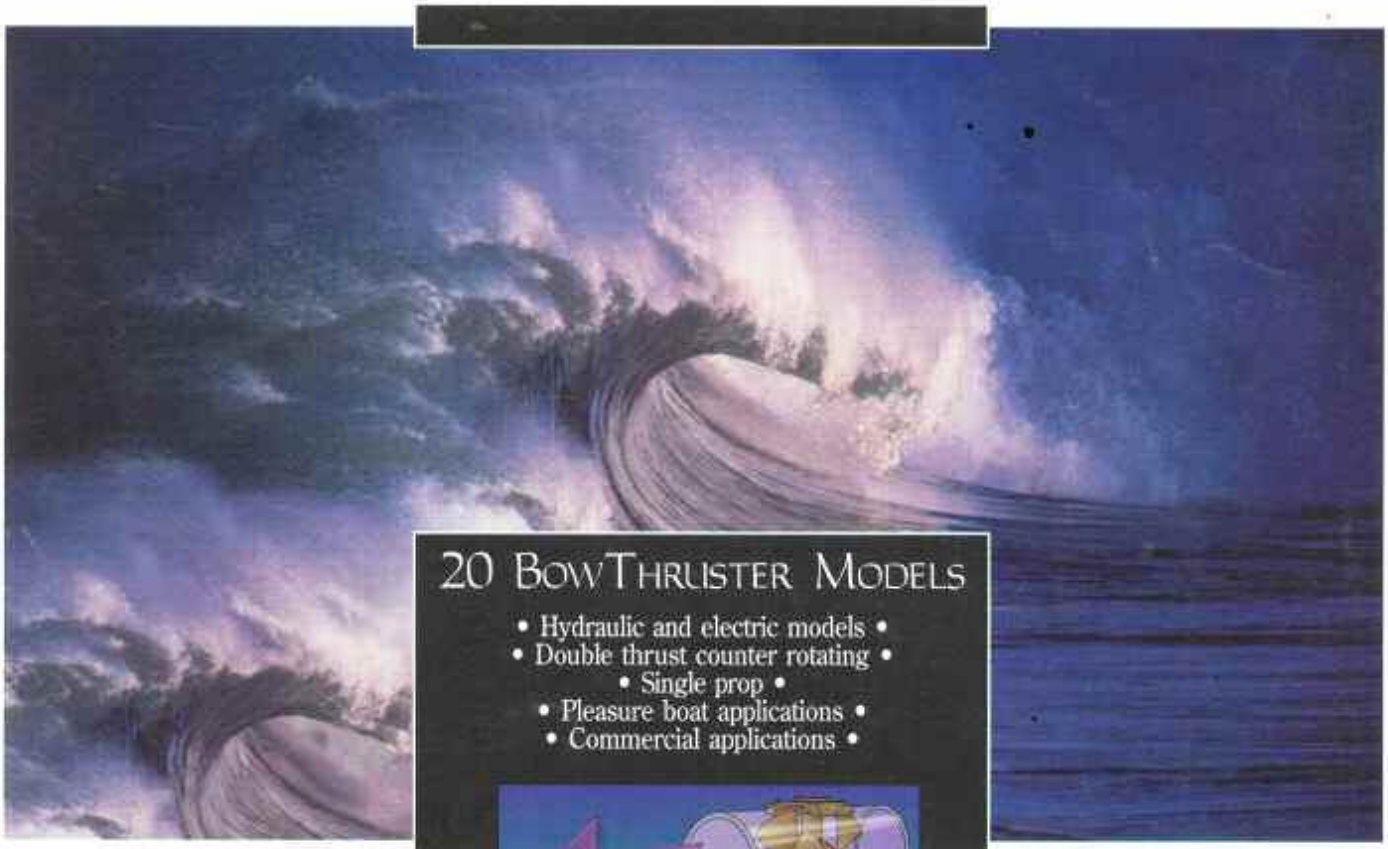
WESMAR

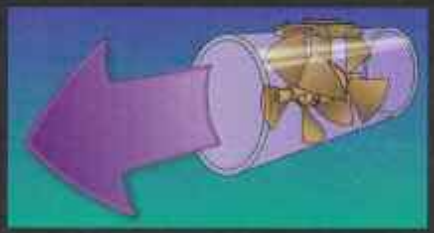
BOW THRUSTER

CATALOG



20 BOW THRUSTER MODELS

- Hydraulic and electric models •
- Double thrust counter rotating •
- Single prop •
- Pleasure boat applications •
- Commercial applications •



OTHER WESMAR PRODUCTS

- Roll fin stabilizers for comfortable cruising •
- Color scanning sonars for navigation and fish finding •
- Side scan sonar for treasure hunting, mapping & surveying •
- Trawl catch sonar for net monitoring •

Wesmar Bow Thrusters From 5 to 350 HP

DPC 75 hydraulic running at 100 HP on this 110' utility boat, "Jolly Roger." Sister ship, "Cavalier" has same system.

Offshore 58' has DPC 12E 24VDC electric system.

Offshore 55' has DPC 12E 24VDC electric system.

Fleming 55' has DPC 12E 24VDC electric system

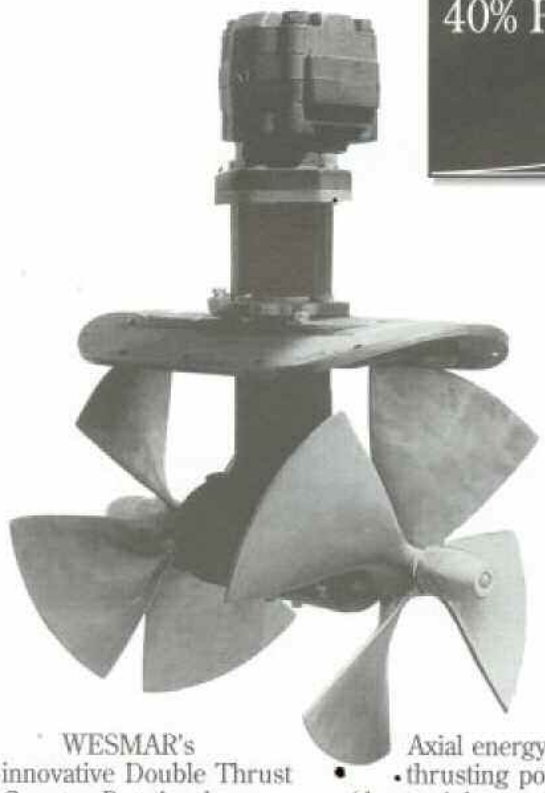
90' LaForce commercial fishing vessel, F/V "Mary Elena," has DPC 75 hydraulic running at 90 HP.

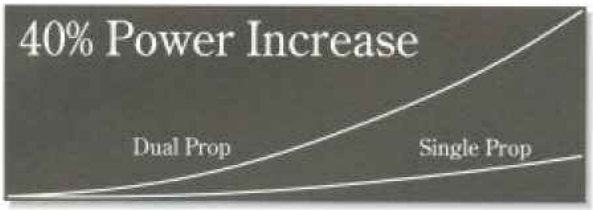
DPC 12E 24VDC electric system is standard equipment on this Lazzara 76'.

PAE, 46' Nordhaven uses either T8E 12VDC or DPC8E 12VDC electric.

Trinity 72' has DPC-25 with AC electric motor at 30 HP.

More Power with Counter-Rotating Double Thrust





WESMAR's innovative Double Thrust Counter Rotating bow thrusters can provide 40% more thrust than conventional single-prop systems.

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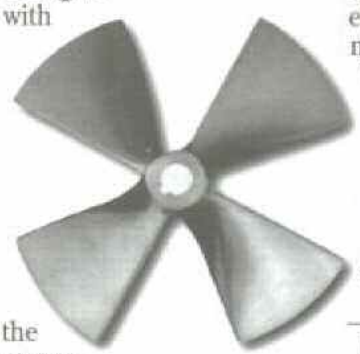


the same tube, prop size, GPM and PSI.* How? When water passes through a spinning prop, two types of energy are created: axial and swirl. Axial energy is the thrusting power force (the straight moving stream that is tunneled forward). Swirl energy is the motion of the water not entirely captured into axial energy (what's left in the normal wash of the prop). WESMAR's counter rotating second propeller eliminates lost swirl energy, in effect converting it into axial energy. The result is greater efficiency and more thrust.

DPC12E is Standard Equipment on Vessels to 76'

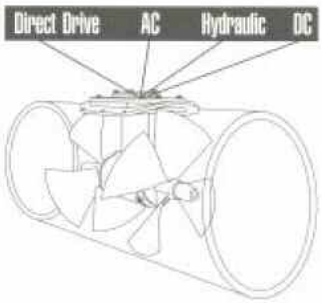
WESMAR counter rotating thrusters are proven. In fact, for an increasing number of boat manufacturers our 12" DPC12E electric model is specified as standard equipment for vessels to 76'.

WESMAR Bow Thruster Systems are Flexible and Versatile

Some boats cannot accommodate the tube size required of the Double Thrust. For those, WESMAR offers affordable, single prop thrusters. Both hydraulic and electric. They can be retrofitted to existing hydraulic or electric systems. You can even install the DPC with DC electric power, and try it. If you still desire more thrust, simply remove two bolts and the motor is off. You can then hook up a hydraulic system. No haulout required.

Space Saving Single Prop

WESMAR DPC Works with Alternate Power Sources



WESMAR thrusters accommodate hydraulic, direct drive, AC, and DC power sources.

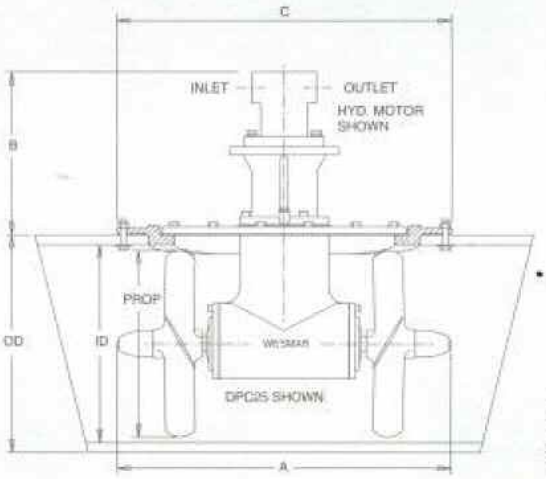
In-House Design from World's Leading Bow Thruster Manufacturer

WESMAR has been engineering and manufacturing bow thrusters for more than a decade. Our thrusters are exceptionally durable, and built in our own in-house machine shop – so you're assured of total quality control. Thruster housings are available in aluminum or bronze to match any hull material. We offer both stainless steel and bronze propellers, three and four-bladed, with the four-bladed Kaplan an optimum choice for the DPC.

** Actual thrust output will vary from vessel to vessel, depending on vessel design, power configuration and other factors.*

Wesmar Counter Rotating Dual Prop Bow Thrusters Technical Specifications

ELECTRIC & HYDRAULIC



Bow Thruster centerline can be mounted anywhere from vertical to 90° horizontal.

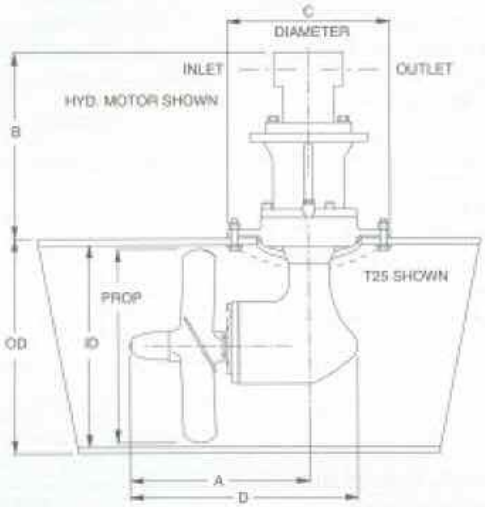
	MODEL (Max HP)	DPC8E	DPC8	DPC12E-10	DPC12E
	A	14.4 in (36.6cm)	14.4 in (36.6cm)	20.3 in (51.6 cm)	20.3 in (51.6 cm)
	B	12 Volt Electric 11.0in (27.9 cm)	Hydraulic 9.75 in (24.7 cm)	24 Volt Electric 18.1 in (45.9 cm)	24 Volt Electric 18.0 in (45.8 cm)
	C	11.45 in (29.9 cm)	11.45 in (29.1 cm)	21.6 in (54.9 cm)	21.6 in (54.9 cm)
	Prop	8 in (20.3 cm)	8.0 in (20.3 cm)	10.0 in (25.4 cm)	12.0 in (30.5 cm)
Fiberglass Tube	OD	9 in (22.9 cm)	9 in (22.9 cm)	11.0 in (27.9 cm)	14.0 in (35.6 cm)
	ID	8.5 in (21.6 cm)	8.5 in (21.6 cm)	10.5 in (26.7 cm)	12.75 in (32.4 cm)
Steel Pipe	Size	8.5 in ID Tube	8.5 in ID Tube	10.5 in ID Tube	14" SCH 40 or 60
	OD	9.0 in (22.9 cm)	9.0 in (22.9 cm)	11.0 in OD Tube	14.0 in (35.6 cm)
BOAT SIZE		25-48'	25-48'	42-55'	45-70+'

	Model (Max HP)	DPC25-10	DPC25	DPC50	DPC75-150
	A	20.3 in (51.6 cm)	20.3 in (51.6 cm)	23 in (58.4 cm)	26 in
	B	Hydraulic 12.0 in (30.5 cm)	Hydraulic 10.5 in (26.7 cm)	Hydraulic 11.8 in (30.0 cm)	Hydraulic 14.5 in
	C	21.6 in (54.9 cm)	21.6 in (54.9 cm)	21.6 in (54.9 cm)	22 in (56.4 cm)
	Prop	10 in (25.4 cm)	12 in (30.5 cm)	16 in (40.6 cm)	20.0 in
Fiberglass Tube	OD	11.0 in (27.9 cm)	14 in (35.6 cm)	18 in (45.7 cm)	22 in
	ID	10.5 in (26.7 cm)	12.75 in (32.4 cm)	16.5 in (41.9 cm)	20.25in
Steel Pipe	Size	10.5 in ID Tube	14" Sch 40 or 60	18" Sc\CH 40 or 60	22" SCH 40 or 60
	OD	11.0 in (27.9 cm)	14.0 in (35.6 cm)	18 " (45.7 cm)	22 in (55.9 cm)
BOAT SIZE		38-60'	50-85'	60-130'	90-165'

	Model (Max HP)	DPC200	DPC250	DPC300	DPC350
	A	54.3 in (138 cm)			
	B	Diesel Engine or Hydraulic	Diesel Engine or Hydraulic	Diesel Engine or Hydraulic	Diesel Engine or Hydraulic
	C	14 in (36 cm)			
	Prop	28 in (71.1 cm)	32 in (81.3 cm)	36 in (91.4 cm)	40 in (101.6 cm)
Fiberglass Tube	OD	30 in	34 in	38 in	42 in
	ID	5/8 Wall	5/8 Wall	5/8 Wall	5/8 Wall 40.75 ID
Steel Pipe	Size	28.75 ID	32.75 ID	36.75 ID	42 in (11106.7 cm)
	OD	30 in (76.2 cm)	34 in (86.4 cm)	38 in (96.5 cm)	200+'

WESMAR SINGLE PROP BOW THRUSTERS TECHNICAL SPECIFICATIONS

ELECTRIC & HYDRAULIC



Bow Thruster centerline can be mounted anywhere from vertical to 90° horizontal.

	MODEL (Max HP)	T6E T6H (5HP)	T8E T8H (5HP)	T12E W/10"Prop (10HP)
	A	7.65 in (19.4 cm)	7.9 in (20.0 cm) 9.8 in (24.9 cm)	10.15 in (25.8 cm)
	B	(12 volt) Elect 11.0 in (27.9 cm)	Hyd 9.75 in (24.7 cm)	(24 volt) Elect 19.0 in (48.3 cm)
	C	6.25 in (15.9 cm)	6.25 in (15.9 cm)	9.66 in (24.5 cm)
	D	9.25 in (23.5 cm)	9.5 in (24.1 cm)	12.7 in (32.3 cm)
	PROP	6.0 in (15.2 cm)	8.0 in (20.3 cm)	10.0 in (25.4 cm)
Fiberglass Tube	OD	7.0 in (17.8 cm)	9.0 in (22.9 cm)	11.0 in (27.9 cm)
	ID	6.5 in (16.5 cm)	8.5 in (21.6 cm)	10.5 in (26.7 cm)
Steel Pipe	SIZE	6.5 in ID Tube	8.5 in ID Tube	10.0 in ID Tube
	OD	7.0 in (17.8 cm)	9.0 in (22.9 cm)	11.0 in (27.9 cm)
BOAT SIZE*		20-36'	25-48'	42-60'

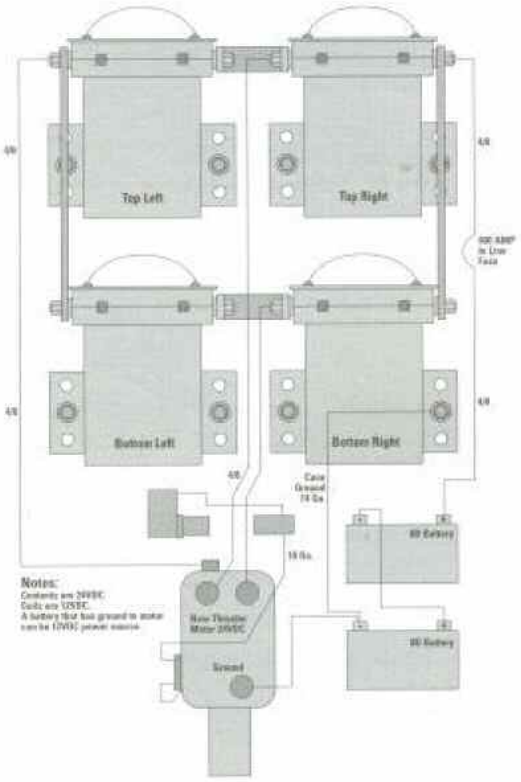
*Recommended size will vary depending on hull material and vessel type.

	MODEL (Max HP)	T12E W/12" Prop (10HP)	T25 (25HP)	T50 (50HP)
	A	10.15 in (25.8 cm)	10.15 in (25.8 cm)	11.5 in (29.2 cm)
	B	(24 volt) Elect 19.0 in (48.3 cm)	Hyd 11.1 in (28.2 cm)	Hyd 11.1 (28.2 cm)
	C	9.66 in (24.5 cm)	9.66 (24.5 cm)	9.66 in (24.5 cm)
	D	13.0 in (33.0 cm)	13.0 in (33.0 cm)	14.4 in (36.6 cm)
	PROP	12 in (30.5 cm)	11.5 in (29.2 cm)	Fibgl 15.5 in (39.4 cm)
Fiberglass Tube	OD	12.75 in (32.4 cm)	12.75 in (32.4 cm)	16.75 in (42.5 cm)
	ID	12.0 in (30.5 cm)	12.0 in (30.5 cm)	16.0 in (40.6 cm)
Steel Pipe	SIZE	12 in Schedule 40	12 in Schedule 40	16 in Schedule 40
	OD	12.75 in (32.4 cm)	12.75 in (32.4 cm)	16.0 in (40.6 cm)
BOAT SIZE*		45-65'	50-80'	60-120'

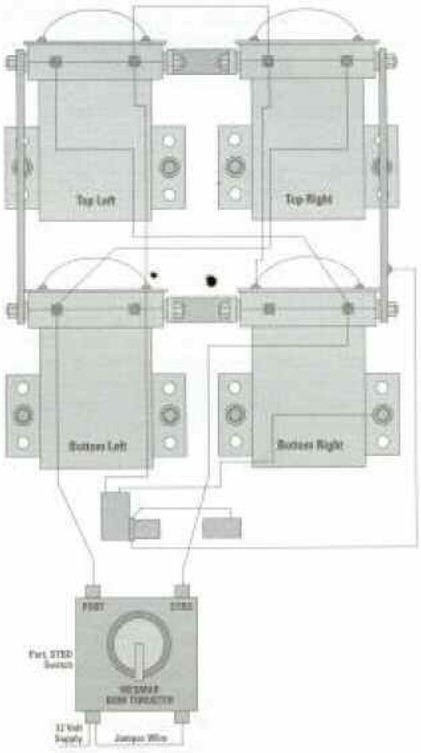
*Recommended size will vary depending on hull material and vessel type.

WIRING EXAMPLES FOR 24VDC AND 12VDC BOW THRUSTERS

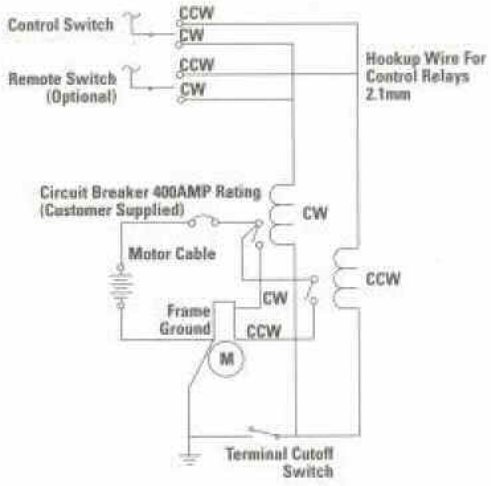
24 VDC WIRING TO SOLENOID BOX. T12E, T12-10, DPC 12E, DPC 12-10 .



SOLENOID JUNCTION BOX WIRING FOR T12 SYSTEMS ONLY.



T6E / T8E, DPC 8E SUGGESTED WIRING DIAGRAM.



LOAD SENSING HYDRAULIC PACKAGE FOR WESMAR BOW THRUSTERS

THE LOAD SENSING ADVANTAGE

WESMAR's load sensing system negates the need for overspeed controls. The sensors determine the amount of pressure needed to operate your thruster at any given moment. This is not only more efficient than an average pressure compensating system, but it allows the engine to run at higher speeds – up to 3000 RPM on smaller systems and 2500 RPM on larger systems – without affecting thruster performance.

THE WESMAR HYDRAULIC SYSTEM

The following is a typical WESMAR bow thruster hydraulic system:

RESERVOIR: Aluminum tank equipped with a 2" suction, 100 mesh stainless steel screen, sight glass and breather, and one (1) return line inlet. Reservoir should be mounted to provide flooded suction to the pump.

GATE VALVE: Provides isolation of pump from circuit during repairs.

LOAD SENSING PUMP: "Senses" amount of pressure necessary to move load and adjust output flow to match valve opening selected on flow control.

CHECK VALVE: Keeps back pressure from pump.

PRESSURE COMPENSATED FLOW CONTROL: Maintains accurate constant flow pressure up to 3000 PSI.

BOW THRUSTER DIRECTIONAL CONTROL VALVE: Handles flows up to 93 GPM and pressure up to 3000 PSI, including 3-position directional control and manifold.

CUSHION VALVE: Minimizes or eliminates shock surge and overload conditions on hydraulic equipment.

RETURN FILTER: Includes 3 micron filter element.

GATE VALVE: Allows easy filter element replacement.

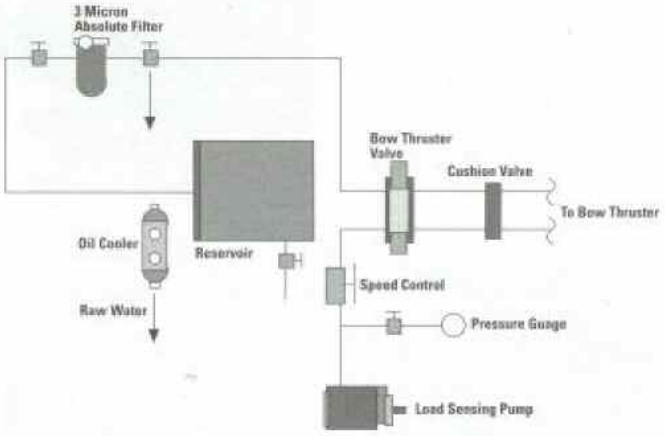
SMALL COOLER: Cools oil in drain case lines.

PRESSURE GAUGE: 0 to 3000 PSI.

WESMAR BOW THRUSTER HP GUIDE

Model	HP range	GPM @ 600 RPM	GPM @ 1200 RPM	GPM @ 1800 RPM
HP-T-38	5 HP to 36 HP	12	24	36
HP-T-38 (CB)	5 HP to 36 HP	12	24	36
HP-T-65	20 HP to 60 HP	20	41	62
HP-S-65	5 HP to 30 HP	10	20	31
HP-S-100	15 HP to 46 HP	15	31	46
HP-T-100	25 HP to 93 HP	30	62	93
HP-S-38 (CB)	5 HP to 18 HP	6	12	18
HP-S-65	5 HP to 31 HP	10	20	31
HP-S-100	13 HP to 46 HP	15	31	46

The above are guidelines only. Smaller or larger horsepower thrusters can be accommodated.



Success Stories of WESMAR Sonars Around the World

"I found 3 Civil War vessels, 2 passenger liners, and a rubber coated German U-Boat."

"My Bluefin Catch Doubled with WESMAR's SS390 Sonar."

"WESMAR's display of an underwater bridge was far superior to a $70,000 sonar."

"WESMAR 's new HD600-E is definitely a sharper, clearer sonar."

"The new HD600-E is four times better than my other sonar."

"Sportfishing Without my WESMAR Sonar is Like Hunting with one Eye."

Ralph Delph is a Key West, Florida, sportfishing charter boat skipper. He holds 81 world records for light tackle fishing. More than any captain on earth.

His secrets?

One of them is his WESMAR SS390 color scanning sonar.

"I use the WESMAR to locate wrecks, to find baitfish, and in many cases to track the fish we're after.

"For example, when we're after sailfish we first have to catch bait. With the sonar I can see where the bait schools are swimming around my boat. I make one throw with my cast net and I've got my bait for the day. It's a phenomenal tool in that respect. Other boats will sit around for an hour looking for bait. But I'm on my way within minutes.

"With WESMAR's trawl catch sonar we could see fish going in the net all night long."

Brothers Kjell and Harald Natterby are Norwegian fishermen who recently put WESMAR's new trawl catch sonar through six weeks of on-the-grounds sea trials.

Most of the year Kjell and Harald fish for mackerel in the North Sea aboard their 130' purse seiner, *Toftoysund*. But for three months of the year they bottom trawl off the Shetland Islands for Sandel, a snakelike fish used in the production of fishmeal. It is this fishery in which they tested the trawl sonar. Kjell's report:

"WESMAR's trawl catch sonar is working very well. We see fish and the direction they're moving and also the shape, location and position of the net, headrope, and trawl doors. If there's a problem with a door or net opening we can pull in and reshoot. Plus, we can see what kind of bottom we're going over; when there is a very hard bottom we pull up and avoid crashing the net.

"In the forward scanning mode we can see fish 175 meters ahead of the net. We can tell exactly where they are, port or starboard, then move our boat in a corresponding direction.

WESMAR's Electronic Gyro Stabilizer has a palm-sized control console that's just 6 1/2" x 4" x 2" and is easy to install.

New WESMAR Electronic Gyro Roll Fin Stabilizers

CRUISE IN COMFORT AS WESMAR RESISTS 90% of OCEAN ROLLS

Just turn on your new WESMAR Roll Stabilizers ... and relax. WESMAR's new electronic stabilizing system automatically adjusts your vessel motion for maximum comfort – resisting up to 90% of the rolls in most seas. The result is smooth vessel motion that is continually and automatically adjusted for current sea conditions.

SIMPLE OPERATION WITH NEW HYDRAULICS AND ELECTRONIC GYRO

WESMAR uses an exclusive electronic gyro sensor and a closed proportional hydraulic system. The gyro has no moving parts and is maintenance-free. Console LED readouts and bar graphs indicate fin position. There simply is not an easier, more reliable stabilizer system available.

RUGGED TRIPLE-LAYER FIN CONSTRUCTION.

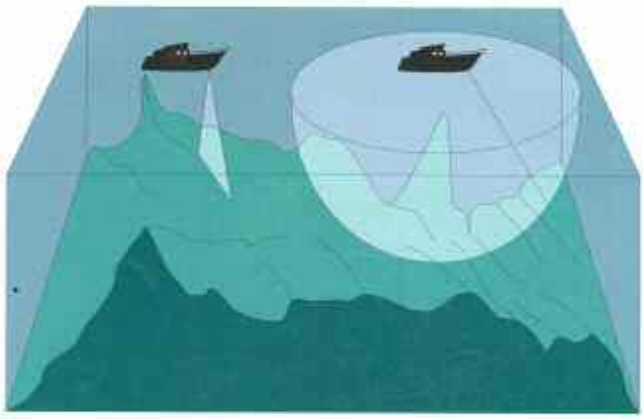
WESMAR's unique, triple-layer aerodynamic fins are composed of a steel plate surrounded by strong, yet lightweight, structural foam. A heavy urethane shell covers the fins to protect against underwater obstacles. The fins are normally fitted in pairs, one on each side of the hull. The steel housing and the design of the stainless steel shafting – using no neck – provide corrosion resistance, improved strength, and compatibility with varying hull materials. WESMAR's internal mechanical components are 2-3 times stronger than competitive systems. Industrial grade bearings, proportional control valves and actuators reduce noise and vibration, while improving reliability. A splinned shaft for strength, and for positioning during installation, is standard.

WESMAR SCANNING SONARS FOR FISH FINDING & NAVIGATION

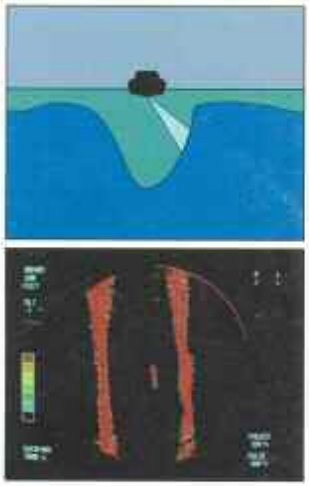
WORLD LEADER IN SONAR TECHNOLOGY

WESMAR color scanning sonar gives you 360 degree underwater vision. Detects most pelagic and other species of fish, often thousands of feet from your boat. Determines bottom conditions and helps spot underwater obstacles – such as reefs and pinnacles – before you motor over them.

There are over 30,000 WESMAR scanning sonars in use around the world. They are easy to use and there are models for boats from 20-400'.

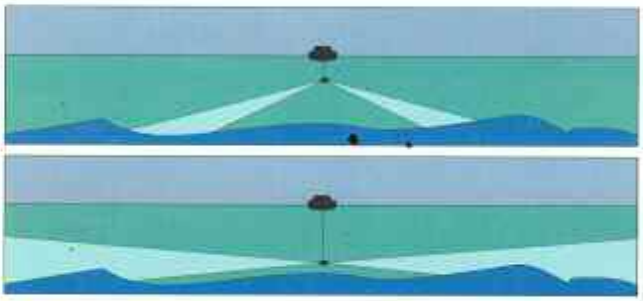


WESMAR color scanning sonars (right) scan fore, aft, and to either side of your boat, typically seeing 30 times more than a conventional video sounder (left).



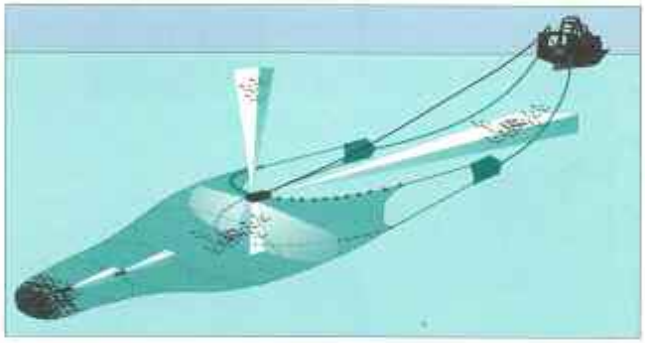
WESMAR color scanning sonars find fish and help navigate, as through this narrow channel.

WESMAR SIDE SCAN SONARS FOR TREASURE HUNTING, MAPPING AND SURVEYING



WESMAR Side Scan sonars survey the bottom in great detail, and are responsible for the discovery and location of many sunken vessels, airplanes and other objects. Portable and moderately priced, WESMAR Side Scans are excellent salvage and surveying tools.

WESMAR TRAWL CATCH SONAR FOR NET & GEAR MONITORING



WESMAR's Multi Mode Trawl Catch Sonar helps commercial fishermen view net and trawling gear, and monitor catches. System is flexible and feature heavy, and has the world's only forward scanning sonar beam in a trawl sonar.

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