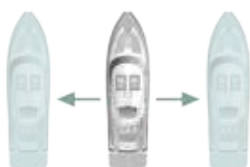


# PRO THRUSTERS

*Confidence by Control*





# ULTIMATE DOCKING

Increasing boat sizes and number of boats have outrun the harbor space for many years around the globe, making docking more difficult than ever. Easy maneuvering have become more important, making thrusters a standard fit in most boats, as they undeniably offer a great help while docking in challenging locations or in adverse weather conditions.

However, while docking in nice weather conditions, many boat owners find that using a 100% of the thruster effect is both unnecessary and create unwanted noise in an otherwise quiet harbor.

This is where a variable speed (proportional) thruster system is a more agreeable docking assistant, allowing you full speed control of your thrusters, enabling more controlled and quieter operation of the thrusters in all situations.

Proportionally controlled thrusters have traditionally only been available for hydraulic and AC electric thruster systems. With Side-Power Pro thrusters, all the significant advantages over standard on/off thrusters are now available for DC based thruster systems as well.



«It is so quiet that people don't think there are any thrusters on board!»

Magnus Rassy  
CEO Hallberg-Rassy AB



SIDE-POWER THRUSTER SYSTEMS



## with Side-Power *Pro*portional thrusters

- Full *proportional* speed control
- Allows *single-handed* docking
- Best choice for *joystick* interaction
- Wide range of *PRO* thrusters
- Unique *Hold-function*
- *Extended* runtime
- *Less* noise



Upgrades available  
for existing hydraulic  
and DC systems.



# Go Proportional



## Put a throttle in your thruster

With many boat owners having previously had boats with under-powered thrusters, they now would like to have enough power in their thrusters to make sure that they perform well and to their job also in the worst conditions. To install a thruster system rated for the worst conditions is clearly advisable, as it is in these situations you need a thruster system the most.

But the down side of a very powerful system might be an undesirable abundance of effect in calmer docking situations. This is not really a huge problem for most, as you can also pulse the thruster, but this can also be both uncomfortable and noisy with a very powerful thruster in a quiet harbor. Considerate operators are thereby often reluctant to use them, adding unnecessary stress to the docking experience.

Side-Power PRO thrusters will be a totally different experience and provide a no compromise solution with fully speed controlled thrusters. Different from on/off thruster systems, where you will get a 100% thrust at once, a proportionally controlled system starts at a lower RPM as you throttle on. This makes a huge difference as the softer acceleration creates a lot less cavitation in the tunnel, which is the main factor for reducing noise in a thruster.

As you can now choose the necessary thrust for any docking situation, docking in a quiet harbor does not need a lot of thrust and you will find that you can slip the boat into your dock almost without making a sound.

An additional benefit to putting a throttle in your thruster is that the heat development in a DC electric motor is much less when running at reduced power, practically leaving you the option of up to continuous usage below 50% effect, normally then just limited by the battery power available.

The extended runtime is put to good use in the unique Hold-function incorporated in the new PJC control panels. With the press of a button, the bow and stern thrusters will keep you alongside the docks, freeing you to yourself jump ashore and tie the docklines. The amount of thrust applied can be adjusted, and in addition the bow and stern thruster can be individually synchronized to get a balanced sideways motion - making single handed docking very easy indeed!





A **PRO** system contains three main elements - proportional control panels, a power control unit and a DC electric thruster - all tied together with the new S-link control system. The thrusters used in a speed control system are almost identical to the standard DC thrusters, the only difference being the addition of a temperature sensor and a new electronic control box. All mechanical and main electric parts are from the well proven thruster range produced by Side-Power for many years. All 12 & 24 volt DC electric thrusters produced by Side-Power can be enabled for **PRO** with DC Speed Control by authorized Side-Power service personnel, even the oldest models.

## PPC 800 Power Control Unit

- Plug and play S-link control cable wiring
- Easy to access, solid main cable terminals
- Easy to place as it can be located anywhere between the batteries and the thruster, also in areas requiring ignition protected parts
- Reliable solid state switching
- Thermal and over current protection
- Active cooling for continuous usage



PPC 800

## Thrusters for **PRO** system

- Any Side-Power DC Electric thruster can be upgraded to PRO version
- Temperature monitoring through PPC800
- Increased directional solenoid lifetime because the solenoids will not switch with load
- IPC intelligence for extra safety

## PJC Control Panel

- Plug and play S-link control cable wiring (waterproof plugs)
- Finger tip control with purpose designed joysticks
- Hold-function for easy docking, runs thrusters at selected power
- Back-lit LCD display with instant feedback
  - Amount of thrust & direction of thrust
  - Thruster temperature/remaining run time
  - Battery status
  - Selectable LCD colour & level for both night and day
  - System monitoring simplifies troubleshooting
  - Interactive multilingual menus
  - Built-in audible alarm "buzzer"



### Even more functionality by adding a Side-Power radio remote!

When a Side-Power radio remote is added to the system you get even more benefits from the speed control system. If you are docking alone - having the PJC panel automatically pushing the boat against the dock while you go put the mooring lines on, you might wish to increase the thrust on the bow thruster momentarily to make it really tight. Pressing the bow thruster button on the remote will then let you do this. You can also shut down the hold function without going to a fixed control panel by selecting to run any of the thrusters in opposite direction of what the hold function is doing.





# DC system Proportional upgrade

Most Side-Power DC thrusters can be upgraded to Proportional speed control. Side-Power offer upgrade kits which includes the necessary parts for upgrading the thrusters to be compatible with the PPC controller and PJC control panel. To upgrade, the thrusters need a new temperature sensor in the electric motor, an S-Link compatible internal cable kit and new S-Link signal cables which allow for the installation of the PPC controller and a PJC control panel.

When considering an upgrade, you might also want to consider installing more powerful thrusters, in order to fully enjoy the benefits of a speed controlled system, ensuring sufficient thrust under the worst conditions, as well as being able to silently slip into a sleeping harbour late at night with precisely the power needed for docking the vessel.

Your local Side-Power dealer can advise correct upgrade kits for your existing system.

## The S-Link system

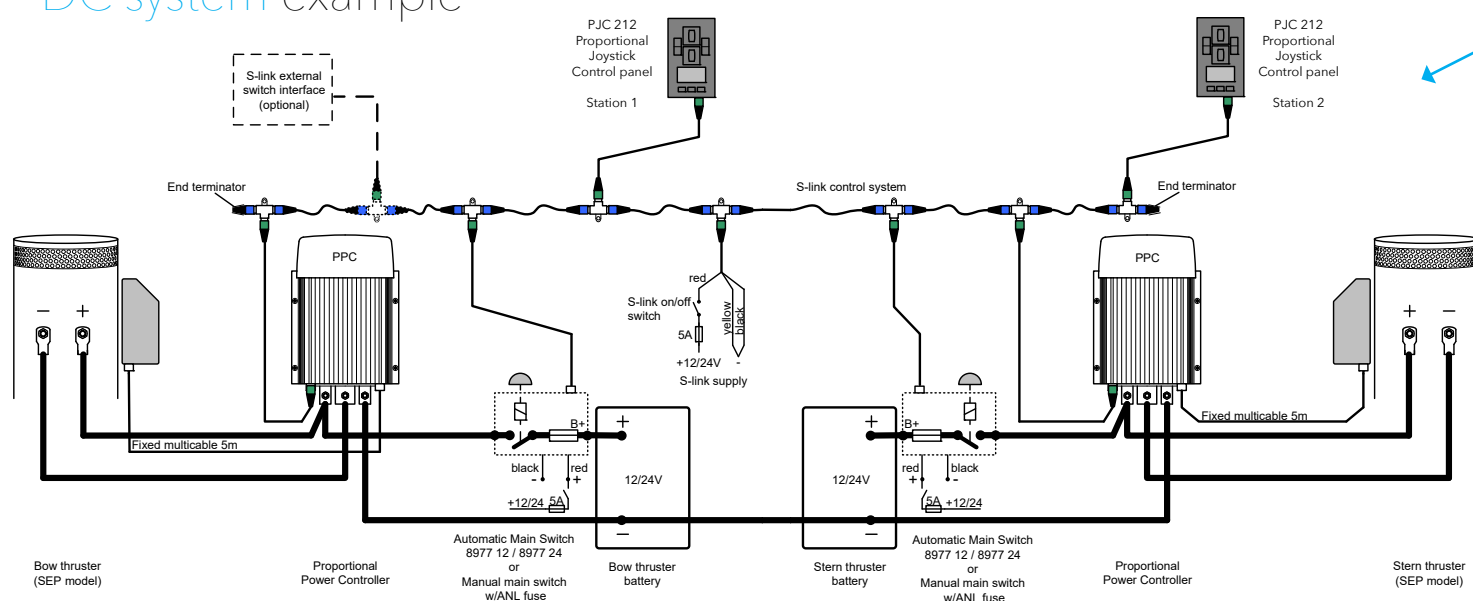
S-link is a "CAN" based control system with full intelligent communication between all units in the system, much like a computer network. It is used for all retract thrusters and all PRO thrusters with the DC speed control system.

### Main advantages include:

- Round, compact and waterproof plugs with unique keying and color coding to avoid faulty hookup
- Unlimited number of commands or information transfer on a single cable
- User feedback at panel
- Intelligent troubleshooting

The S-Link system is also control stabilizers, hydraulic & AC thruster and power steering systems. All via one single cable.

## DC system example





# Hydraulic system Proportional upgrade

Existing hydraulic on/off systems can also be upgraded to Proportional speed control. As for a DC system, the control cables will need to be changed to our S-Link system, and then installing the PJC panels for finger-tip control of the system, will as well directly provide feed-back from the hydraulic system to the panel display.

Another benefit of replacing the signal cables to our S-Link system is if you consider to install Side-Power stabilizers in the future, as they communicate via the same S-link system, where you can use the PJC thruster panel also as a secondary or third stabilizer control panel, minimizing space and cost.

In addition to the control cables, you also need to upgrade the valve actuators, the tank/valve controller and tank sensors, to make the system top modern and compatible with speed control and hold functions. Contact your local Side-Power dealer for more information about upgrading your system.

*Side-Power have manufactured more than 1000 hydraulic thruster systems and are using exact custom made software to design and engineer each system for ultimate performance in each application.*



Hydraulic thrusters



Fin stabilizers



AC thrusters



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## Worldwide sales and service



All Side-Power products are constructed and manufactured at our ISO-certified factory in Norway.

Visit [www.side-power.com](http://www.side-power.com) for more products and detailed information.

