricks for speeding the drying time of laundry. There is an automatic preheat feature which begins warming up the heaters during the final wash spin cycle. The spin cycle can spin the stainless steel drum at speeds of up to 1000 RPM! The spin speed varies depending on the wash program selected. The high speed spin uses centrifugal force to extract water from the laundry.

Better Cleaning At Lower Cost: The Clothes Processor is gentler on clothes because it is a horizontal axis machine. Horizontal axis or "front loading" washers use a rocking motion to "tumble wash" the laundry. There is no agitator to harm the clothes. Having no agitator means the Clothes Processor runs QUIETLY, SO QUIET, IT CAN BE INSTALLED NEAR THE BEDROOM.! A horizontal axis machine uses less water. Therefore, it takes less energy to heat the water and less detergent to clean the clothes. The money saved in energy, water, and detergent costs makes the Clothes Processor an even greater value.

Quality Inside and Out: Inside the Clothes Processor is a stainless steel drum. This drum is resistant to deposits and oxidation and comes with a 30 year warranty against rust and corrosion. The drum is designed with thousands of holes so water flows from the drum quickly during the spin cycle which in turn speeds up the drying time The frame of the Clothes Processor is constructed of sturdy galvanized sheet iron, and enameled exterior is durable and easy to clean.

Stability: The Equator washer/dryer is famous for it's stability and vibration free silent operation thanks to precision engineered shock absorbers and a spring suspension system. These stability features, in conjunction with the adjustable front leveling legs, reduce noise and wear and tear on internal components of the machine.

Adaptability: The special "F" connector (included) lets you connect a single inlet hose to the Clothes Processor. This allows the unit to run when only a single water outlet is available. Standard 1" diameter size is the same as a washer faucet.

Note; Specifications and images shown on this site are supplied by the manufacture and are subject to improvements and updates without prior notice therefore may not represent current updated models.

Return Policy; All returns are subject to a 30% restocking fee and must be in original carton in new unused condition and return freight prepaid.

Warranty Policy; All warranties are "Carry in Service"

Dynamx, Inc.
P.O. Box 494, Paulden, AZ. 86334
Order Toll Free (877) 389-4629 **(orders only)**
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E-mail = info@warehouseappliance.com

Appendix 2

Power Generation Products and Systems

ossa

OSSA POWERLITE

Pacific Sail Expo, Oakland, California - Glacier Bay, Inc., introduced a new family of lightweight high-voltage DC products called the **OSSA Powerlite** system. The system centers around unique DC generators. On display was a 10.5 kw unit that weighs 350 lbs and measures 27.5"L x 20"w x 25"h. At this weight (including sound shield) the generator is 150 lbs lighter than its nearest competitor. A unique sound enclosure permits easy access for service while providing virtually silent operation. **OSSA Powerlite** generators are also available in 6kw, 13.5kw and 28kw capacities. All generators feature extremely quiet operation and significant savings in size and weight.

The **OSSA Powerlite** generators form the basis of Glacier Bay's **OSSA Powerlite** system. This extensive group of compatible, high-voltage DC/AC accessories are intended to be used together to gain significant advantages over current alternatives. When combined, the **OSSA Powerlite** system components provide weight saving of 50% or more as well as improved energy efficiency, performance and reliability. The **OSSA Powerlite** product line will eventually grow to include refrigeration, air conditioning, electric propulsion drives, bow thrusters, windlasses, rapid battery chargers, heaters, stoves and other major power-consuming systems and appliances. In addition to their own branded products, Glacier Bay will offer a no-cost **OSSA Powerlite** compatibility certification program to other manufacturers of high-voltage DC accessories.

For more information on Glacier Bay's **OSSA Powerlite** system contact Stephen O'Reilly at 510-437-9100 x102 or by email at so@glacierbay.com

SUN-MAR

"It may be THE invention of the 20th Century."
-Tom Hanley, Excel

Unit Specifications | Pricing | Customer Referrals | Ecolet Mobile

The Ecolet family of composting units are the first composting toilets specifically designed to recycle waste on boats and recreational vehicles. Less pump-outs! No more chemical toilets! Recycling brings freedom, with the ODOR-FREE operation of a Sun-Mar.

The Design of the Ecolet Family

Although the Ecolet uses Sun-Mar's tried and true three-chamber system, "marinizing" the unit led to some interesting adaptations. The need to be able to handle violent motion meant that the finishing drawer had to be gasketed so that no liquid could escape from the evaporating chamber.

The air intakes faced the same problem. These had to be located higher up and the air ducted down to the evaporating chamber.

At the same time, a new drum lock was designed to ensure that the composting drum was held upright under all sea conditions.

Space constraints meant that a fold-away foot rest was needed on the unit. This footrest had spring loaded legs, and a safety release mechanism to enable it to be removed periodically when access to the finishing drawer was required.

To assist installation, strong mounting brackets were mounted at the base and rear of the unit. The only difference between the ECOLET (Sloped back) and the ECOLET (Regular) is that the MARINE unit had a 45° angle designed into the base of the unit at the rear, so that hull shapes could be better accommodated when the ECOLET was mounted across the boat rather than fore and aft. The RV unit has a square bottom for easier installation in a vehicle. The RV unit is also ideal for a boat where the installation does not require the 45° angle at the back.

Electrically, the ECOLET Family are quite different from other units because of the unique situation on many boats and RV's. A 4.0 Watt 12 Volt fan is installed in a fan box within the vent stack. This fan, (which is on its own circuit) is designed to operate continuously while the unit is in use.

To assist the 12 Volt fan in providing adequate venting, the ECOLET is unique among Sun-Mar units in having a 3" vent stack. Customers need to supply their own deck vents, which should be constructed to allow adequate air movement while preventing seawater from entering the unit.

Carbon and Zeolite Filter

While venting is optimal above deck level, some installations will require that the deck vent is flush with the deck. Sun-Mar has incorporated the use of activated carbon and zeolite filter materials in the fan box to "scrub" the air of fresh ammonia odors. Tests of this have proven successful, and ensure odor-free operation at deck level.

Dual Voltage Heater Configuration

Evaporation is aided by separate 12 Volt and 110 volt heaters each of 120 Watts, and both with their own individual thermostats. These heaters are located in the sealed base compartment which on the Ecolet (Sloped Back) also extends up the 45° angle at the rear of the unit.

The thinking in designing two different heaters into the unit was that a 12 Volt supply is often available while the unit is in motion, while the 110

Ecolet Unit Selection

Will you be using the unit in a marine vessel with limited 12 Volt Power, and require the shape of the unit to conform to a 45° hull? If so, choose our ECOLET (Sloped Back)

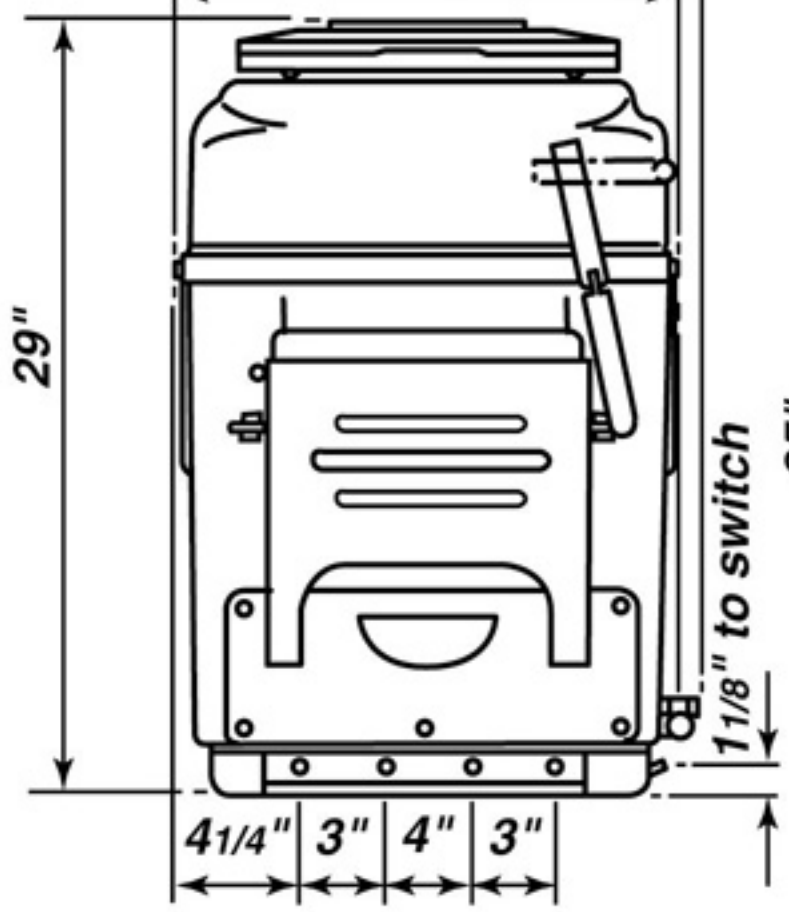
Will you be using the unit in a trailer or recreational vehicle or a fore to aft marine installation? If so, choose our ECOLET (Regular). (See below for details on all units)

Do you have a 12 Volt power source that can handle a 10 amp heating system? If so, choose our dual voltage option for either unit, for added evaporative performance

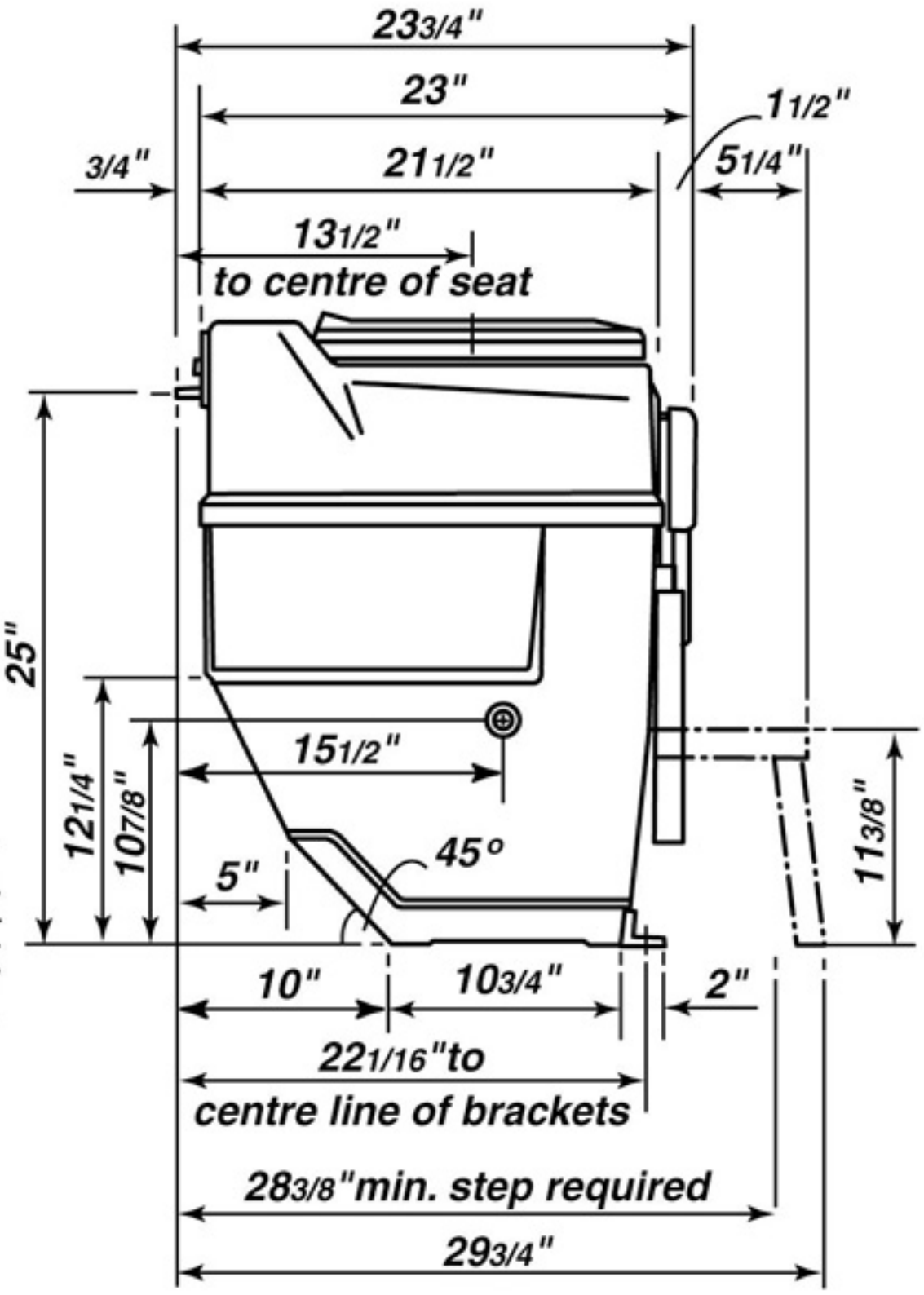
volt heater can frequently be used while the vehicle was in an RV park, or, in the case of a vessel, hooked up to shore supply. Most do not have enough 12 Volt power to run the 125 watt heater when it is on - for that reason the dual voltage is available as a special option only, and all of the units will come with just the 110 heater when ordered. Both will still come with the 12 Volt fan.

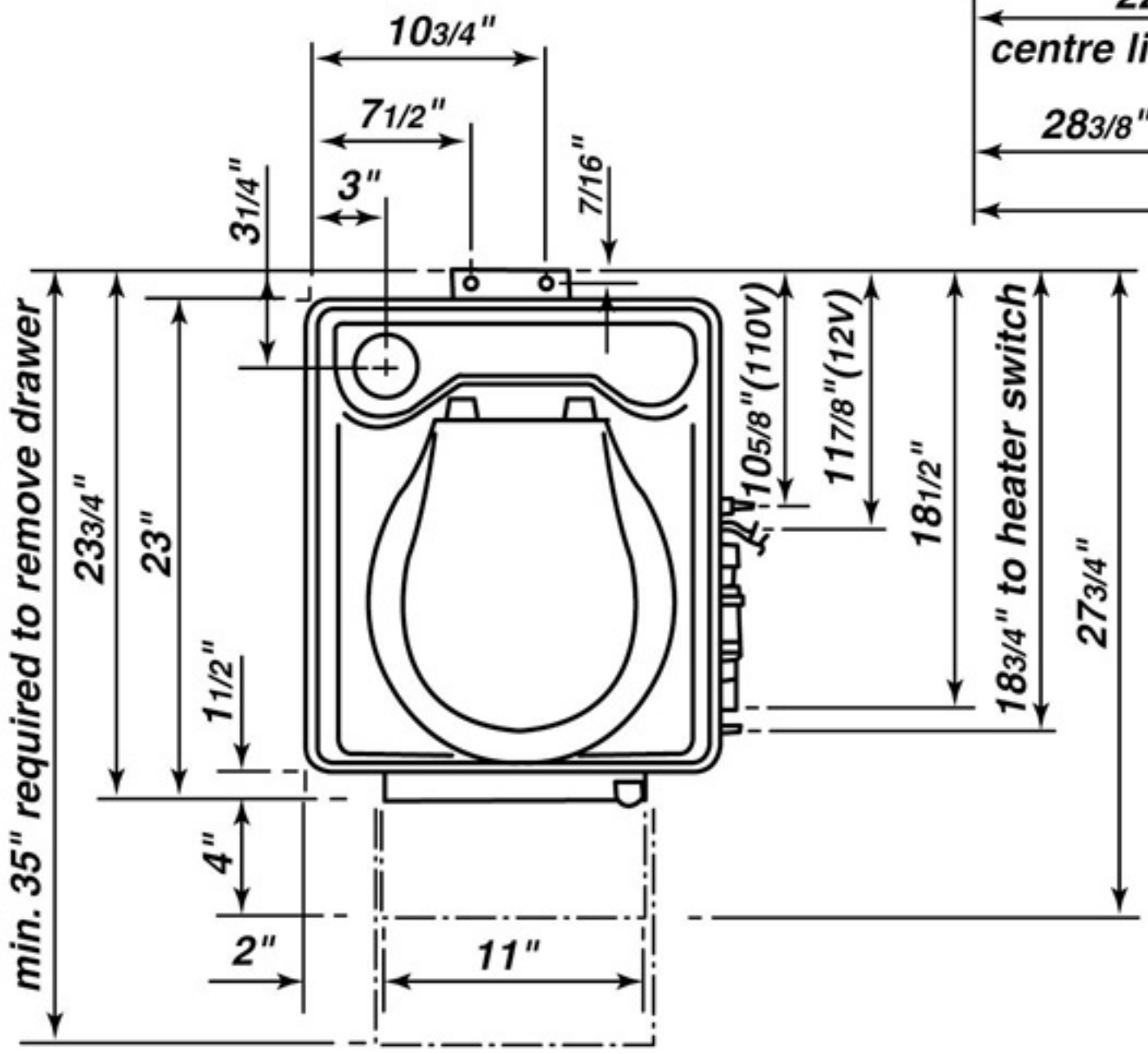
Evaporation capacity on ECOLET units is limited by the size of the heater, the surface area of the evaporation chamber, and the volume of air movement. Consequently, arrangements should be made to connect the ECOLET drains to a container or small holding tank for disposal in an approved manner, especially if you are unable to incorporate the 12 Volt heater option into the unit.

FRONT ELEVATION



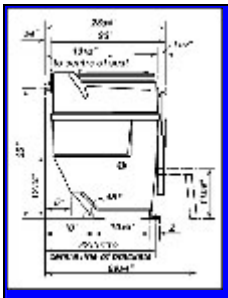
SIDE ELEVATION





PLAN ELEVATION

NOTE: *Footrest on ECOLET 110 is fixed position type not retractible as indicated*

Capacity Listed capacities refer to the amount of people, on average, using the unit per day. Do not pick a unit that is below your capacity.	
Residential/Continuous (Adults/Families)	1
Seasonal/Vacation (Adults/Families)	3 adults or families of 4
Electricals Electricals must be connected while the unit is in AC use for proper operation	
Maximum Amps (With Heater On)	1.2 AC Optional
Fan Watts (Required or Optional Hookup)	4.0 12v Required
Heater Watts (When Thermostat switches it on)	120 AC Optional
Average Power Use in Watts (Heater on 1/2 time)	63
Vent & Drains	
Vent Pipe	3" PVC Thinwall
Drains (Required or Optional Hookup)	1" Drains, Required
Weights (Lbs.) & Dimensions	
Product Weight/Shipping Weight	45/80
Shipping Carton Dimensions (W by L by H)	28" by 21" by 19"
Depth Required to Remove Drawer	31"
Unit Height/Width/Depth	28" by 19" by 21"
Rough-In Dimensions	 Click on thumbnail for exploded view

Home of the patented *Electric Wheel*

Dealer Inquiries Invited

SOLOMON TECHNOLOGIES INC.

Motor Drive Units

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ST 74

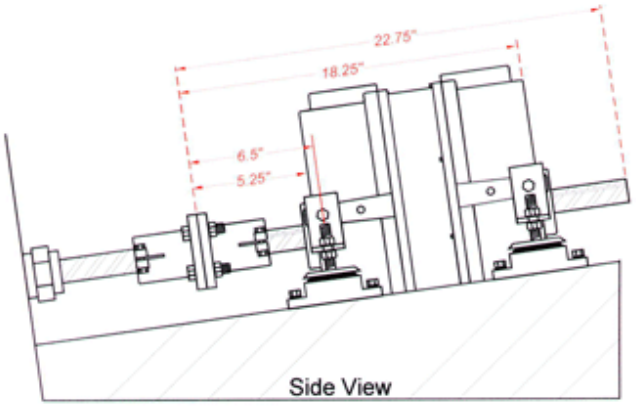
ST 74

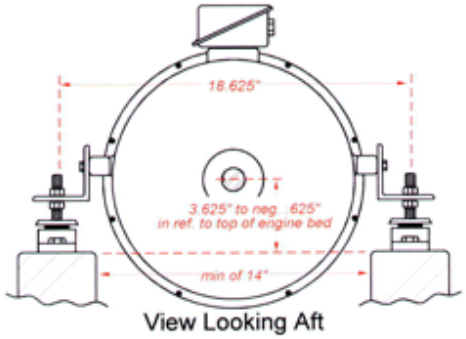
with two rotors affixed to the shaft

Specifications

horsepower	12
kilowatts	9
torque (lb-ft)	74
full load amp draw	64
diameter (in.)	13
length (in.)	17
weight (lb.)	143.5
for boats displacing up to	16 tons
for monohull lengths	33-50'+
for multihull lengths	40-60'+
replaces diesels up to	48+ hp

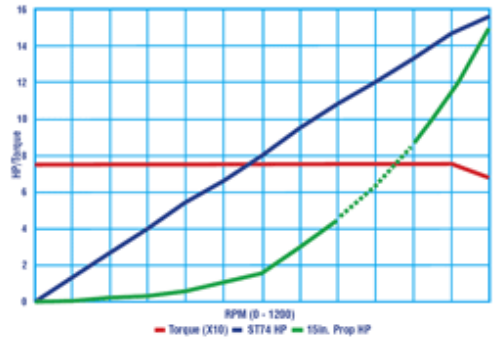
Mounting Diagrams





Torque Curve

ST74
Dynamic Output



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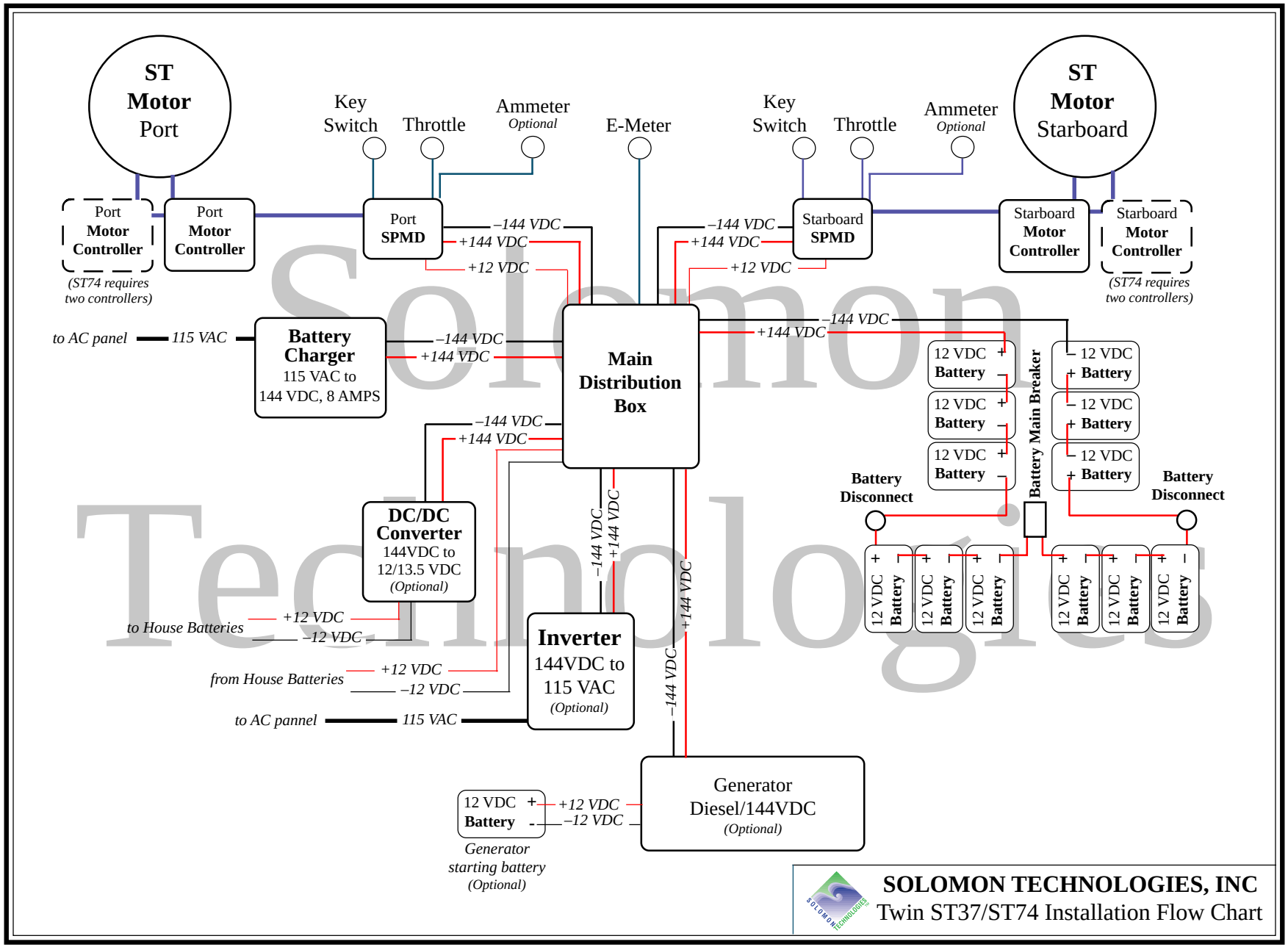


IFCTW0803

don't think you can't do it. Nothing simpler than a diesel engine. Patience and logic, assisted by a new part or two, can follow down and cure any problem.

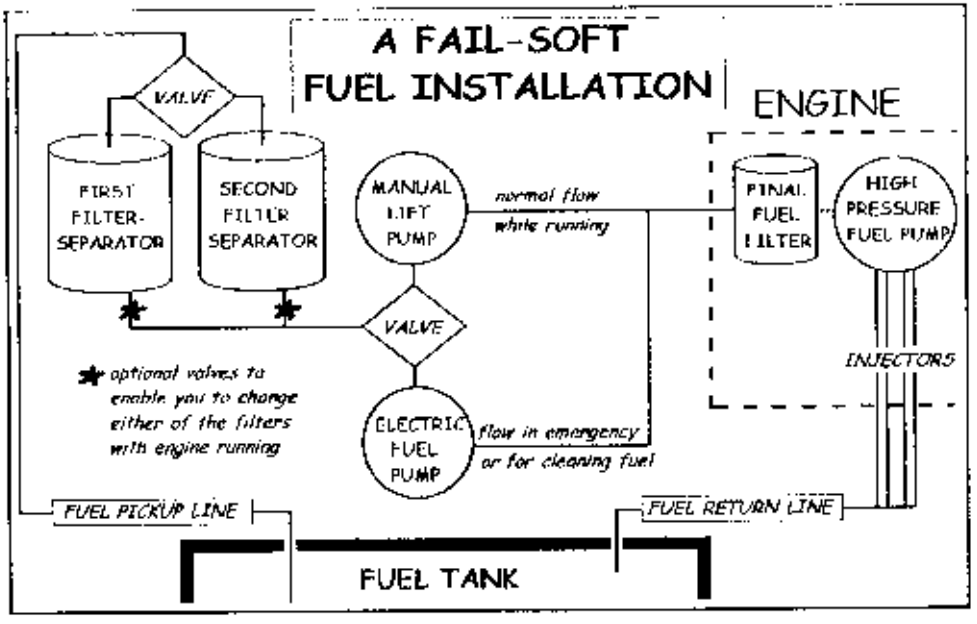
The SAD Syndrome

An engine simply running out of fuel gives a resigned *klunk-puff-puff* and dies, just like when you use the kill switch. An engine killed by something stronger than it stopping its rotation, like a huge cargo net wound up in the propeller, dies with a squawk and a bang, and perhaps the sound of rushing water.

The infamous **Surge And Die** syndrome **(SAD)** occurs when a diesel gets starved for fuel. Air gets into the lines because the desperately sucking fuel pump succeeds in breaking their seals. When this happens the engine surges (fast RPM-ing), making a panicky scream. Engine death inevitably follows.

The vast majority of engine problems on the *Thorny Path* come from contaminated fuel. You can finesse most of these problems by using a **Baja Filter** (see Glossary), using a good fungicide (not too much), and by preparing your installation with adequate filtration. Adequacy at home turns to insufficiency between the tropics. Besides the manufacturer's engine mounted canister filter and the engine's lift pump screen filter, you should have at least one other filter and a water separator mounted between the tank and the engine. Ensure the fungicide you buy doesn't decompose the filter elements you use.

You can mount a switchable fuel pump to get a few more hours of engine life when clogged fuel filters cause SAD. This also gives you a way to bleed your fuel lines without getting spasms in your thumb from the lift pump lever. It also gives you a way to clean your fuel tanks without having to bucket out the fuel and strain it through tee shirts.



Keeping Your Fuel Clean

Not only does this installation give you better protection but the electric fuel pump gives you the ability to overcome clogged filters in order to make port. When you hear the engine start to surge, put the fuel pump in-line and switch it on. Once in port, you can also use the installation to clean your tank.