

HYDRAULIC

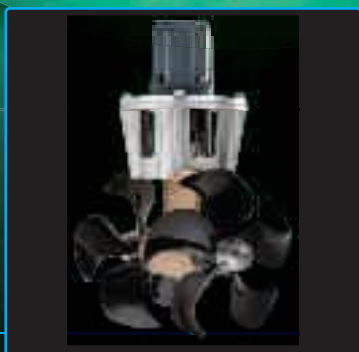
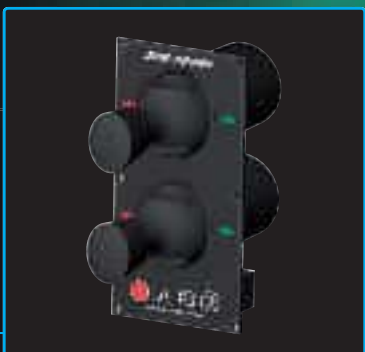


THRUSTER



SYSTEMS

2009



**SIDE-POWER**

*Thruster systems*





YOU'RE IN TOTAL CONTROL



SIDE-POWER THRUSTER SYSTEMS

CONFIDENCE BY CONTROL

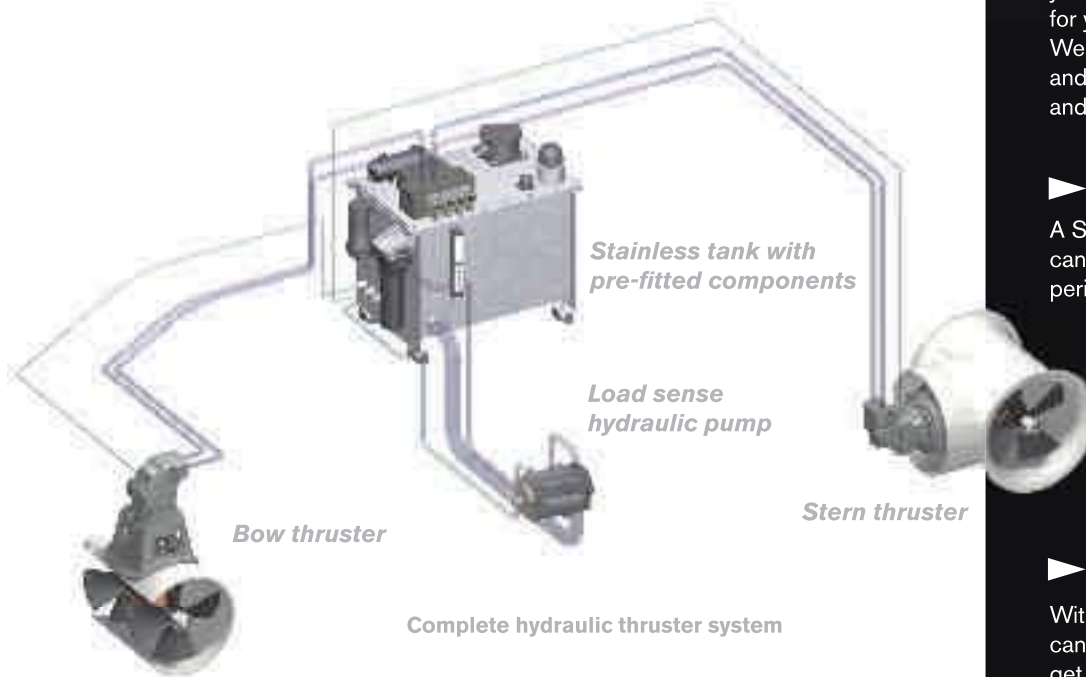


# HYDRAULIC thruster systems

A hydraulic thruster system is the natural choice when extensive thruster usage or long run cycles are required. We design our hydraulic systems with the style needed for pleasure craft and the reliability necessary for commercial use.

For many vessels, a hydraulic system offers an economic advantage because of the possibility to run several systems onboard from a centralized hydraulic power source. This will save cost on the individual components so that the complete package ends up with a more favourable cost compared to running all items with individual DC electric motors. Equipment that is often powered by a centralized hydraulic system includes windlasses, stabilizers, winches, cranes, furling systems and lifting mechanisms etc.

There are many different ways of designing hydraulic systems, and some solutions are better for specific applications than others. Sidepower hydraulic systems are designed to provide outstanding performance and flexibility to efficiently support any on-board hydraulic equipment that is sensible to power from a centralized hydraulic system.



## ► Electric or hydraulic?

Being a leading manufacturer of both hydraulic and DC electric thruster systems, you can trust Sidepower to give you objective advice on what to choose for your vessel.

We have the knowledge and experience and our philosophy is to get things right and have satisfied customers.

## ► Continuous use

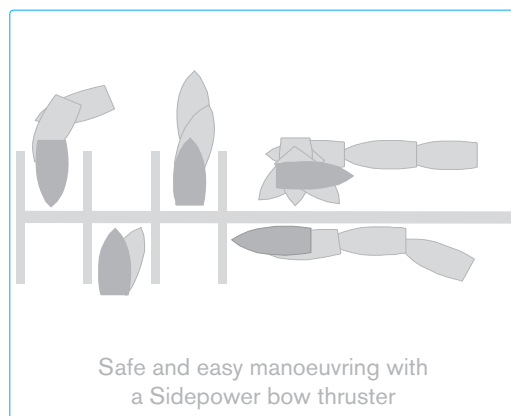
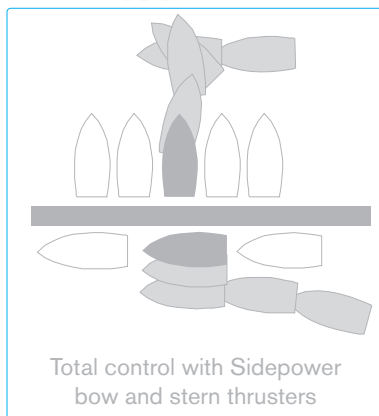
A Sidepower hydraulic thruster system can be run continuously for very long periods.

## ► Controlled power

With a Sidepower hydraulic system, you can easily and without huge extra cost get proportional power control of your thruster(s). This will provide an easier and more detailed control of the vessel in varying conditions.

## ► Stern thruster

The added cost for fitting a sternthruster for your vessel is sometimes only a modest percentage of the total package if you are already installing a complete hydraulic system.



# SIDE-POWER

## - the boatbuilder's choice

Sidepower thrusters are the choice of the leading boat manufacturers around the world. Our engineering and development work is the foundation for the high quality products that have been accepted as the best among the professionals in the industry.

### Safety

Sidepower thrusters include several features to ensure the safety of your vessel and its passengers. These features protect against technical and operator faults.

- mechanical protection of drive gear
- electronic protection against sudden change of drive direction
- protection against accidental operation incorporated in control panels

For more information about the protection of the hydraulic system, please see page 6/7

### Performance

Investing in product development and testing is an important reason why Sidepower is the leading thruster brand today. Now larger vessels can benefit from these investments that have resulted in modern, cost effective production of highly efficient and reliable thrusters.

- propulsion technology know-how
- 5-bladed composite propellers
- improved waterflow from streamlined gearhouse design
- high thrust and efficiency in compact tunnel diameters
- all hydraulic components are supplied by "brand name" manufacturers like:

Parker, Sauer Danfoss and Bowman

### Reliability

The world's leading boatbuilders have used Sidepower for many years because they know they can trust a Sidepower to work without problems, year after year.

- in-house manufacturing and assembly
- engineering through experience
- use of superior materials
- controlled quality of every supplied part
- all hydraulic components are supplied by "brand name" manufacturers
- 2-year limited warranty



SIDE-POWER THRUSTER SYSTEMS



CONFIDENCE BY CONTROL

Through our close cooperation with major boatbuilders we know how important an easy and proper installation is. Our hydraulic thruster systems are easy to install correctly by design.

**Installation**

Sidepower hydraulic systems are designed for ultimate and guaranteed reliability, performance and easy installation. For the installer, perhaps the most important feature of any hydraulic system is that they are delivered ready for installation. Sidepower hydraulic systems are manufactured with this in mind and each hydraulic system is tailored specifically to each vessel and its specific needs. Sidepower hydraulic systems come pre-fitted with all internal hydraulic and electrical components ensuring correct installation and potentially saving hours of work for the installer. Sidepower systems do require the installation of external hydraulic and electrical connections, which can only be done onboard.

**Brand name components**

Sidepower hydraulic systems use only brand name hydraulic components ensuring reliability and easy worldwide access to spare parts and service.

**Full documentation**

A Sidepower hydraulic system is delivered with all necessary drawings, installation manual, system startup manual, service manuals, hose/tube specifications etc. to ensure an easy and correct installation and a lifetime of reliability and serviceability.



Installation and start-up manual



System manual

**Sidepower hydraulic system features**

- compact-sized units
- "Plug & Go" electric wiring (except for valve end on proportional systems)
- all hydraulic connections internally on the tank are pre-fitted
- delivered ready with all hydraulic settings
- all electric connections are pre-wired for thrusters on tank
- full documentation, including installation and user manual, startup manual etc.
- fast and safe propeller mounting with locknut
- easy access zinc anodes



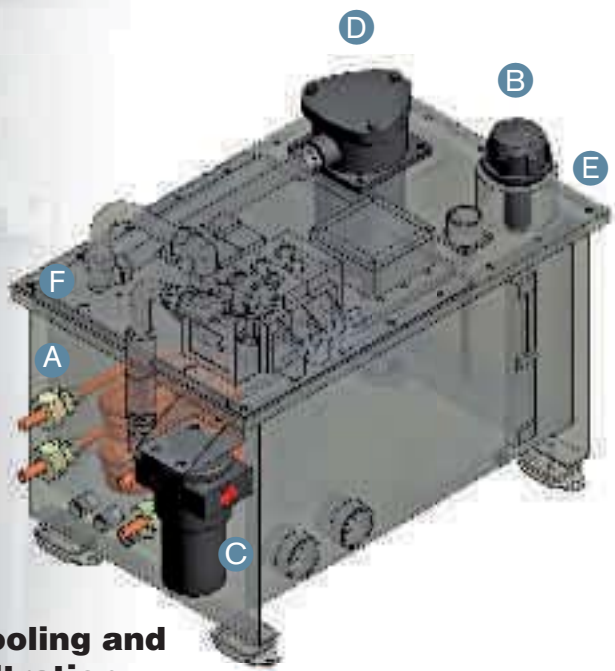
► **The safe choice**

Sidepower is a reliable, long term partner because we have design, manufacturing, product support and service directly in house. This means that you always get up to date products you can rely on year after year.

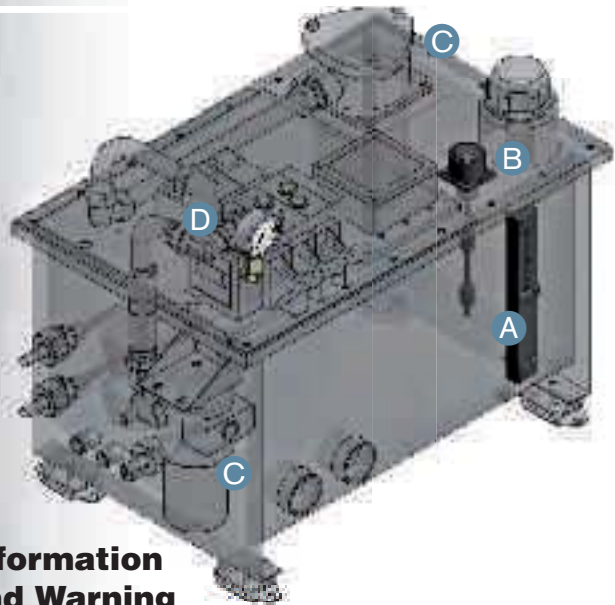
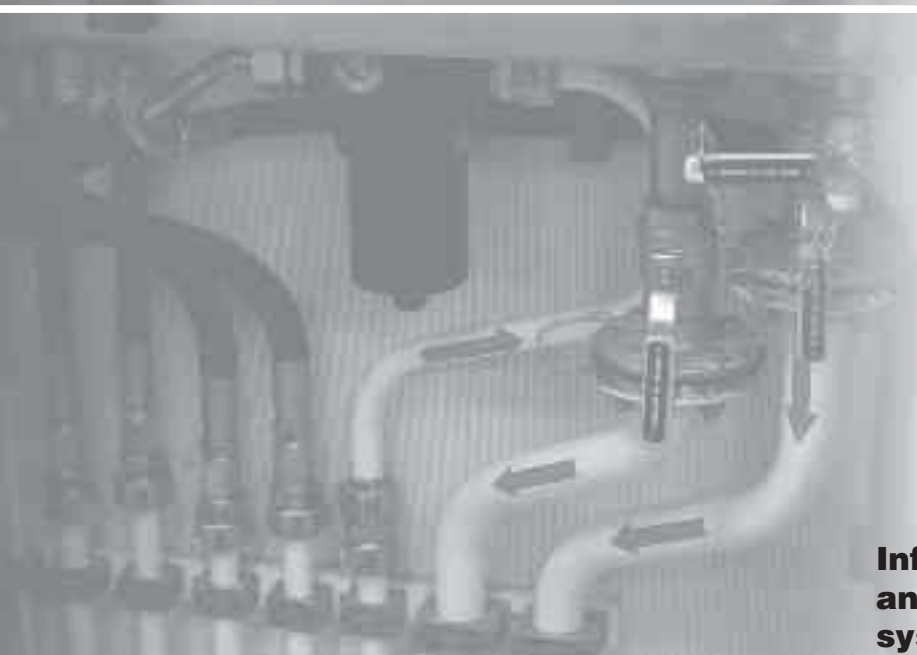
► **Technology**

The most important factor for correct sizing of a thruster as well as designing the hydraulic system to power it, is to have exact and detailed knowledge about the thruster's performance and power requirements. All Sidepower thrusters have specially developed and tested composite propellers for maximum performance. We supply matched hydraulic systems to your requirements to ensure ultimate cost and space efficiency.

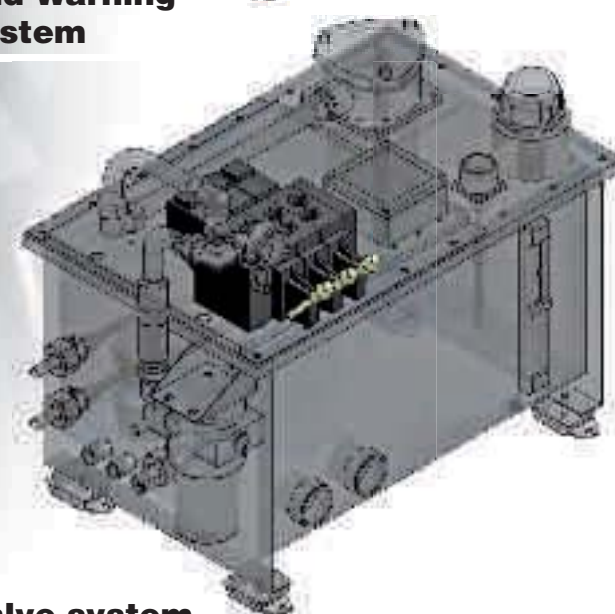




**Cooling and Filtration**



**Information and Warning system**



**Valve system**

# HYDRAULIC components

To ensure a long life and trouble-free operation of your thruster system, choose the compact Sidepower hydraulic system for your hydraulic power needs.

A thruster will normally be the most demanding consumer among the hydraulic parts onboard, so that it is important that the system is correctly built and sized. A Sidepower hydraulic system is specifically designed for ultimate flexibility to support any of the other hydraulic parts on board. It has been designed using the same stringent standards as all other Sidepower parts, focusing on:

- Reliability
- Safety
- Performance
- Easy & safe installation
- Easy maintenance

Perhaps the most important feature of any complete hydraulic system is for it to be delivered as ready as possible for installation. Sidepower systems require only the external hydraulic and electrical connections (which can only be done onboard), saving time and trouble for the installers.

A Sidepower system is delivered with all necessary drawings, installation manuals, system startup manual, service manuals etc. to ensure an easy and correct installation and a lifetime of reliability and serviceability.

## Cooling and filtration

It is important for the lifetime and reliability of a hydraulic system that the oil stays clean and within accepted temperatures to avoid excessive wear and damage to any of the components in the system. The Sidepower hydraulic system is designed to achieve this by having:

- Ⓐ Dual internal oil cooler (standard)\*
- Ⓑ Air filter in ventilation cap
- Ⓒ High pressure filter with service gauge
- Ⓓ Return filter with service gauge
- Ⓔ Oil fill with filter
- Ⓕ Additional oil cooler for extra cooling requirements (optional)\*

\* an optional DC electric water pump for the oil cooler is also available

## Information and warning system

For safety and ease of service there are several sources of information and warnings on the tank.

- Ⓐ Oil level and temperature gauge on the tank
- Ⓑ Electric alarm outputs for oil level and temperature to Sidepower control panels with alarm lights and sound
- Ⓒ Both filters have gauges that indicate the condition of their filters and when they need changing
- Ⓓ Pressure gauge on valve shows oil pressure from pump

## Valve system

- Safety relief valve on feed protects system against overpressure
- Can be built to control of up to nine hydraulic units onboard
- Individual pressure and flow adjustments (preset) for all components
- Shock valve on outputs to all components
- Hydraulic flow curve specialized on thruster modules to match propellers thrust curves (proportional controlled systems)
- Manual running possibility for easy servicing and trouble shooting
- Identification of each valve system for later resetting to original



## ► Tank features

- Powder coated stainless steel
- Soft mounting feet to avoid structural carried noise
- Internal swash plate that also helps remove air from the oil
- Angled bottom of tank with drain plug at lowest point
- All internal hydraulic connections on tank are pre-fitted
- All internal electric connections for thrusters pre-wired, ready with extension connectors
- Optional temperature controlled water pump for oil cooler

# BENEFITS



Strong and lightweight 5-blade composite propellers perfectly shaped for power, less noise and low start and stop torques



Lock nut fastening of propellers provides easy and reliable fitting of the propellers

All internal wiring on systems are pre-connected for easy, correct and reliable wiring

All internal hydraulic connections are pre-connected for easy, correct and reliable connections

All panels and accessories have "Plug & Go" wiring for easy, correct and reliable wiring



Zinc anodes outside propellers makes them easy to access and change without having to remove propellers

Gearleg with oil-bath lubrication with oil tank inside boat makes overpressure of oil in gearleg, which help seals ensure water stays out

Hardened spiral-cut gears gives you extended lifetime, low noise and more compact gearhouse design

All bearing and sealing surfaces machined in CNC machines ensures correct tolerances, surfaces and angles

Slim, hydrodynamically shaped gearlegs minimize resistance and possibility for cavitation

Load sense hydraulic system for ultimate flexibility and performance, with minimum noise and wear

All hydraulic parts supplied by "brand name" manufacturers ensures quality and worldwide serviceability of the system

Pre-fitted cooling and filtration system standard with info gauges ensures long lifetime and trouble-free operation



	SAFETY	LIFETIME & RELIABILITY	BETTER PERFORMANCE	EASY INSTALLATION	EASY SERVICE
Strong and lightweight 5-blade composite propellers perfectly shaped for power, less noise and low start and stop torques	✓	✓	✓	✓	✓
Lock nut fastening of propellers provides easy and reliable fitting of the propellers	✓	✓	✓	✓	✓
All internal wiring on systems are pre-connected for easy, correct and reliable wiring	✓	✓	✓	✓	✓
All internal hydraulic connections are pre-connected for easy, correct and reliable connections	✓	✓	✓	✓	✓
All panels and accessories have "Plug & Go" wiring for easy, correct and reliable wiring	✓	✓	✓	✓	✓
Zinc anodes outside propellers makes them easy to access and change without having to remove propellers	✓	✓	✓	✓	✓
Gearleg with oil-bath lubrication with oil tank inside boat makes overpressure of oil in gearleg, which help seals ensure water stays out	✓	✓	✓	✓	✓
Hardened spiral-cut gears gives you extended lifetime, low noise and more compact gearhouse design	✓	✓	✓	✓	✓
All bearing and sealing surfaces machined in CNC machines ensures correct tolerances, surfaces and angles	✓	✓	✓	✓	✓
Slim, hydrodynamically shaped gearlegs minimize resistance and possibility for cavitation	✓	✓	✓	✓	✓
Load sense hydraulic system for ultimate flexibility and performance, with minimum noise and wear	✓	✓	✓	✓	✓
All hydraulic parts supplied by "brand name" manufacturers ensures quality and worldwide serviceability of the system	✓	✓	✓	✓	✓
Pre-fitted cooling and filtration system standard with info gauges ensures long lifetime and trouble-free operation	✓	✓	✓	✓	✓



# HYDRAULIC pumps

Sidepower hydraulic systems use almost exclusively variable displacement load sense pumps. They offer a high level of reliability, efficiency and flexibility without creating unnecessary noise or the need for huge tanks and oil cooling systems.

## Powering a thruster system

A thruster is almost always the most power demanding part of a hydraulic system. That's why the hydraulic system must be dimensioned to the thruster(s). Knowing our thrusters better than anybody, we can design the perfect hydraulic system to match.

## Advantages with load sense system

- reliable and well proven system
- delivers only the flow and pressure that is actually needed at the time
- the loadsense control of the pump is more reliable than an electric clutch
- low heating and energy waste
- high efficiency piston pumps
- low noise in both running and standby mode
- ignition protected for fitting in gas/petrol areas

## Normal power sources for hydraulic pumps

- main engines
- generator / auxiliary engines
- AC electric motor

*One of many variable displacement load sense pumps offered by Sidepower*

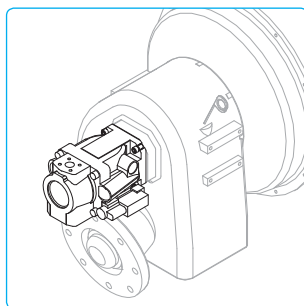


## ► What is «load sense»

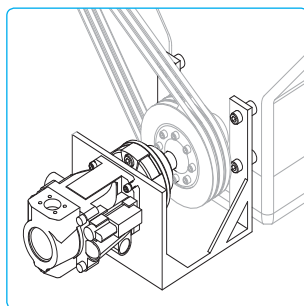
Load sense means that the pump's displacement is hydraulically controlled by the hydraulic valve adjusting its "swash plate". The valve will continuously sense if there is a need for more flow or pressure to any consumer and adjust the pump accordingly. This means there is no need to rely on electrical activation or to have large volumes of oil pumped around the boat constantly.

## How to connect and power hydraulic pumps

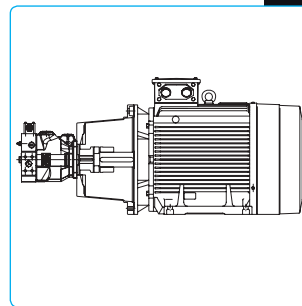
The most common way of fitting pumps is by a PTO (Power Take Off). This is the preferred method if available, because everything is then matched together by standards so that the fitting is easy and safe. If there is no PTO available, it is normally possible to fit the pump with a bracket and a flexible coupling to the front end of any engine. Some also use belt drives, but we prefer not to do so because of the high torque needed by a thruster system. Another option is to power the hydraulic pump by using an AC electric motor. Below you can see some examples of these installation methods.



*PTO fitting  
of pump*



*Engine front-end  
fitting of pump*



*AC Power pack*

# SIDE - POWER



## SH 100/185 T



Light duty thrust up to (kg • lbs)	100 • 220
Heavy duty thrust up to (kg • lbs)	80 • 176
Typical boat size (ft • m)	30' - 34' • 9 - 16
Tunnel I.D. (mm • in)	185 • 4.92"
Propulsion system	Twin
Hydraulic power up to (kw • Hp)	8.2 • 11.0
Propeller output up to (kw • Hp)	6.9 • 9.3
Weight (kg • lbs)	9.0 • 19.8
<b>Item Code</b>	<b>SH100/185T-xxx</b>

### Measurements

A (mm • in)	185 • 7.28
B (mm • in)	195 • 7.64
B max (mm • in)	212 • 8.34
C min. (mm • in)	200 • 7.87
D (mm • in)	170 • 6.70
D recommended (mm • in)	340 • 13.4
E min. (mm • in)	6 • 0.24
E max. (mm • in)	8 • 0.31

### Stern Thrusters

I (mm • in)	172 • 76.72
II (mm • in)	256 • 10.08
III min. (mm • in)	150 • 5.91
IV max. (mm • in)	35 • 1.38
Tunnel length (mm • in)	337 • 13.27

### Item code

<b>Stern thruster kit</b>	<b>90086i</b>
<b>Cowls - short model</b>	<b>90075</b>
<b>Cowls - long model</b>	<b>90077</b>



## SH 160/215 T



Light duty thrust up to (kg • lbs)	160 • 352
Heavy duty thrust up to (kg • lbs)	140 • 308
Typical boat size (ft • m)	35' - 62' • 11 - 19
Tunnel I.D. (mm • in)	215 • 8.46"
Propulsion system	Twin
Hydraulic power up to (kw • Hp)	13.1 • 17.5
Propeller output up to (kw • Hp)	11.0 • 14.8
Weight (kg • lbs)	10.5 • 23
<b>Item Code</b>	<b>SH160/215T-xxx</b>

### Measurements

A (mm • in)	215 • 8.46
B (mm • in)	195 • 7.64
B max (mm • in)	230 • 9.05
C min. (mm • in)	215 • 8.5
D (mm • in)	280 • 11
D recommended (mm • in)	560 • 22
E min. (mm • in)	6 • 0.24
E max. (mm • in)	8 • 0.31

### Stern Thrusters

I (mm • in)	172 • 76.72
II (mm • in)	300 • 11.8
III min. (mm • in)	215 • 8.46
IV max. (mm • in)	54 • 2.13
Tunnel length (mm • in)	330 • 13

### Item code

<b>Stern thruster kit</b>	<b>90135i</b>
<b>Cowls</b>	<b>90136</b>



## SH 240/250 TC



Light duty thrust up to (kg • lbs)	240 • 528
Heavy duty thrust up to (kg • lbs)	220 • 440
Typical boat size (ft • m)	42' - 75' • 13 - 23
Tunnel I.D. (mm • in)	250 • 9.8"
Propulsion system	Twin Counter rot.
Hydraulic power up to (kw • Hp)	17.7 • 23.7
Propeller output up to (kw • Hp)	14.9 • 20.0
Weight (kg • lbs)	15.9 • 35.0
<b>Item Code</b>	<b>SH240/250TC-xxx</b>

### Measurements

A (mm • in)	250 • 9.84
B (mm • in)	213 • 8.38
B max (mm • in)	230 • 9.05
C min. (mm • in)	230 • 9.0
D (mm • in)	280 • 11
D recommended (mm • in)	560 • 22
E min. (mm • in)	7 • 0.28
E max. (mm • in)	10 • 0.39

### Stern Thrusters

I (mm • in)	191 • 7.52
II (mm • in)	340 • 13.39
III min. (mm • in)	250 • 9.84
IV max. (mm • in)	60 • 2.36
Tunnel length (mm • in)	350 • 13.78

### Item code

<b>Stern thruster kit</b>	<b>90140i</b>
<b>Cowls</b>	<b>90132</b>



## SH 300/300 TC



Light duty thrust up to (kg • lbs)	300 • 660
Heavy duty thrust up to (kg • lbs)	270 • 594
Typical boat size (ft • m)	55' - 100' • 17 - 31
Tunnel I.D. (mm • in)	300 • 11.8"
Propulsion system	Twin Counter rot.
Hydraulic power up to (kw • Hp)	20.6 • 27.6
Propeller output up to (kw • Hp)	17.4 • 23.3
Weight (kg • lbs)	19.5 • 42.9
<b>Item Code</b>	<b>SH300/300TC-xxx</b>

### Measurements

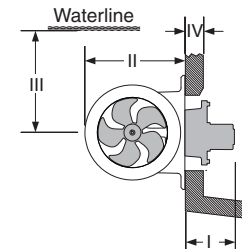
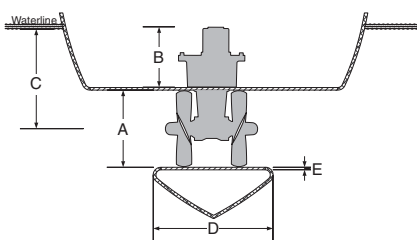
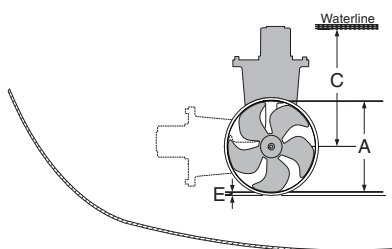
A (mm • in)	300 • 11.81
B (mm • in)	220 • 8.66
B max (mm • in)	244 • 9.61
C min. (mm • in)	300 • 11.81
D (mm • in)	300 • 11.81
D recommended (mm • in)	600 • 23.6
E min. (mm • in)	10 • 0.39
E max. (mm • in)	10 • 0.39

### Stern Thrusters

I (mm • in)	195 • 7.68
II (mm • in)	420 • 16.54
III min. (mm • in)	300 • 11.81
IV max. (mm • in)	60 • 2.36
Tunnel length (mm • in)	456 • 17.95

### Item code

<b>Stern thruster kit</b>	<b>90200i</b>
<b>Cowls</b>	<b>90220</b>





# HYDRAULIC thrusters

## SH 420/386 TC



Light duty thrust up to (kg • lbs)	420 • 925
Heavy duty thrust up to (kg • lbs)	380 • 835
Typical boat size (ft • m)	76 - 120' • 23 - 37
Tunnel I.D. (mm • in)	386 • 15.2"
Propulsion system	Twin Counter rot.
Hydraulic power up to (kw • Hp)	30.0 • 40.2
Propeller output up to (kw • Hp)	23.7 • 31.8
Weight (kg • lbs)	51.8 • 114.2

**Item Code** SE420/386TC-xxx

### Measurements

A (mm • in)	386 • 15.2
B (mm • in)	292 • 11.5
B max (mm • in)	372 • 14.65
C min. (mm • in)	380 • 15.0
D (mm • in)	500 • 19.7
D recommended (mm • in)	750 • 29.5
E min. (mm • in)	10 • 0.39
E max. (mm • in)	15 • 0.59

### Stern Thrusters

I (mm • in)	257 • 10.12
II (mm • in)	540 • 21.25
III min. (mm • in)	380 • 15.00
IV max. (mm • in)	
Tunnel length (mm • in)	550 • 21.65

**Item code**  
**Stern thruster kit** 90550  
**Cowls** 90560

## SH 550/386 TC



Light duty thrust up to (kg • lbs)	550 • 1210
Heavy duty thrust up to (kg • lbs)	500 • 1100
Typical boat size (ft • m)	76 - 145' • 23 - 44
Tunnel I.D. (mm • in)	386 • 15.2"
Propulsion system	Twin Counter rot.
Hydraulic power up to (kw • Hp)	51.0 • 68.4
Propeller output up to (kw • Hp)	42.9 • 57.5
Weight (kg • lbs)	52.6 • 115.7

**Item Code** SE550/386TC-xxx

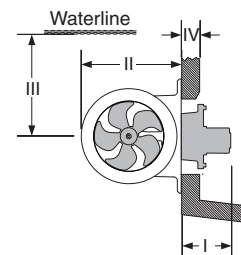
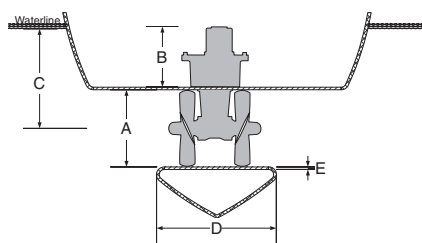
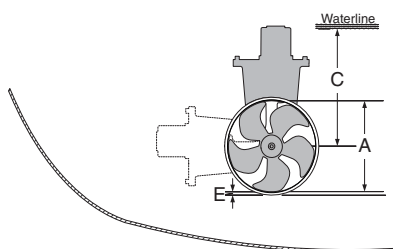
### Measurements

A (mm • in)	386 • 15.2
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IV max. (mm • in)	
Tunnel length (mm • in)	550 • 21.65

**Item code**  
**Stern thruster kit** 90550  
**Cowls** 90560



# SIDE - POWER

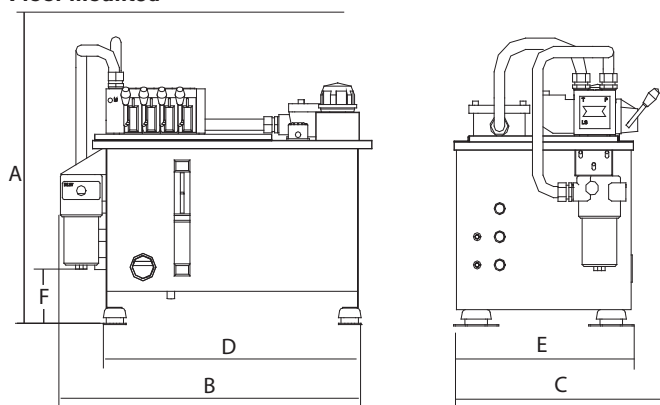
## Flow & pressure

Thruster	Motor		at 60% thrust		at 80% thrust		at 100% thrust	
			Flow	Pressure	Flow	Pressure	Flow	Pressure
SP 100 HYD	Ultra	Ltr/min - bar	18.8	103	21.7	137	24.2	172
	6 ccm	USG - PSI	5.0	1494	5.7	1987	6.4	2494
	Ultra	Ltr/min - bar	25.0	77	28.9	103	32.3	129
	8 ccm	USG - PSI	6.6	1117	7.6	1494	8.5	1871
	Ultra	Ltr/min - bar	31.3	62	36.1	82	40.4	103
	10 ccm	USG - PSI	8.3	899	9.5	1189	10.7	1494
SH160/215T	Ultra	Ltr/min - bar	18.6	150	21.5	200	24	250
	6 ccm	USG - PSI	4.9	2175	5.7	2900	6.3	3625
	Ultra	Ltr/min - bar	24.8	112	28.6	150	32	187
	8 ccm	USG - PSI	6.6	1624	7.6	2175	8.5	2712
	Ultra	Ltr/min - bar	31.0	90	35.8	120	40	150
	10 ccm	USG - PSI	8.2	1305	9.5	1740	10.6	2175
	Ultra	Ltr/min - bar	34.1	82	39.3	109	44	136
	11 ccm	USG - PSI	9.0	1189	10.4	1581	11.6	1972
SH240/250TC	Ultra	Ltr/min - bar	43.1	64	49.7	86	55.6	107
	14 ccm	USG - PSI	11.4	928	13.1	1247	14.7	1552
	Ultra	Ltr/min - bar	19.1	217			21.3	272
	8 ccm	USG - PSI	5.0	3147			5.6	3944
	Ultra	Ltr/min - bar	23.8	174	27.5	232	28.5	240
	10 ccm	USG - PSI	6.3	2523	7.3	3364	7.5	3480
	Ultra	Ltr/min - bar	26.2	158	30.2	211	33.8	264
	11 ccm	USG - PSI	6.9	2291	8.0	3060	8.9	3828
	Ultra	Ltr/min - bar	33.1	124	38.2	166	42.7	207
	14 ccm	USG - PSI	8.7	1798	10.1	2407	11.3	3002
SH300/300TC	Ultra	Ltr/min - bar	38.1	109	44.0	145	49.2	181
	16 ccm	USG - PSI	10.1	1581	11.6	2103	13.0	2625
	Ultra	Ltr/min - bar	45.1	92	52.1	122	58.3	153
	19 ccm	USG - PSI	11.9	1334	13.8	1769	15.4	2219
	Ultra	Ltr/min - bar	20.0	243			20.0	243
	10 ccm	USG - PSI	5.3	3524			5.3	3524
	Ultra	Ltr/min - bar	22.0	221			24.6	276
	11 ccm	USG - PSI	5.8	3205			6.5	4002
SH420/386TC	Ultra	Ltr/min - bar	27.8	173	32.1	231	35.0	275
	14 ccm	USG - PSI	7.3	2509	8.5	3350	9.2	3988
	Ultra	Ltr/min - bar	32.0	152	36.9	202	41.3	253
	16 ccm	USG - PSI	8.5	2204	9.7	2929	10.9	3669
	Ultra	Ltr/min - bar	37.9	128	43.7	170	48.9	213
	19 ccm	USG - PSI	10.0	1856	11.5	2465	12.9	3089
	Ultra	Ltr/min - bar	40.1	275			40.1	275
SH550/386TC	26 ccm	USG - PSI	10.6	3988			10.6	3988
	Ultra	Ltr/min - bar	45.4	255			46.9	272
	29 ccm	USG - PSI	12.0	3698			12.4	3944
	Ultra	Ltr/min - bar	51.7	224			56.7	269
	33 ccm	USG - PSI	13.7	3248			15.0	3901
	Ultra	Ltr/min - bar	58.1	200			65.4	253
SH550/386TC	37 ccm	USG - PSI	15.4	2900			17.3	3669
	Ultra	Ltr/min - bar	77.2	135	89.2	180	99.7	225
	50 ccm	USG - PSI	20.4	1958	23.6	2610	26.3	3263
	P-42	Ltr/min - bar	66.1	176	76.3	235	85.3	293
	42 ccm	USG - PSI	17.5	2553	20.2	3408	22.5	4250
	P-52	Ltr/min - bar	83.7	143	96.7	191	108.1	238
	52 ccm	USG - PSI	22.1	2074	25.5	2770	28.6	3451
	Pro piston	Ltr/min - bar	61.8	183	71.4	244	79.8	305
	40 ccm	USG - PSI	16.3	2654	18.9	3538	21.1	4423
	Pro piston	Ltr/min - bar	92.3	122	106.6	162	119.2	203
60 ccm	USG - PSI	24.4	1769	28.2	2349	31.5	2944	



# HYDRAULIC tanks

## Floor mounted



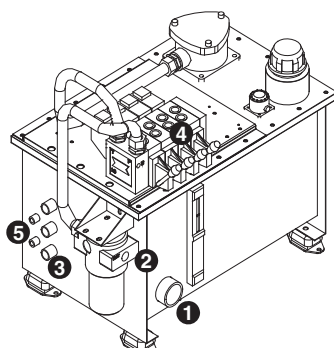
Tank kit	40 ltr	60 ltr	90 ltr	120 ltr
<b>Tank volume</b> (ltr · usg)	52.8 · 13.9	93.9 · 24.8	122.3 · 32.3	160 · 42.3
<b>Oil volume</b> (ltr · usg)	40 · 10.6	60 · 15.9	90 · 23.8	120 · 31.7
<b>Dry weight*</b> (kg · lbs)	46 · 101	60 · 132	68 · 154	77 · 170
<b>A</b> Build height (mm · in)	690 · 27.2	690 · 27.2	800 · 31.5	800 · 31.5
<b>B</b> Build length (mm · in)	785 · 30.9	800 · 31.5	800 · 35.1	1000 · 39.4
<b>C</b> Build depth (mm · in)	400 · 15.7	550 · 21.7	550 · 21.7	550 · 21.7
<b>D</b> Tank length (mm · in)	615 · 24.2	683 · 26.9	683 · 26.9	883 · 34.8
<b>E</b> Tank depth (mm · in)	340 · 13.4	479 · 18.9	479 · 18.9	479 · 18.9
<b>F</b> Filter change (mm · in)	100 · 4.0	100 · 4.0	100 · 4.0	100 · 4.0

\* with valve block for single thruster only

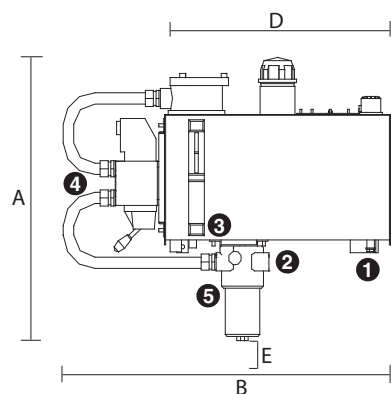
## Connections on tank

<b>1</b> Tank to pump	2" BSP
<b>2</b> Pump to valve	1" BSP
<b>3</b> Bleed returns (3x)	1/2" BSP
<b>4</b> Valve ports to users	1/2" BSP
<b>5</b> Water to/from oil cooler	3/4" Nipple

JIC thread kit available



## Bulkhead mounted



Tank kit	40 ltr	60 ltr
<b>Tank volume</b> (ltr · usg)	52.7 · 13.9	80 · 21.2
<b>Oil volume</b> (ltr · usg)	40 · 10.6	60 · 15.9
<b>Dry weight*</b> (kg · lbs)	45 · 99	59 · 130
<b>A</b> Build height (mm · in)	705 · 27.8	860 · 33.6
<b>B</b> Build length (mm · in)	870 · 34.3	890 · 35.0
<b>C</b> Build depth (mm · in)	330 · 13.0	330 · 13.0
<b>D</b> Tank length (mm · in)	600 · 23.6	600 · 23.6
<b>E</b> Filter change (mm · in)	100 · 4.0	100 · 4.0

## Connections on tank

<b>1</b> Tank to pump	2" BSP
<b>2</b> Pump to valve	1" BSP
<b>3</b> Bleed returns (3x)	1/2" BSP
<b>4</b> Valve ports to users	1/2" BSP
<b>5</b> Water to/from oil cooler	3/4" Nipple

JIC thread kit available



\* with valve block for single thruster only

# SIDE - POWER

Sidepower offers a unique series of «smart» control panels, an important part of a thruster system. Choose between our compact touch button, the popular joystick controls, the «docking» control panel with the most intuitive thruster control ever or the new exclusive round panel. Why not try the radio remote control for full mobility onboard, being the perfect tool for shorthanded boating. Radio linked panels are also an option. Mix or match, the choice is yours!

## Easy installation

- round cut-out hole (std.instrument size)
- installs from front side
- pre-fitted O-ring seal
- multi-voltage (12 & 24V)

## Safety

- child-safe on / off system
- power / control light
- automatic deactivation
- easy operation

## Quality

- waterproof (IP65-front)
- UV safe
- CE -approved

## Design

- compact size
- modern styling
- no visible screw heads



### Touch panels

The compact and flush design keeps smaller dashboards tidy and prevents ropes from snagging on sailboats.

	Touch panel	Round touch panel
H (mm • in)	70 • 2.76	-
W (mm • in)	70 • 2.76	Ø86.5
<b>Item code (12 &amp; 24V)</b>	<b>8950</b>	<b>8955</b>



### Joystick panel

Our most popular model that provides a comfortable and user friendly control of the bow thruster.

### Boat switch panel

The boat switch panel have the advantage of being as user friendly as the joystick panel while still being very low and designed so that ropes or clothing do not snag, a more user friendly solution for sailboats than the traditionally used touch panels.

	Joystick panel	Boat switch panel
H (mm • in)	70 • 2.76	-
W (mm • in)	70 • 2.76	Ø86.5
<b>Item code (12 &amp; 24V)</b>	<b>8960</b>	<b>8965</b>



### Dual joystick panel

The docking choice when having two thrusters is this space saving dual joystick panel. Easy control of both bow and stern thruster with just one hand.

### Docking panel

The docking panel is a revolutionary concept in thruster control. It provides intuitive control of bow and stern thrusters by simply moving the boat shaped switch the way you want your boat to move (patented).

	Dual Joystick panel	Docking panel
H (mm • in)	120 • 4.72	120 • 4.72
W (mm • in)	70 • 2.76	70 • 2.76
<b>Item code (12 &amp; 24V)</b>	<b>8940</b>	<b>8909</b>



### Hydraulic info panel

To ensure that also single speed hydraulic thruster systems have a maximum level of safety we have developed a hydraulic info panel. This panel includes both a visual and audible alarm for oil level and oil temperature and also has an emergency stop that shuts down the pump function in a Sidepower hydraulic system.

	Info panel
H (mm • in)	70 • 2.76
W (mm • in)	70 • 2.76
<b>Item code (12V/ 24V)</b>	<b>8980-12V/8980-24V</b>



# control panels

## Handheld radio remotes

A radio remote control makes your thruster system even more helpful around the docks. Providing full simultaneous control of a bow and a stern thruster or a bow thruster and a windlass, making shorthanded boating much easier.

	Radio remotes
H (mm • in)	95 • 3.74 (transmitter)
W (mm • in)	48 • 1.89 (transmitter)

### Item code:

Radio remote set (bow + stern thruster) / Radio remote set (bow thruster + windlass) **8980 / 8985**  
 Extra transmitter (bow + stern thruster) / Extra transmitter (bow thruster + windlass) **8981 / 8986**



## Proportional control panels

Proportional thruster control allows you to control the actual power of your thruster. This is important for vessels that use thrusters for more than just docking manoeuvres and vessels with a very powerful thruster system. You will not have to run at full power thereby creating rough movements of the vessel in light wind conditions or similar.

### Proportional control panels for hydraulic thrusters

Sidepower offer two types of proportional control panels, both are available for single and dual hydraulic thrusters.

- full speed control of the thruster(s)
- control light
- warning lights and audible alarm for oil level and temperature
- emergency stop
- waterproof from front (IP65)
- “Plug & Go” wiring in panel ends



### “Yacht” version panels

The yacht version panels are primarily designed for use in pleasure craft.

- compact size for easy positioning
- low profile proportional joysticks
- rubber grip on joystick(s) for comfortable and safe operation

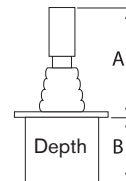


### “Pro” version panels

The pro panels are designed for use on both leisure and commercial vessels.

- joysticks are lockable in running position at any speed setting for continuous thrust
- entire panel waterproof (IP65)

	Yacht Single	Yacht Dual	Pro Single	Pro Dual
Height (mm • in)	71 • 2.80	122 • 4.80	125 • 4.92	206 • 8.11
Width (mm • in)	71 • 2.80	71 • 2.80	106 • 4.17	106 • 4.17
Depth (mm • in) A/B	60 • 2.36 / 42 • 1.65	60 • 2.36 / 42 • 1.65	115 • 4.43 / 100 • 3.94	115 • 4.43 / 100 • 3.94
Item code (12 V)	<b>895112-S</b>	<b>895112-D</b>	<b>896112-S</b>	<b>896112-D</b>
Item code (24 V)	<b>895124-S</b>	<b>895124-D</b>	<b>896124-S</b>	<b>896124-D</b>

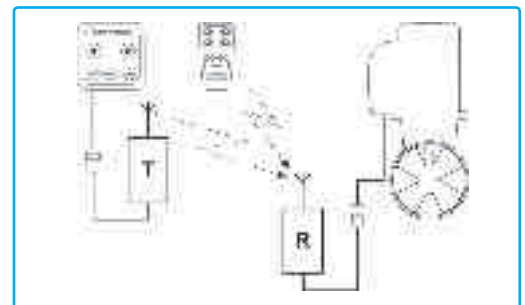


## Radio link for control panels

The radio link eliminates the need for difficult cable runs between control panel(s) and thruster. Consisting of a transmitter box, that connects to a control panel and a remote control receiver that plugs into the thruster(s), the receiver accepts up to 4 independent transmitters or hand held radio remotes. The multi-channel system supports two thrusters and can be mixed with hard wired control panels. Full Sidepower safety level with child-safe activation and intelligent auto-off, even at the receiver.

### Item codes:

Radio link kit	<b>8970</b>
Extra transmitter unit for radio link kit	<b>8975</b>





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