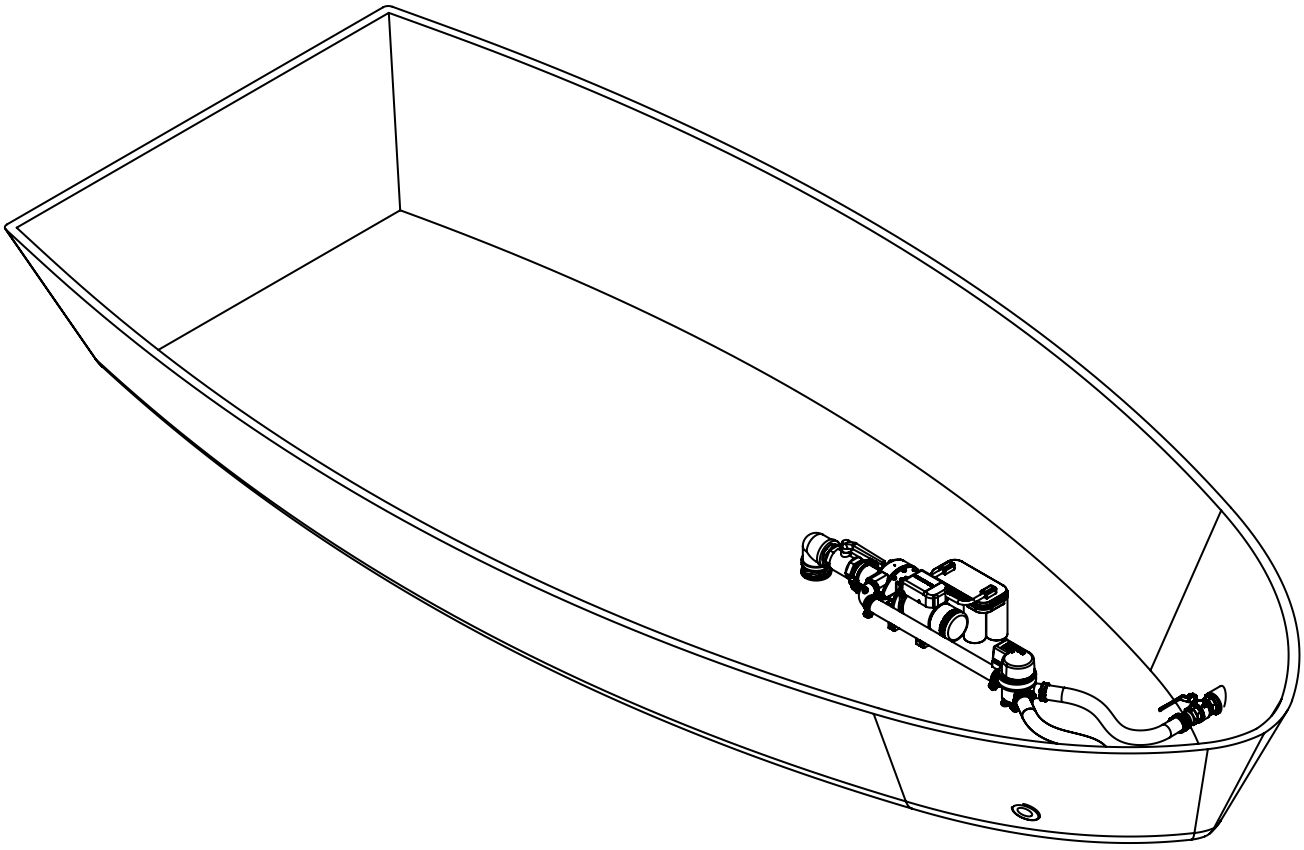
Jet Thruster

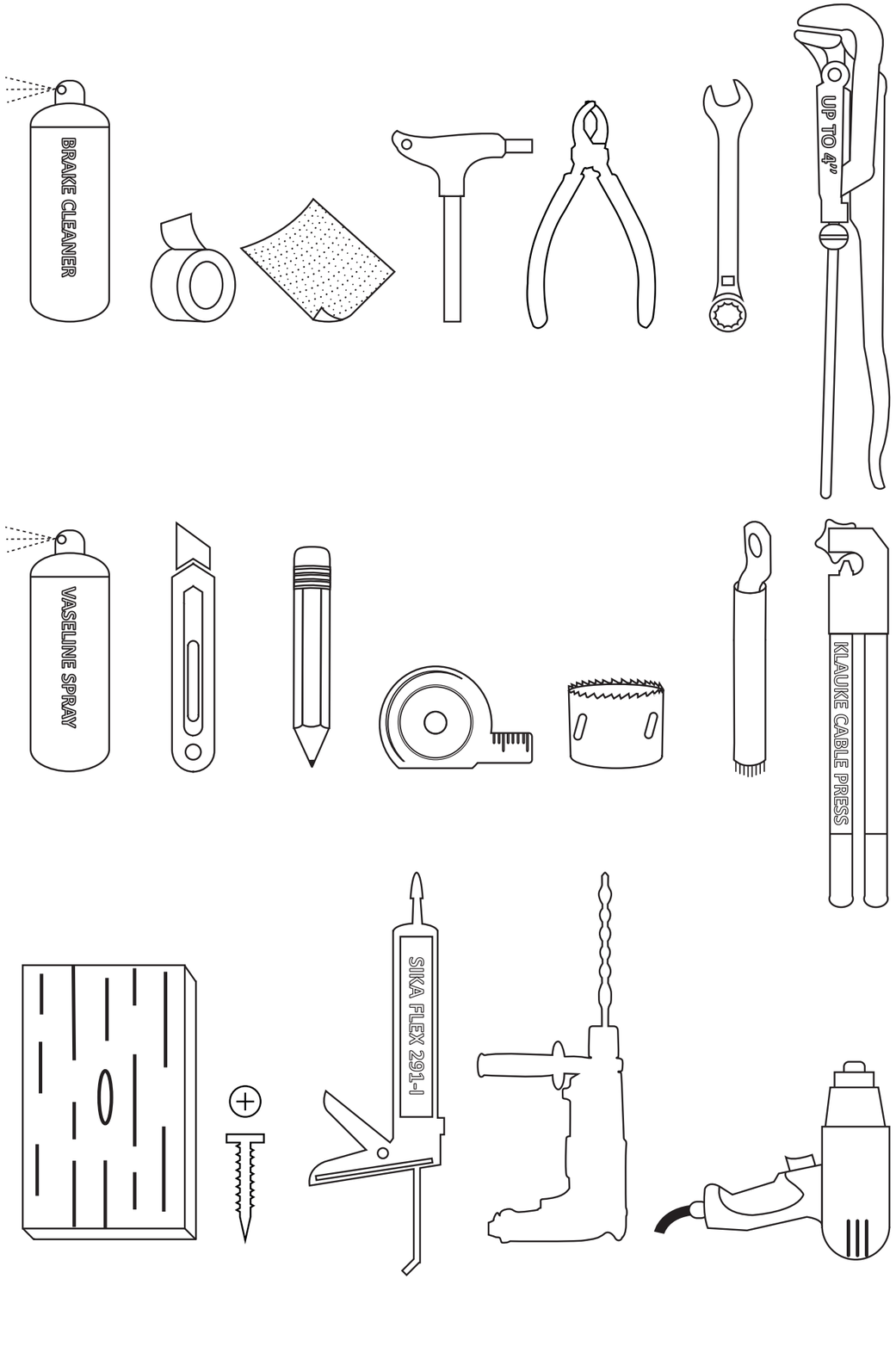
QUICK START

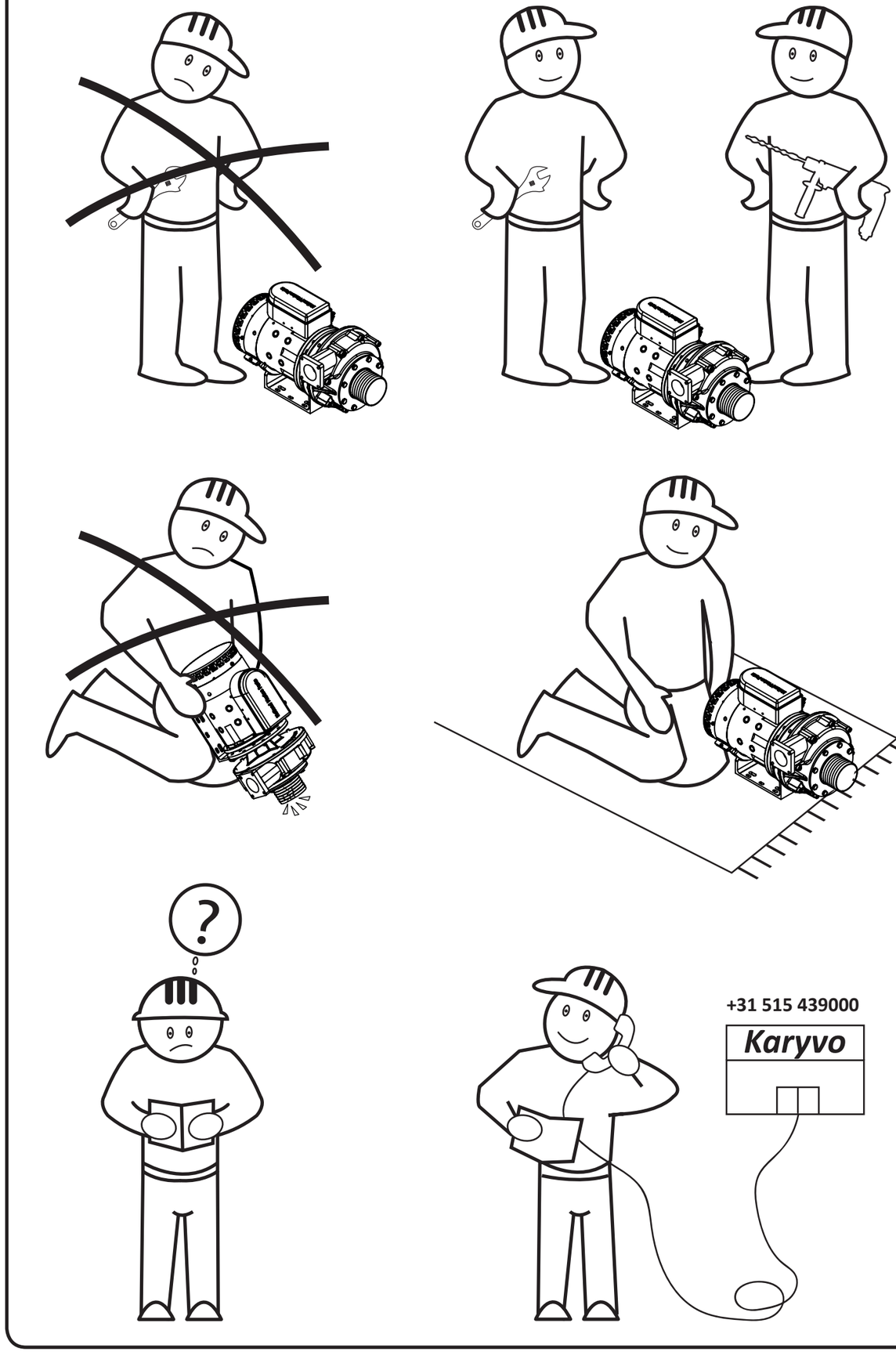
This is a short manual for a Jet Thruster installation. For more detailed information see installation manual D-010-00



Keep this manual and the D010-00 always on board

Common required tools for a installation





The foundation for a proper installation:

- Correct Nozzle position
- Pump under waterline
- Batteries adjacent to the pump
- Smooth hose routing
- Very short battery cables

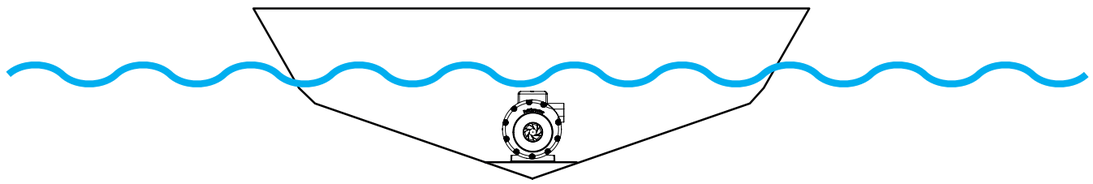
Installation preparation

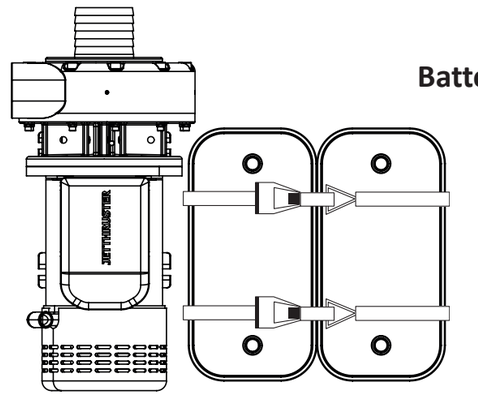
- Determine pump position, nozzle position & hose routing throughout the vessel
- Clean all stainless steel & composite parts thoroughly with acetone or Brake cleaner Make sure all grease is removed from parts.
-Use Polyurethane Marine sealant (for example Sikaflex 291i) for all connection Check the shelf life!
-Prevent damaging of stainless steel parts by ferro items (Tools)

Most Critical steps to meet!

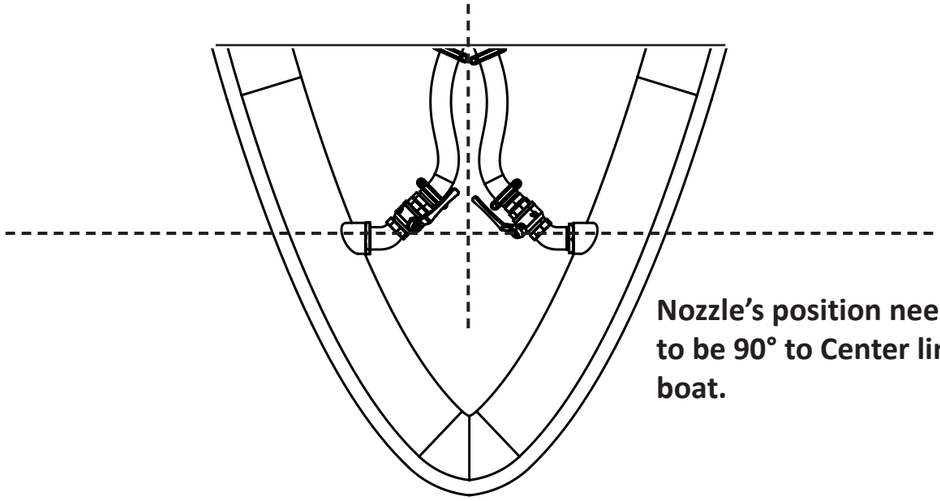
See all other steps and meet them as well

Pump must be below waterline

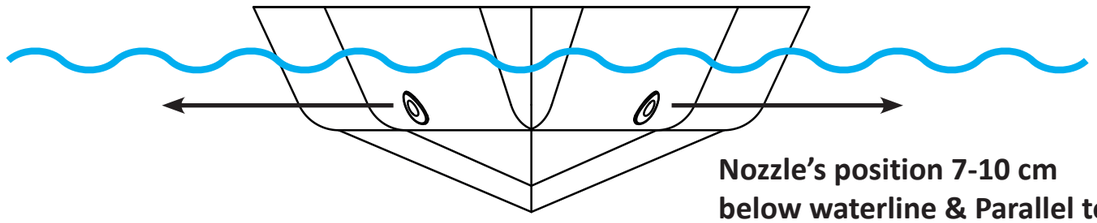




Batteries directly next to pump



Nozzle's position needs to be 90° to Center line of boat.



Nozzle's position 7-10 cm below waterline & Parallel to waterline

1: Pump always under the waterline

- Prevent contact with bilge water
- Install pump- zinc- anode
- Keep space behind pump unit (Ventilator cap)
- Ensure space besides the pump for batteries

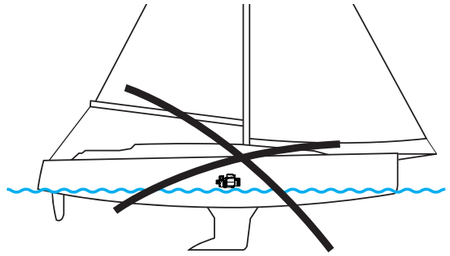
2: Batteries directly next to pump

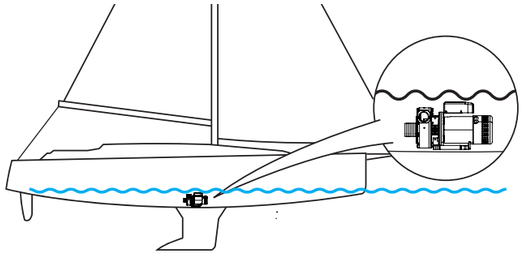
- Use Optima Yellowtop batteries
- Install batteries on waterproof plywood and install batteries and secure safely
- When necessary: install series-parallel switch on top the batteries
- Keep cable length to absolute minimum. Take notes of cable length for evaluation
- Connect negative of battery 1 with negative of service battery. (Common ground)
- Use proper battery pole clamps
- Use proper and good-fitting terminals
- Install battery pole caps

3: Nozzle position

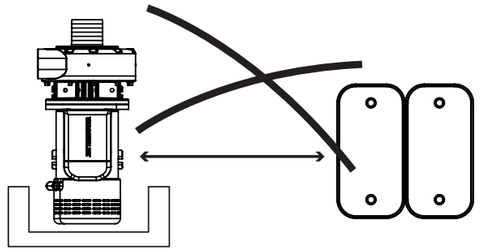
- Nozzles as far forward (or in the stern) of the vessel
- Topside Nozzle tube 7-10cm under the waterline
- Installation of Nozzle horizontal
- Nozzle 90 degrees to be installed to center-line of the vessel
- Nozzle can be located slightly forward and aft of each other (staggered)
- Use 45-degrees elbow only in case of a small bow section
- For a wide bow: do not use 45-degree elbows but curve the hose instead
- Install and connect the zinc anode with the stainless steel parts

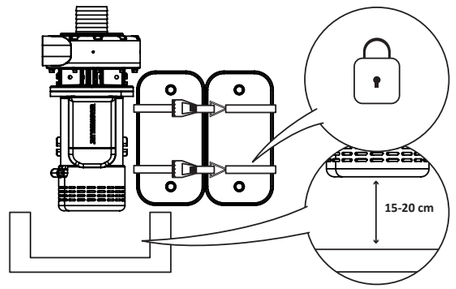
Step 1



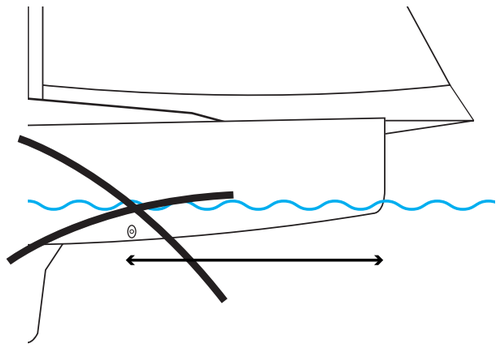


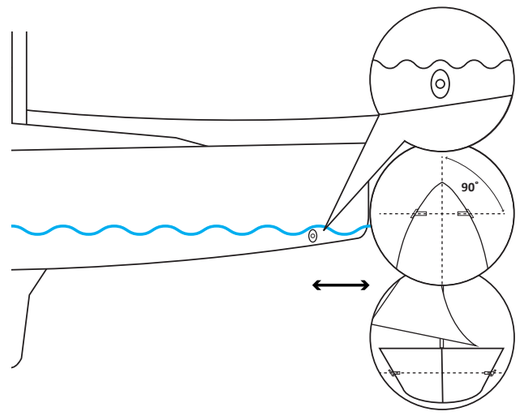
Step 2





Step 3





4: Clean all threaded parts before using PU sealant

- Clean all threaded parts with brake cleaner, dry it off with a clean paper towel
- Apply a good amount of PU sealant on both threaded parts before connecting them
- make sure the complete surface of thread is covered in PU sealant
- Remove any left over PU Sealant with the special wet wipes in the round can
- Attention, the wet wipes are for removing afterwards the left over sealant. Do not clean upfront the threaded parts with the wet wipes. This will cause the sealant not to bond and will cause leakage!!!

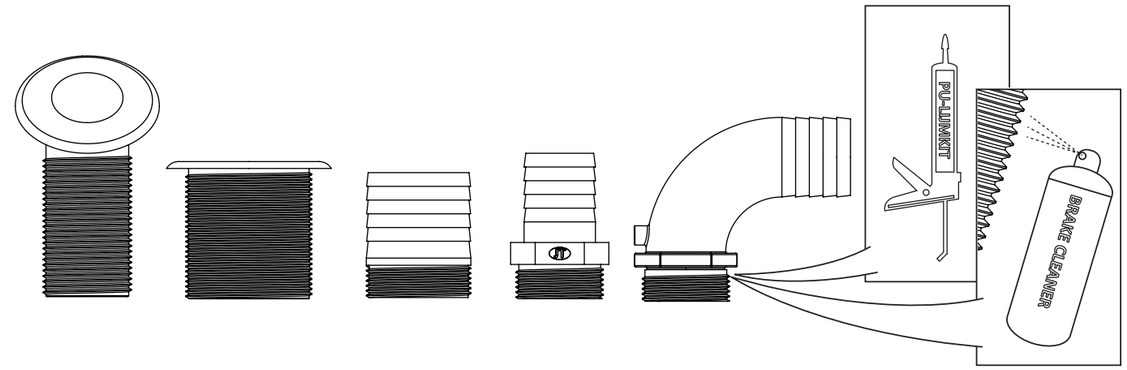
5: Water inlet and acces to shut off valve

- Ball valve must be easily accessible
- Inlet hose max 1 meter long, shorter always possible
- Installation of water inlet may be possible from the side of the vessel
- Water inlet below waterline. Position higher than pump is allowed
- Remove antifouling under flange
- Use supplied Stainless steel tool to twist water inlet into 90-degrees turn

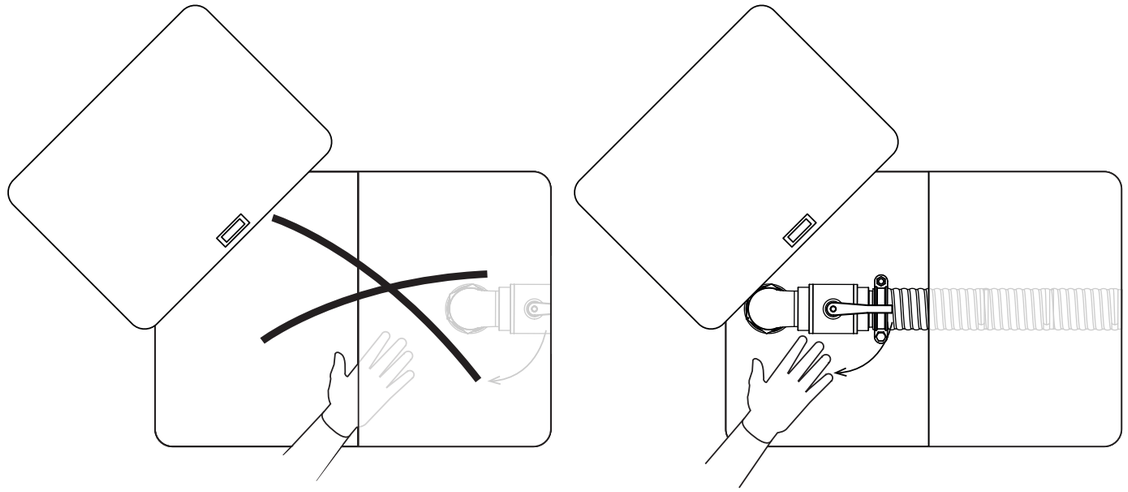
6: Hose clamps and connection:

- Use grease on the bolts
- Prevention against corrosion (Vaseline spray)

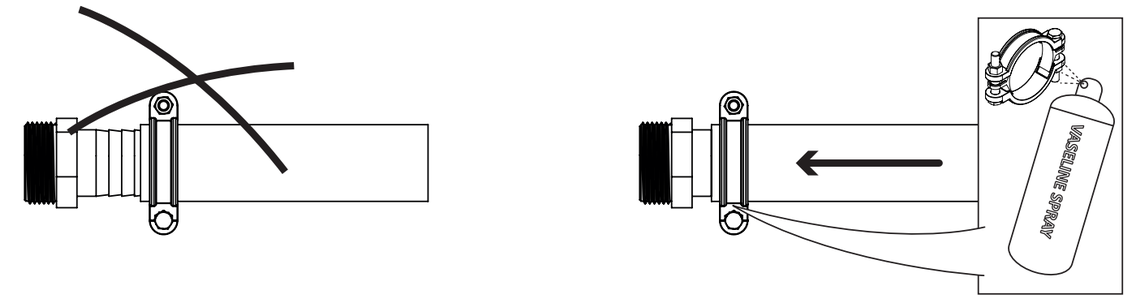
Step 4



Step 5



Step 6



7: Hose routing

- Hoses may be above waterline
- Heat up hose with a electrical heat gun to be able to make a nice steady curve
- Cut hose to appropriate length with a sharp knife (do not saw). Cut coiled wire with pliers
- Prevent kinks of dents in hose
- Prevent damaging the hose (sharp parts in vessel)
- Attach hose to hull with bonding fasteners

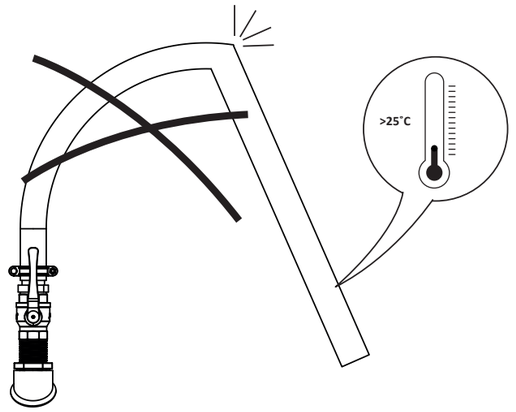
8: Control panel in helm station

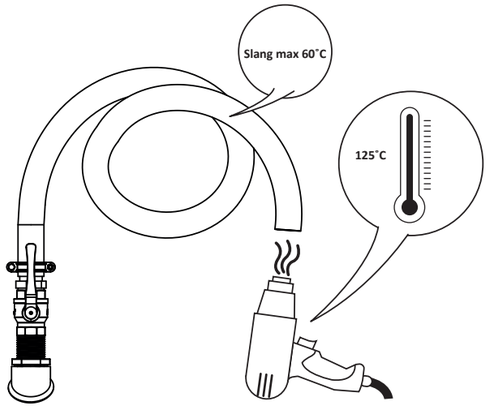
- Use drilling template for installing control panel
- Glue front plate panel onto dashboard with flexible marine sealant

9: Controller

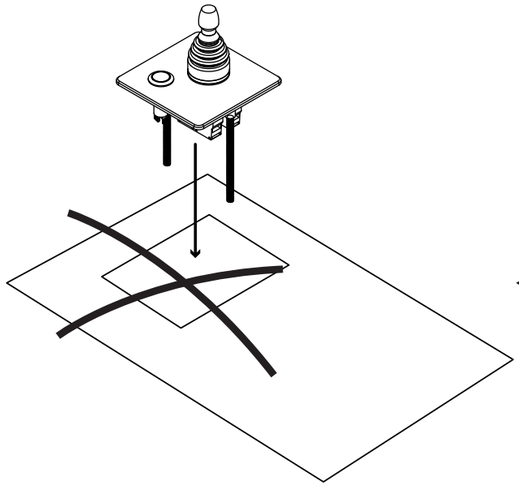
- Preferably install controller near the switch panel
- Use the length of the valve cable (10m) and pump cable (5m)
- Connect controller with 12V Service battery (via switch panel)
- DO NOT change polarity of connection cable! (will cause serious damage!)
- Check if connecters click with audible click
- Check dip-switch settings for Single or Combi function (see Last page)

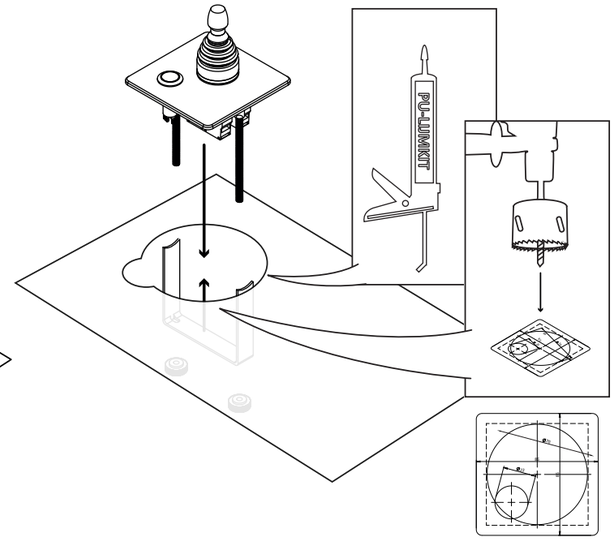
Step 7



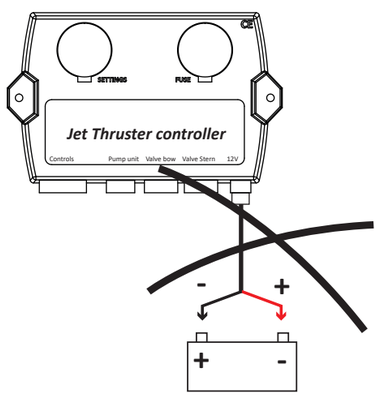


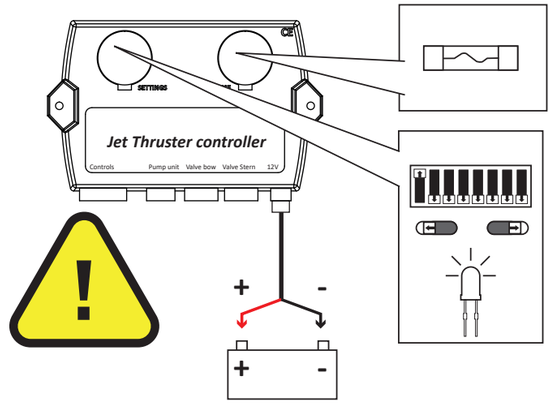
Step 8





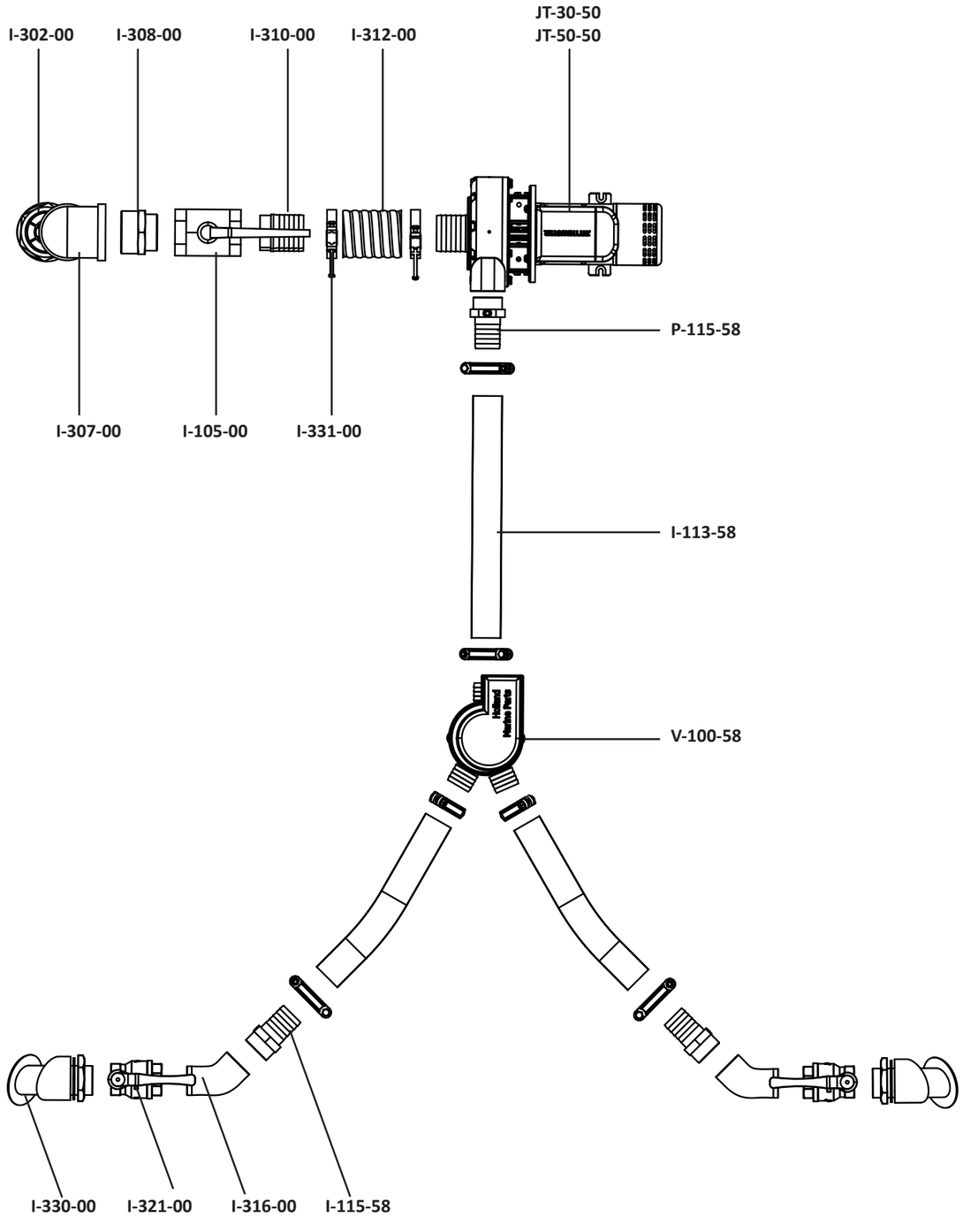
Step 9





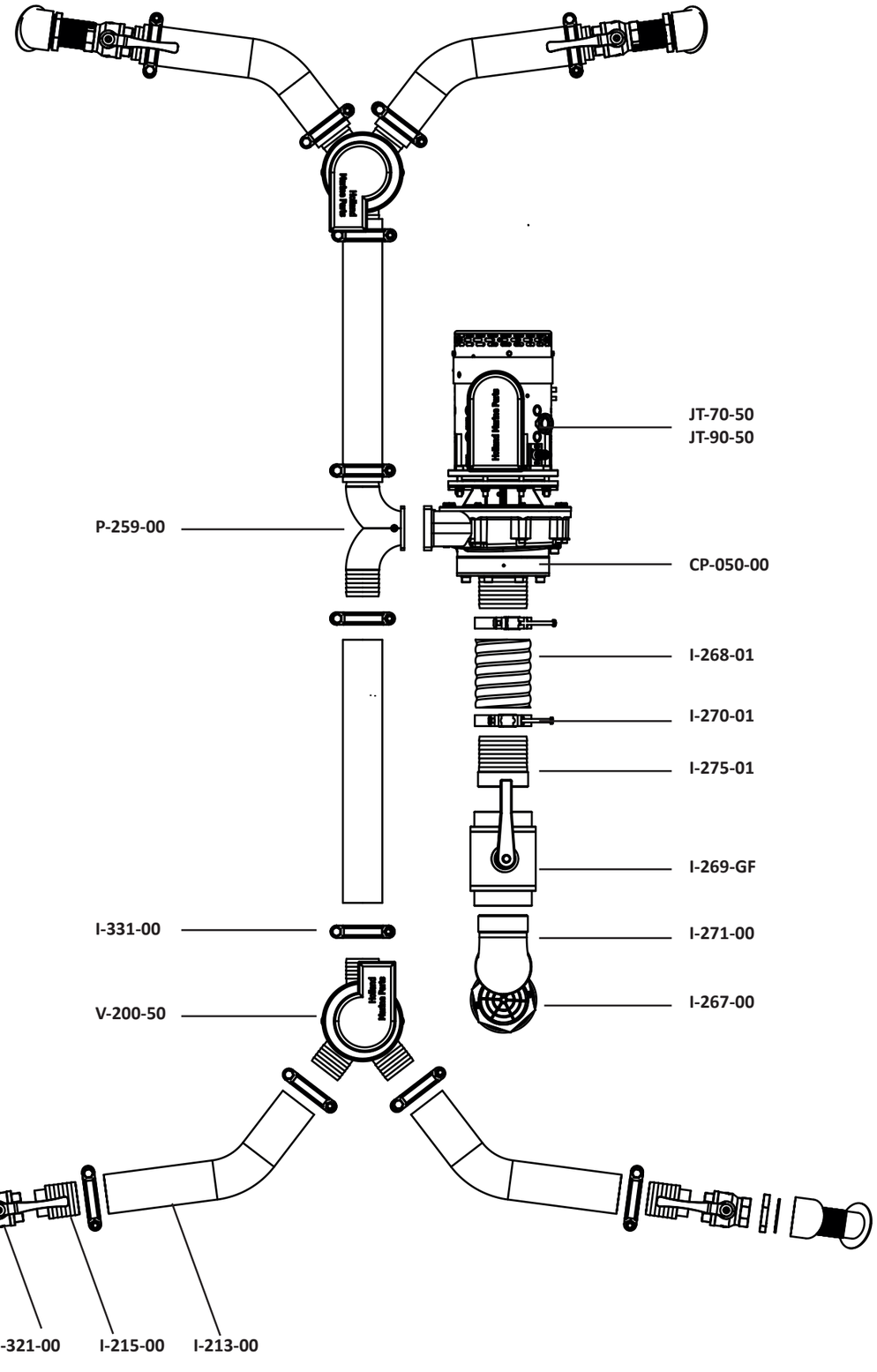
JT-50 example setup

See part list to create your own custom setup

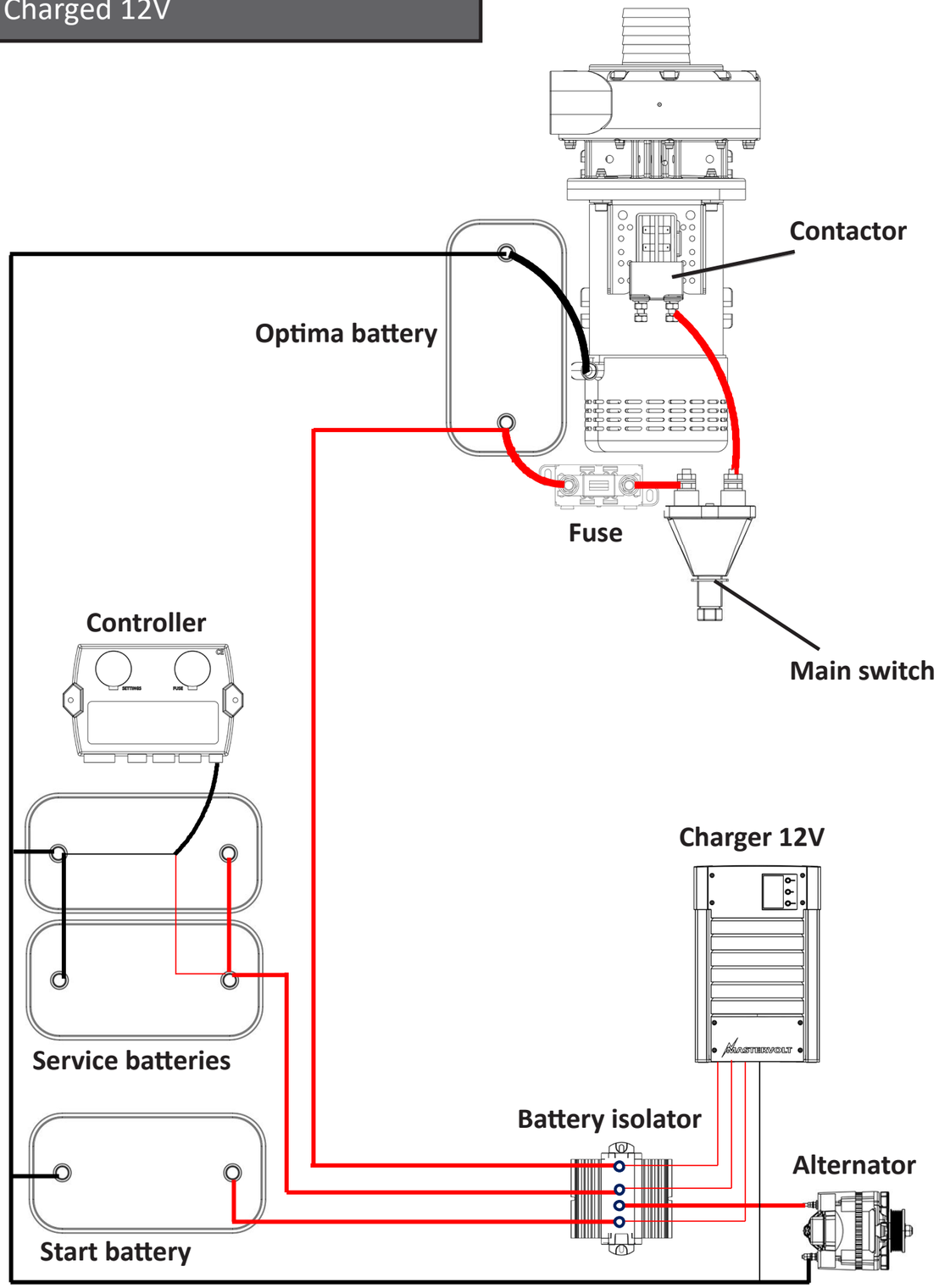


JT-90 example setup

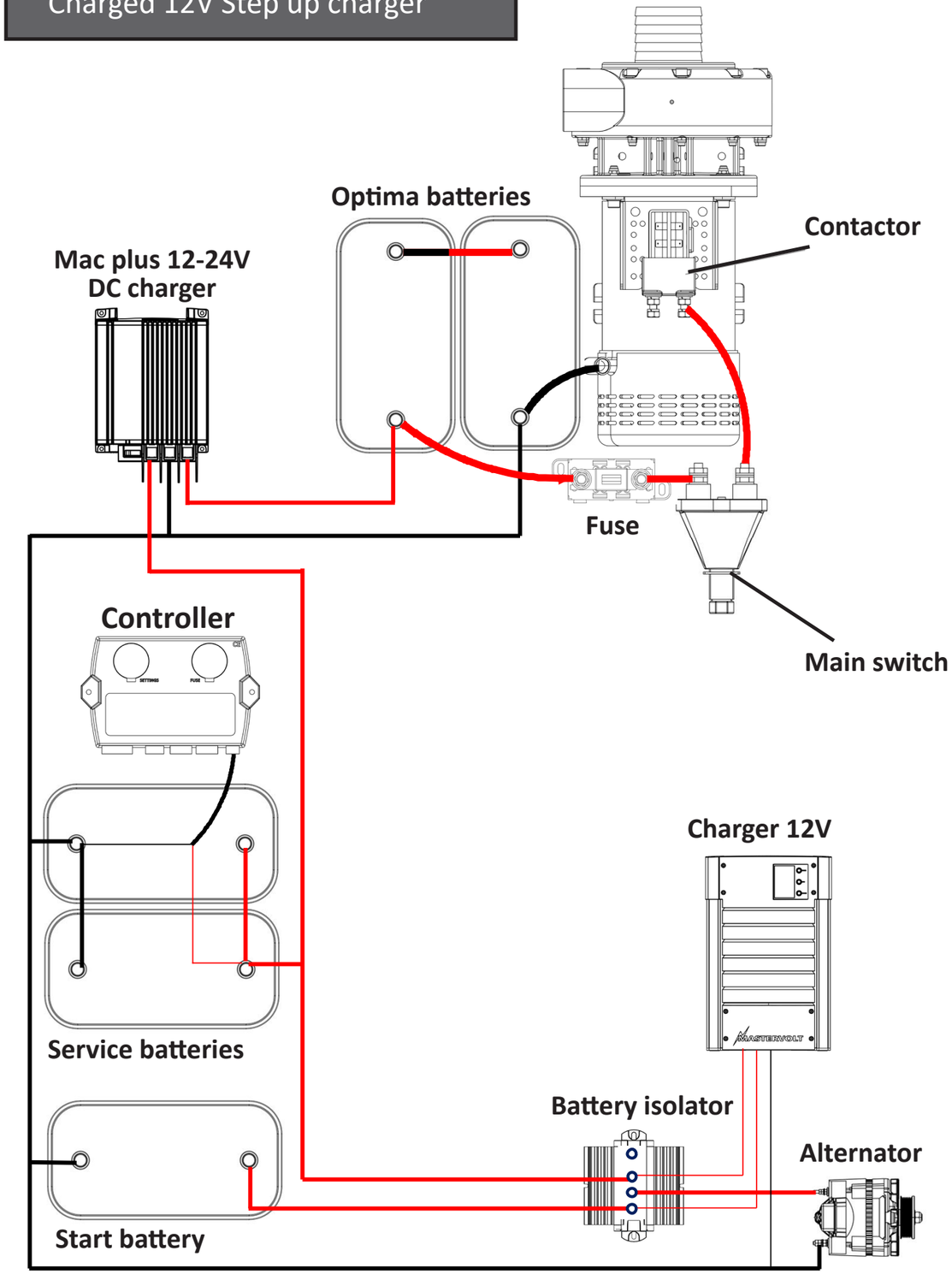
See part list to create your own custom setup



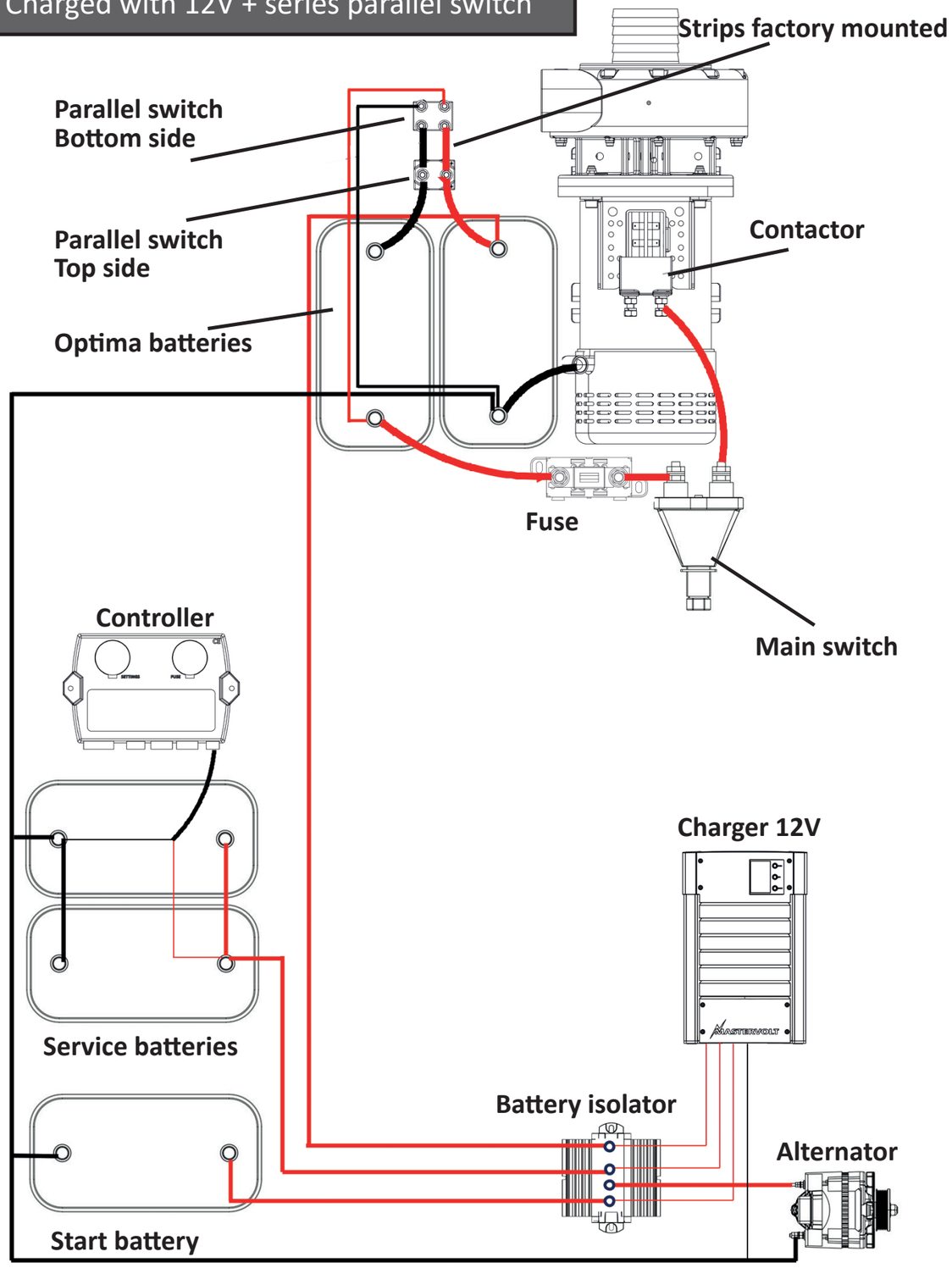
JT-30 12V
Charged 12V



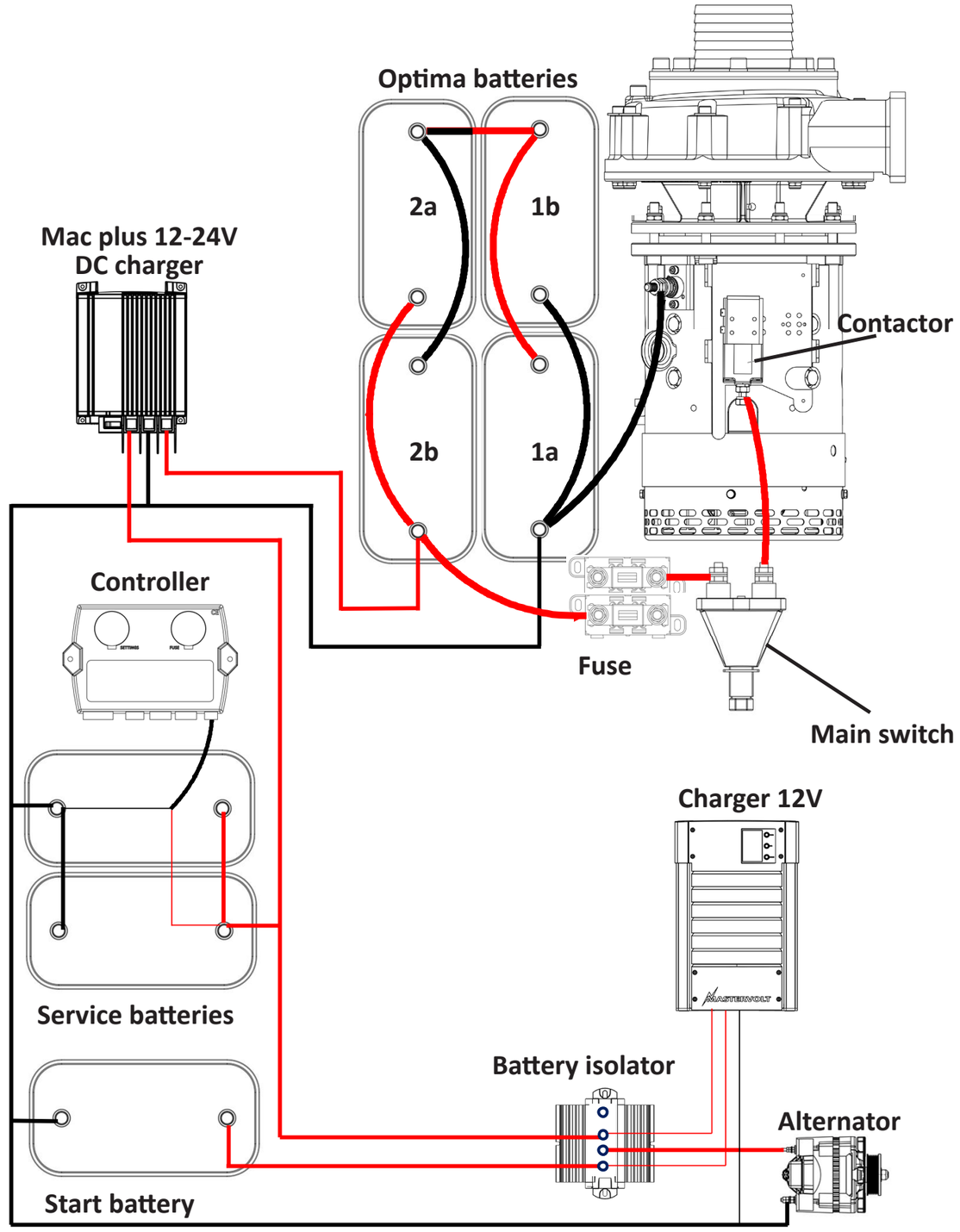
JT-50 24V
Charged 12V Step up charger



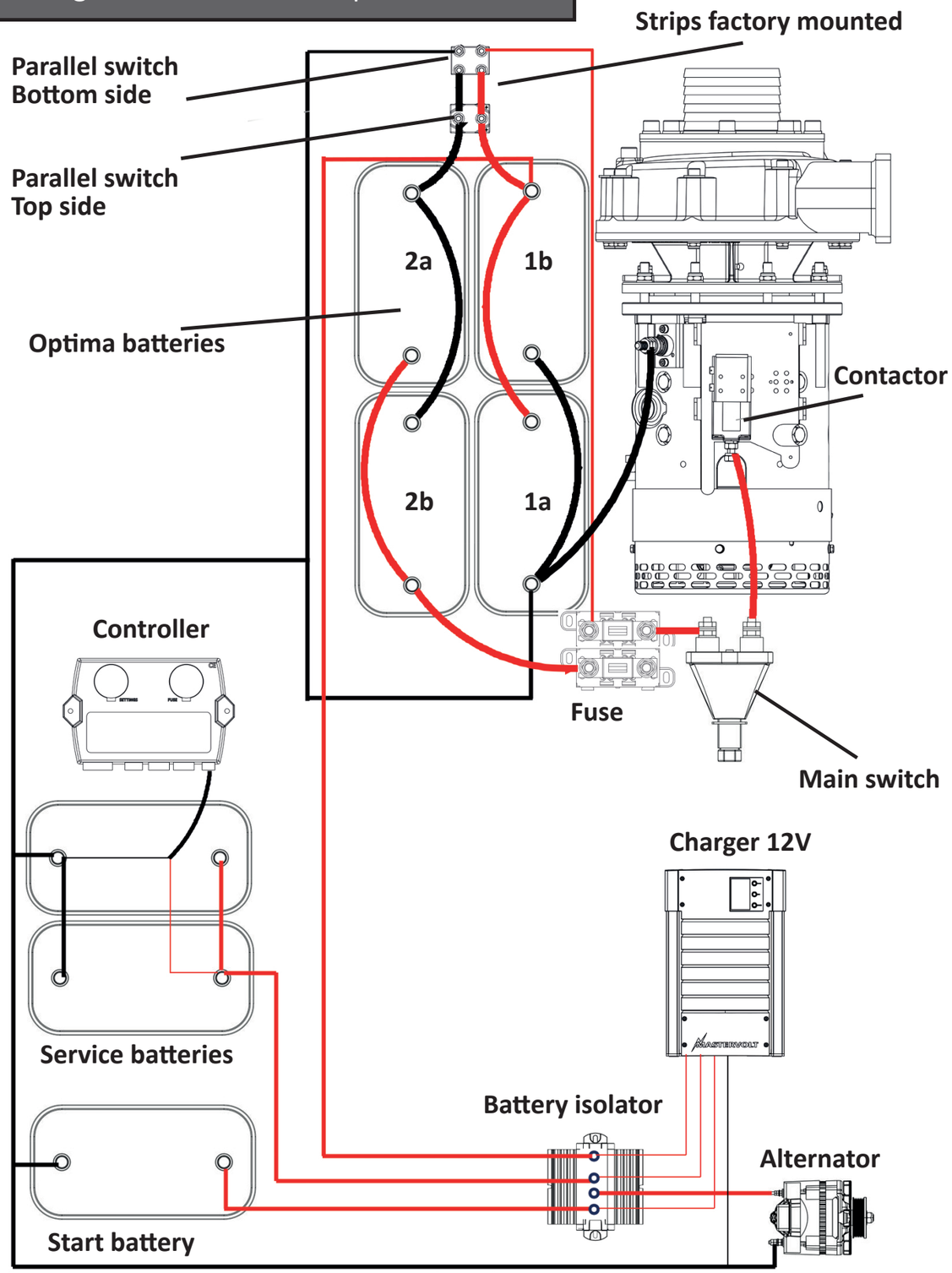
JT-50 24V
Charged with 12V + series parallel switch



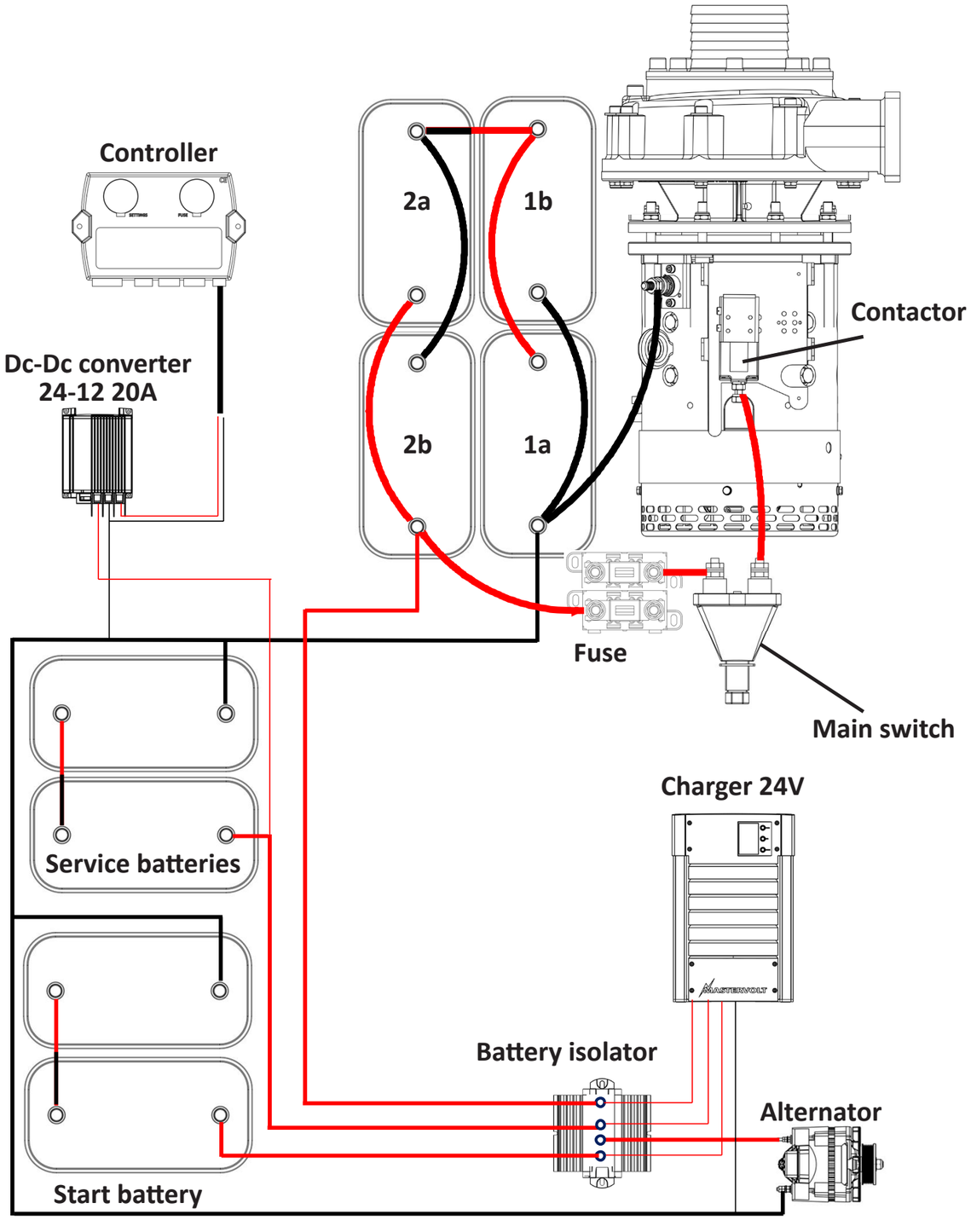
JT-90 24V
Charged 12V Step up charger



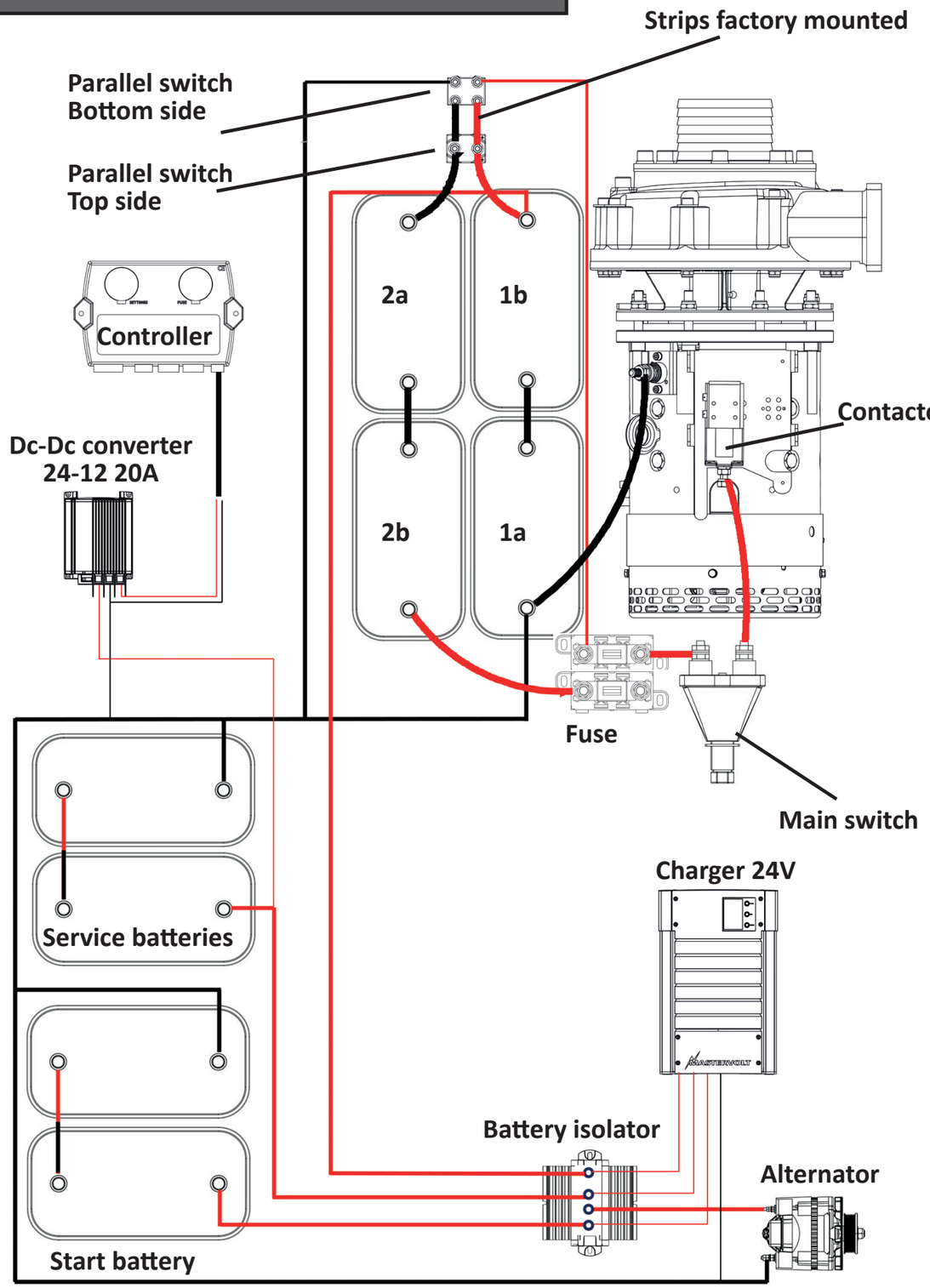
JT-90 24V
Charged with 12V + series parallel switch



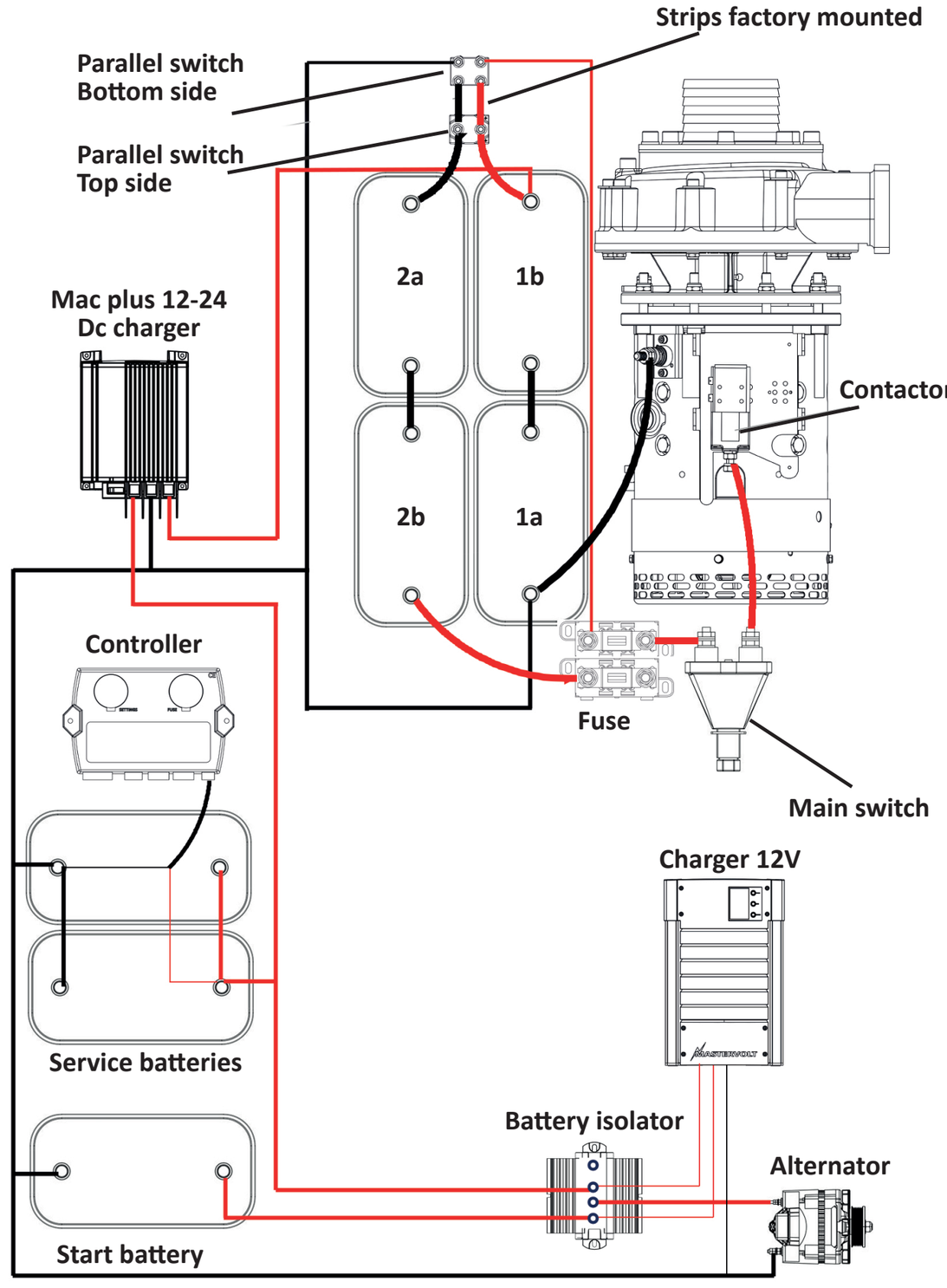
JT-90 24V
On a 24V board circuit

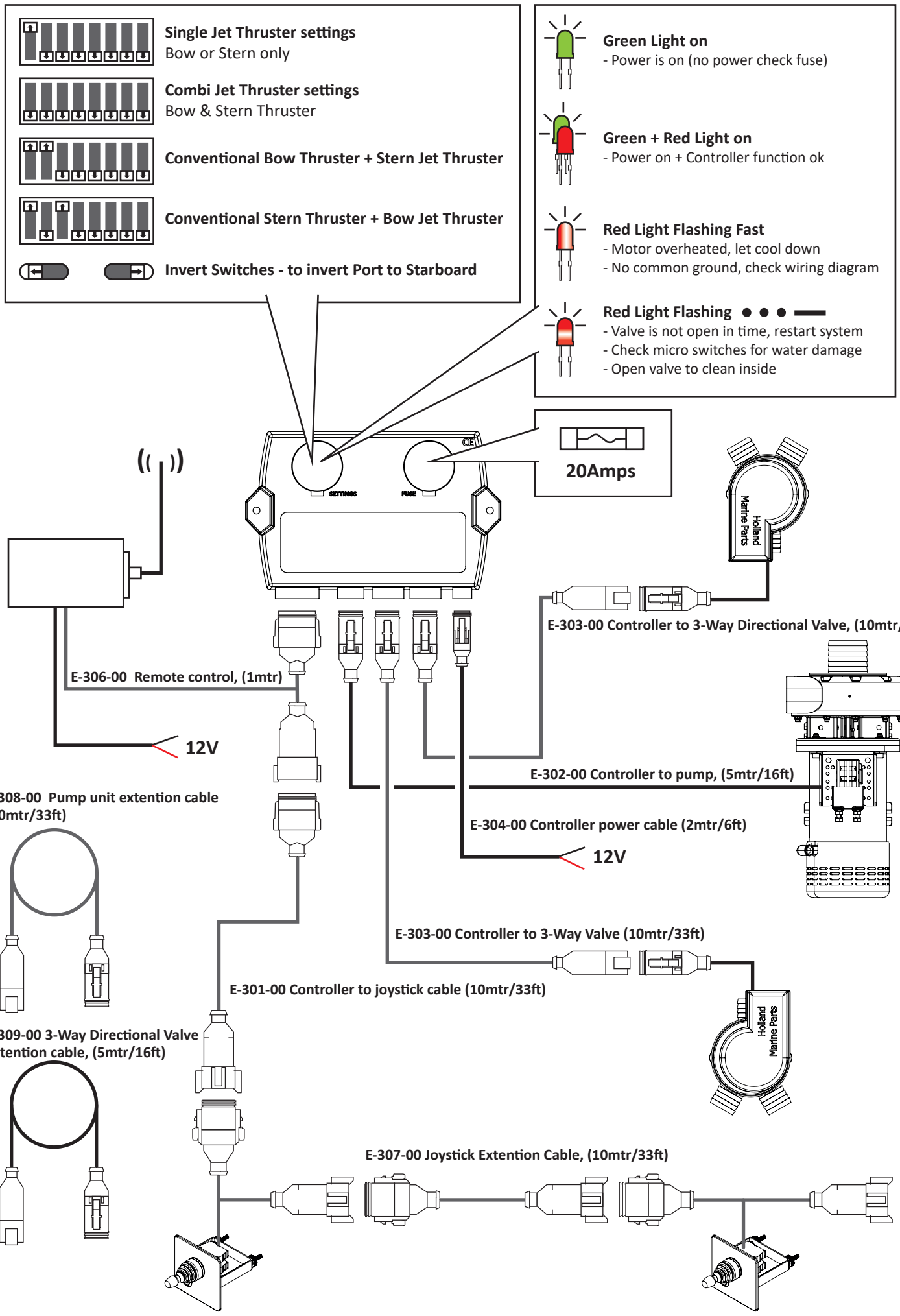


JT-90 48V
On a 24V board circuit



JT-90 48V
Charged with 12V Step up charger + series parallel switch




Single Jet Thruster settings
Bow or Stern only
Combi Jet Thruster settings
Bow & Stern Thruster
Conventional Bow Thruster + Stern Jet Thruster
Conventional Stern Thruster + Bow Jet Thruster
Invert Switches - to invert Port to Starboard
Green Light on
- Power is on (no power check fuse)
Green + Red Light on
- Power on + Controller function ok
Red Light Flashing Fast
- Motor overheated, let cool down
- No common ground, check wiring diagram
Red Light Flashing
- Valve is not open in time, restart system
- Check micro switches for water damage
- Open valve to clean inside
20Amps
SETTINGS
FUSE
Holland Marine Parts
E-303-00 Controller to 3-Way Directional Valve, (10mtr/33ft)
E-306-00 Remote control, (1mtr)
12V
E-302-00 Controller to pump, (5mtr/16ft)
E-308-00 Pump unit extention cable (10mtr/33ft)
E-304-00 Controller power cable (2mtr/6ft)
12V
E-303-00 Controller to 3-Way Valve (10mtr/33ft)
E-301-00 Controller to joystick cable (10mtr/33ft)
E-309-00 3-Way Directional Valve extention cable, (5mtr/16ft)
E-307-00 Joystick Extention Cable, (10mtr/33ft)