

# TCS 780



TRAWL SONAR WITH CURRENT SENSORS

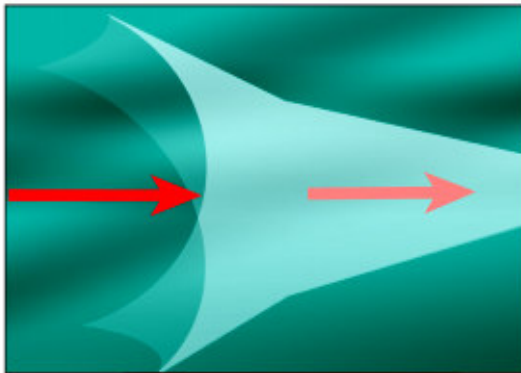


CURRENT SPEED AND DIRECTION IN MOUTH OF NET AND CODEND  
UP TO SIX CATCH SENSORS



## TRAWL CURRENT DIRECTION:

Equipped with three sensors the TCS 780 headrope unit (sled) is able to detect the direction and flow of the current at the headrope. Trawl efficiency is achieved when the current is perpendicular to the mouth of the net. The current direction indicator on the TCS 780 trawl system gives the essential information to adjust the net for optimum fish catch. Positioning the net ahead of fish that swim with the current will fill the net much faster reducing tow time and fuel consumed.



## TRAWL SPEED:

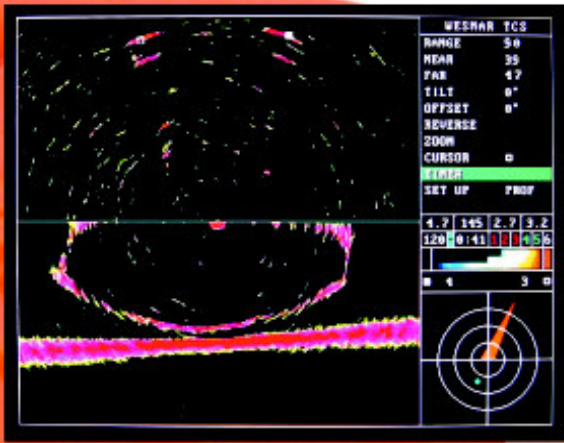
Current at fishing depth can be different than current at the surface. By monitoring the water flow at the mouth of the net the correct vessel speed can be set to catch the fish that might be lost, saving fuel as well. Both trawl speed and current direction information are sent to the vessel through the net sounder cable, a reliable link unaffected by depth and water conditions.



## INNER-NET SPEED:

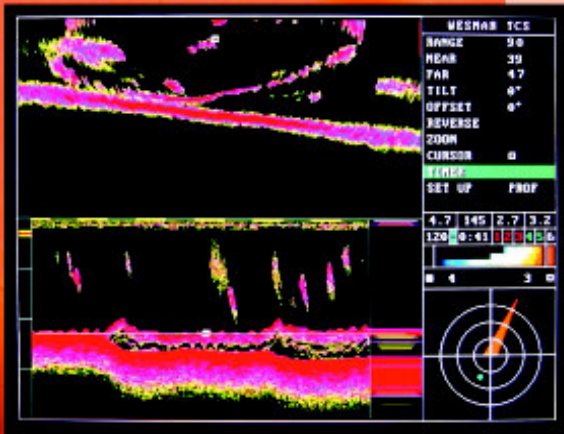
The WESMAR INS 85 inner net speed sensor is a new sensor that measures the water speed inside the net and communicates acoustically with the TCS 780 sled. Typically the inner-net sensor is installed inside the intermediate close to the codend. Water should flow smoothly through the net taking the fish with it to the codend. If the water flow slows because of the water blockage or the net being filled with fish, the fish can swim out and escape. The WESMAR INS 85 inner net speed sensor will sense the change in the water flow signaling the skipper it is time to haul back.

**IMPROVE CATCH VOLUME, CATCH QUALITY AND  
SAVE FUEL WITH THE NEW TCS 780 TRAWL SONAR**



## FORWARD SCAN:

The forward looking transducer will scan forward marking doors and tracking fish, measure door spread and bridle lengths, and determine if the doors are horizontal or one is above or below the other. The forward looker will also confirm that the fish are not passing over the bridles.



## SPLIT SCREENS:

Select Profile & Down Sounder or Forward Scan & Down Sounder or Forward Scan & Profile for simultaneous viewing. Each transducer has its own adjustments to bring out the best in resolution. The Down Sounder keeps a steady view of the net opening, fish and footrope while the captain can take measurements in the other screen. Activate the 4X zoom feature and follow the footrope and bottom relation.



## LIGHTWEIGHT:

The TCS 780 weighs 29 kgs, 18 kgs lighter than other headrope units with the forward scanning capability. One person, not two or three, are needed to handle the sled.

## CATCH SENSORS:

A large codend can use more than four sensors to monitor the catch rate. Wesmar catch sensor identity can be set from 1 to 6. Each sensor when triggered will sound an alert in the wheelhouse as to the number triggered. Wesmar catch sensors are quick to respond providing the best protection from overfilling the net.

**IMPROVE CATCH VOLUME, CATCH QUALITY AND SAVE FUEL WITH THE NEW TCS 780 TRAWL SONAR**

# UPGRADE TCS 770 PERFORMANCE WITH NEW TCS 780 ELECTRONICS

**The powerful new TCS 780 wheelhouse electronics will operate the TCS 770 sled adding new features and expanding the capabilities of the TCS 770 sleds.**

## HAND CONTROL:

A new processing module with more processing power than ever before, better graphics and response times takes the place of the TCS770 console with knobs. The hand control makes the operation easier and more accessible throughout the wheelhouse. For even greater convenience an optional wireless remote control is available.

## DATA OUTPUT:

Depth and Temperature data are available as NMEA outputs. Connect the TCS 780 to a compatible video sounder and view a depth line across the screen that represents the positions of the net. Align the net line with fish targets on the screen before the fish reach the net.

## TOW TIMER:

Timer will start automatically when the system is turned on. Or, reset the timer any time.

## TALKING CATCH SENSORS:

A beep will signal the number of the sensor that has triggered. No need to watch the screen for the critical sensor to trigger.

## BETTER INTERFACE:

The trawl sonar screen is never covered by a menu when adjustments are made. The effect of all adjustments is immediately visible on the screen.

## QUICKER UPDATE IN SPLIT SCREEN:

By managing the transmit interval of the profile & sounder transducers, the profile picture will update much faster.

## BETTER NET VIEW:

A larger 220 degree profile sector is now available in split screen. This keeps the headrope in view during turns without adjusting dome offset.

## COMPATABILITY:

New processing module and cable power driver are compatible with the following WESMAR headrope units (sleds): 780, 770, 380, 345, 335. Any of these sleds can be carried on the vessel to suit the fishing conditions.



**The WESMAR TCS 780 Trawl Sonar incorporates requests and ideas from captains and fish masters from around the world who are pressured with demands for ever improving the quality of the catch and reducing fuel consumption. The same experienced WESMAR Engineering Team that designed the TCS 700 and TCS 770 Trawl Sonars met the challenge with distinction in designing the amazing TCS 780.**

# TCS 380

## LIGHTWEIGHT COMPACT TRAWL SONAR FOR BOTTOM AND SEMI-PELAGIC FISHING

TCS 380 includes depth and temperature sensors and all other features of TCS 780 except forward looker.

The TCS 380 headrope unit weighs only 26 lbs (12 kgs) dry and becomes a lightweight on the net at 9.9 lbs (4.5 kgs), ideal for bottom and small research nets.



### SPECIFICATIONS:

#### TCS 780 HEADROPE UNIT (SLED)

Working Depth: 1800m  
Frequency: 110kHz Forward Scan, 8.5 x 8.5 degrees  
110kHz Down Sounder, 28 x 28 degrees  
180kHz Profile, 4 x 30 degrees  
OR: 300kHz Profile, 2.3 x 25 degrees  
Stabilizer: Forward Scan +/- 30 degrees  
Trawl Current Direction: Relative to net opening  
Trawl Speed: 0.5 to 9.9 knots  
Inner-Net Speed: 0.5 to 9.9 knots  
Catch Sensors: 1 to 6 Wesmar sensors, 1 to 4 Other sensors.  
Depth Sensor: Meter, Fathom, Feet  
Temperature: +/- 0.1 degree Centigrade  
Weight: 65lb, 29.5kg dry : 20.9lb, 9.5kg wet

#### WHEELHOUSE ELECTRONICS TCS 780/380 PROCESSING MODULE

Hand controller: Wired hand controller (connect any number) Optional  
Radio Link  
Input Voltage: No Voltage Required  
Data Output: NMEA, depth, temp or both  
Tow Timer: Up to 9 hr 59 min  
Talking Catch Sensors: Speaker in wired hand controller  
Video Output: VGA, 640 x 480  
Dimensions: L 26 cm, W 10 cm, H 22.9 cm

#### TCS 380 HEADROPE UNIT (SLED)

1000m  
N/A  
200kHz Down Sounder, 28 x 28 degrees  
300kHz Profile, 2.3 x 25 degrees  
N/A  
N/A  
Relative to net opening  
0.5 to 9.9 knots  
0.5 to 9.9 knots  
1 to 6 Wesmar sensors, 1 to 4 Other sensors  
Meter, Fathom, Feet  
+/- 0.1 degree Centigrade  
26.5lb, 12kg dry : 9.9lb, 4.5kg wet

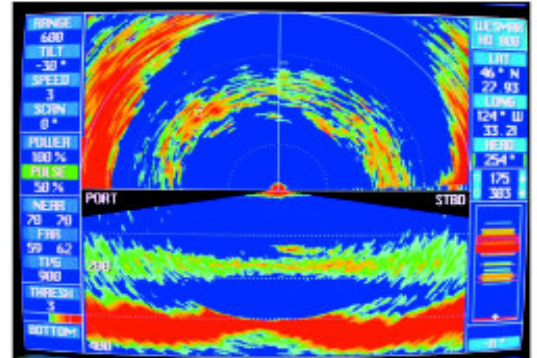
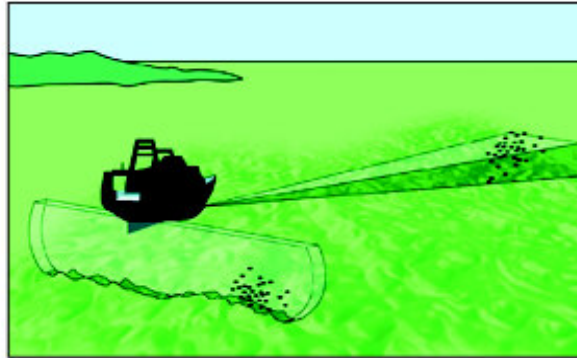
#### CABLE POWER DRIVER

Input Voltage: 110 / 220V AC, 100 watts  
Output Voltage: 120V DC @ 0.8 A  
Test Cable: 10 m  
Interconnect Cable: Cable to Processing module 10.6 m  
Dimensions: L 38 cm, W 16.5 cm, H 44.5 cm

# IMPROVE YOUR CATCH CAPABILITY

WESMAR HD800/110-10-10E PRECISION SEARCHLIGHT SONAR HIGH FREQUENCY, 110 KHZ IDEAL FOR MACKEREL AND POLLOCK FISHING

## TRAWL OPERATIONS



"Other boats were amazed we could view Pollock so clearly at such great distances. We were fishing at depths of 320 to 450 fathoms and catching fish at ranges of 320 to 260 fathoms."

Lars Oterhals,  
Fishmaster,  
American Triumph

"The WESMAR HD800/110-10 allows us to stay on fish at all times, even if we have to alter course frequently during a tow."

Captain Oleg Kostikov,  
BATM Ivan Kalinin



WESMAR produces the only rugged, heavy duty long stroke hoists in the industry with center pull hydraulic cylinders for fast and positive retraction

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### PRODUCT WARRANTY

Commercial warranty and consumer limited warranty, disclaimer, and remedies. Seller warrants title, materials, and workmanship on equipment, except components manufactured by others for which seller assigns, as permitted, the original manufacturer's warranty. Seller's warranty period for all applicable express or implied warranties shall be ninety (90) days after installation or one (1) year after date of shipment to the original buyer, whichever time period expires first. Nonconforming equipment reported to seller during the applicable warranty period and returned to seller at buyer's expense and risk shall be repaired, or replaced at seller's option. If seller is unable or unwilling to repair or replace such reported and returned nonconforming equipment within a reasonable time, then buyer shall be entitled to a refund of the purchase price of the equipment as buyer's sole remedy. This paragraph sets forth buyer's exclusive remedies for nonconforming goods. This commercial warranty and consumer limited warranty is in lieu of all other warranties, express or implied, including design, course of dealing, merchantability, and fitness for a particular purpose.

NOTE: LIMITATION OF SELLER'S COMMERCIAL AND CONSUMER LIABILITY. Seller shall not be liable on any claim for loss of use, revenue, or profit, for injury, or for any other incidental or consequential damages, regardless of the basis for buyer's claim(s), including, but not limited to, the law of contract, warranty, or tort. In no case shall seller's liability on any claim(s) exceed the amount paid to seller for the purchased goods.