YSI Professional Plus
Water Quality Instrument

Specifications

Tougher. Smarter. More Versatile.

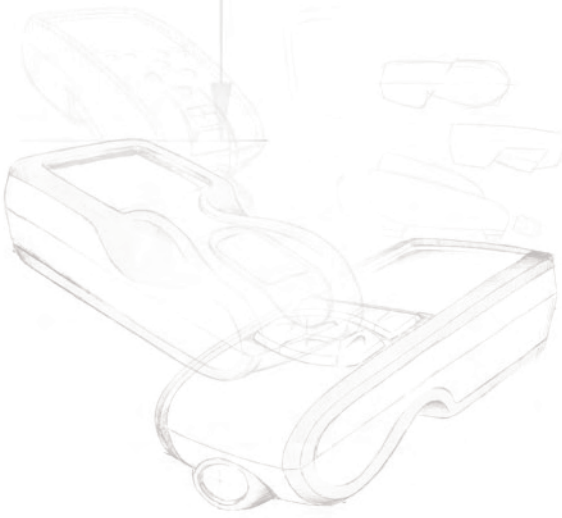
YSI **Professional Plus**

The YSI Professional Plus is not a refinement. It came straight out of the imagination of our customers...and the ingenuity of a multi-disciplined team dedicated to making the ideal solution come to life. Our focus never wavered because listening to our customers is a continuous process, and the heart and soul of our commitment.

Designed to be tough and smart in the lab or field. And extremely versatile. The Pro Plus accommodates any combination of YSI Pro Series cables, sensors, and accessories. Want to measure DO in the field? Maybe pH/DO/Nitrate? Or perhaps you need it to be a lab instrument that measures BODs? Whatever you need...the Pro Plus is your choice.

YSI Pro Plus. The ultimate handheld sampling instrument.

Tougher. Smarter. More Versatile.



onlyYSI

Rugged, durable field cable with a 2-year warranty standard

onlyYSI

Backlit display AND keypad for use in true low-light conditions

onlyYSI

The file system allows for a 100 folder and site list structure to store and easily manage 2,000 data sets

onlyYSI

Adjustable right- or left-handed hand strap

onlyYSI

Detailed on-screen Help function

onlyYSI

Case is rubber over-molded to provide extra protection and prevent slipping; also allows for flat non-slip design on a table top and provides an IP-67 rating with or without the battery cover; 1-meter drop rated from all angles

onlyYSI

MS (military-spec) connectors – rugged, waterproof, keyed, bayonet style quarter-turn lock

onlyYSI

Multiple user-replaceable sensor options *and* a choice of galvanic or polarographic DO sensors

onlyYSI

This symbol refers to a feature or benefit only YSI offers on a handheld instrument.

Tougher

Do your job with confidence even in the harshest field conditions. The drop-tested Pro Plus was designed tough with military-spec connectors, a two-year warranty on all cables, weighted sensor guards, and a rubber over-molded case with three-year warranty. Its interchangeable sensors and extra-durable cables nearly eliminate down time. And its low overall cost of ownership means you're making a worthwhile investment for years to come.

Quatro Cable
This multiparameter cable allows the measurement of temperature, conductivity, salinity, dissolved oxygen and your choice of any two ISEs – pH, ORP, ammonium, nitrate or chloride.

Quatro Flow Cell
The Quatro cable flow cell (606850) is available for multiparameter low-flow monitoring.

- only YSI **Easy-to-install cable weights; can be daisy-chained for additional weight**
- only YSI **Rubber, over-molded IP-67 waterproof case** (even without battery cover)
- **3-year instrument warranty**
- only YSI **2-year cable warranty**
- only YSI **Rugged cables, sensors, and military-spec connectors**
- only YSI **Drop-tested 1 meter at all angles**
- **Scratch-resistant lens; viewable with polarized glasses**
- **Instrument floats**
- **Weighted, user-replaceable multi-sensor design**

This Pro Plus was dragged nearly half a mile down a gravel road off the back of an ATV. They dusted it off and turned it on.

Cable Options – Field (order ISE and DO sensors separately)

Single Parameter Options

60510 – ISE (pH, ORP, pH/ORP, ammonium, chloride, nitrate)*

60520 – DO (galvanic, polargraphic)**

60530 – Conductivity/Salinity (sensor included)

Single Parameter Options with Conductivity (included)

6051030 – ISE/Conductivity

6052030 – DO/Conductivity

Dual Parameter Options

6051010 – ISE/ISE

6051020 – ISE/DO

Multiparameter Options

Quatro – ISE/ISE
DO/Conductivity

*Choice of ISE; pH, ORP, pH/ORP (not recommended on the 6051010 or Quatro cables)
Choice of ISE; Ammonium, Nitrate, or Chloride for fresh water only

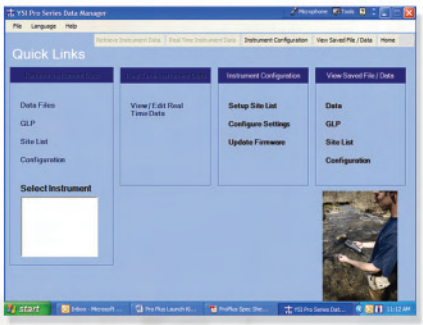
**Choice of DO; Galvanic, Polarographic
Choice of cable lengths: 1, 4, 10, 20, 30 meters all (up to 100 meters on 60520 only)

Smarter

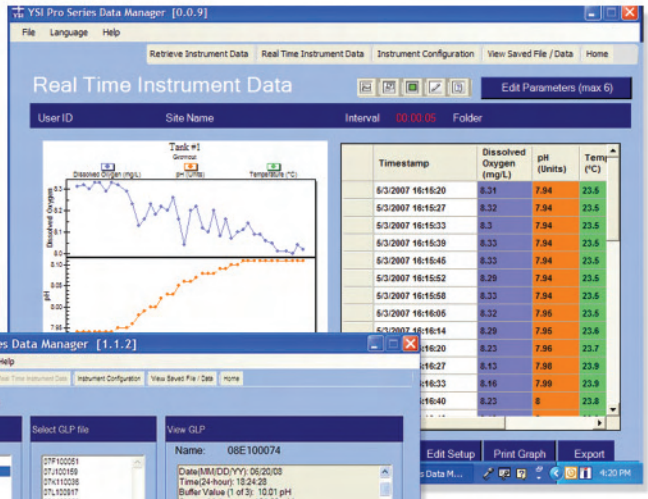
The technology-smart YSI Pro Plus has all the built-in support you'll need for the lab or field. It provides multiple languages, detailed GLP data, on-screen Help to eliminate the need for a bulky manual, sensor diagnostics, up to six-point auto-buffer recognition, re-cal prompts, user-defined auto-stable function, and security passwords for extra protection. And much more.

FREE
Data Manager Software

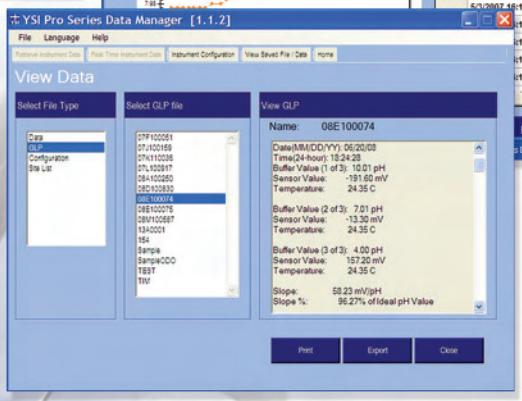
- Easy-to-use software to manage all your data studies
- View, print and export graphical and tabular data
- View and print GLP data
- Quickly configure just one or multiple instruments
- Conduct real-time studies



Home screen



Real-time study



GLP file data

- 2000 data set memory
- only YSI — Free, Data Manager desktop software and ProComm II saddle
- Interval or single-event logging
- only YSI — 100 folder & site list data structure
- Password protection
- Detailed GLP data
- USB connection also powers the instrument
- only YSI — 6-point cal with auto-buffer recognition
- only YSI — User-adjustable auto-stable with prompts
- User-upgradeable software via waterproof USB port
- Recalibration prompts
- only YSI — Search function filters user-defined data information

The Pro Plus shown with the 605107 lab-grade pH sensor and the 605170 lab stand.

Cable Options – Laboratory

Lab Grade ISE
605107 – pH
605108 – ORP
605109 – pH/ORP
Choice of cable lengths:
1 and 4 meters

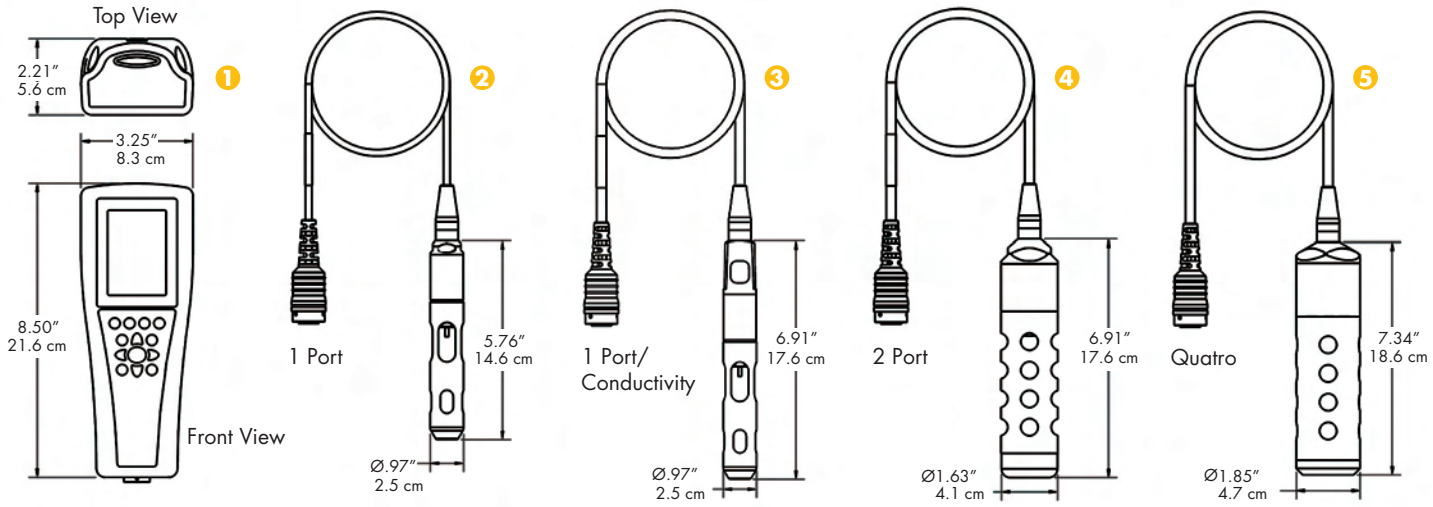
Self-Stirring BOD
605780 BOD
2-meter cable

All field cables can also be used in the lab and are ideal to use with the 063507 tripod.

1 Pro Plus Instrument
2 Single Port Cable
3 Single Port Cable with Conductivity
4 Dual Port Cable
5 Quatro Multiparameter Cable

More Versatile

Professional Plus Instrument General Specifications	
Auto Stable	User-defined auto-stable function holds stable readings on display when criteria is met
Barometer	Built-in barometer
Buffer Recognition	Auto buffer recognition for US and NIST buffers
Certifications	RoHS, CE, WEEE, C-Tick, VCCI, FCC, IP-67, 1-meter drop test, Assembled in USA
Connectivity	USB 2.0; ProComm II communications saddle and USB cable included; user-upgradeable software via USB and website
Connector	MS (military spec) waterproof with bayonet lock
Data Management	Data Manager desktop software included; 100 user-defined folders and site names
Data Memory	5,000 data sets (data, date, time, user-defined info); 100 GLP files
Dimensions	8.3 cm width x 21.6 cm length x 5.6 cm depth (3.25 in x 8.5 in x 2.21 in)
Display	Graphic display with detailed Help; backlit display AND keypad
DO Membrane Response Times (T95; 100%-0) and Flow Dependence	1.25 mil PE = 8 seconds and 6 in/sec flow 2.0 mil PE = 17 seconds and 3 in/sec flow 1 mil Teflon® = 18 seconds and 12 in/sec flow
DO Sensors	Polarographic or galvanic field sensors; self-stirring polarographic BOD sensor for the lab
Field Cables	Standard lengths of 1, 4, 10, 20, or 30 meters - up to 100 meters on DO only cables; all 4-meter and longer cables include a cable management kit
Flow Cell	Single, dual and multiparameter Quatro cable all flow cell compatible
GLP Compliance	Yes; detailed GLP information is stored and is available to view, download or print
Lab Cables	BOD sensor includes 2-meter cable; 1 or 4 meters on lab pH, ORP and pH/ORP cables
Languages	English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese (Simplified & Traditional)
Logging Modes	Single or Continuous
Operating Temperature	-10 to 60°C
Power	2 alkaline C-cells provide 80 continuous hours at ambient temperature without backlight; ProComm II saddle provides USB power or optional wall power, cigarette lighter, and universal cell phone charger options
Storage Temperature	-20 to 70°C
User ID	Optional user ID for data security
Warranty	3-year instrument; 2-year field cables
Waterproof	IP-67 (even with the battery cover off); floats
Weight with Batteries	475 grams (1.05 lbs)



System Specifications (Cable and Sensors)

	Sensor Type	Range	Accuracy	Resolution	Units	Calibration
Dissolved Oxygen (%) (temp comp range -5 to 45°C)	Polarographic or Galvanic	0 to 500%	0 to 200% (± 2% of reading or 2% air saturation, whichever is greater) 200% – 500% (± 6% of reading)	1% or 0.1% air saturation (user selectable)	%	1 or 2-points with zero
Dissolved Oxygen (mg/L) (temp comp range -5 to 45°C)	Polarographic or Galvanic	0 to 50 mg/L	0 to 20 mg/L (±2% of the reading or 0.2 mg/L, whichever is greater) 20 to 50 mg/L (±6% of the reading)	0.1 or 0.01 mg/L (user selectable); 0.1% air saturation	mg/L, ppm	1 or 2-points with zero
Temperature (Field rugged cables)		-5 to 70°C	±0.2°C (±0.3°C cables over 45-meters)		0.1°C	°C, °F, K
Temperature (Lab-grade)*		0 to 40°C	±0.35°C	0.1°C	°C, °F, K	
Conductivity**	Four electrode cell	0 to 200 mS/cm (auto range)	±0.5% of reading or 0.001 mS/cm, whichever is greater (4-m cable) ±1% of reading or 0.001 mS/cm, whichever is greater (20-m cable)	0.001 mS/cm to 0.1 mS/cm (range dependent)	µS, mS	1 point
Salinity	Calculated from conductivity and temperature	0 to 70 ppt	±1.0% of reading or 0.1 ppt, whichever is greater	0.01 ppt	ppt, PSU	1 point
pH	Glass Combination Electrode	0 to 14 units	±0.2 units	0.01 units	mV, pH units	1, 2, 3, 4, 5, or 6 point (user selectable); US, NIST or Custom Buffers
ORP	Platinum button	-1999 to +1999 mV	±20 mV in redox standards	0.1 mV	mV	1 point
Ammonium*** (ammonia with pH sensor)	Ion Selective Electrode	0 to 200 mg/L-N, 0 to 30°C	±10% of reading or 2 mg/L-N, whichever is greater	0.01 mg/L	mg/L-N, mV	1, 2, or 3 point (user selectable)
Nitrate***	Ion Selective Electrode	0 to 200 mg/L-N, 0 to 30°C	±10% of reading or 2 mg/L-N, whichever is greater	0.01 mg/L	mg/L-N, mV	1, 2, or 3 point (user selectable)
Chloride***	Ion Selective Electrode	0 to 1000 mg/L, 0 to 40°C	±15% of reading or 5 mg/L, whichever is greater	0.01 mg/L	mg/L-Cl-, mV	1, 2, or 3 point (user selectable)
Total Dissolved Solids (TDS)	Calculated from conductivity and temperature	0 to 100 g/L TDS constant range 0.30 to 1.00 (0.64 default)		0.001, 0.01, 0.1g/L	kg/L, g/L	
Barometer	Piezoresistive	375 to 825 mmHg	±1.5 mmHg from 0 to 50°C	0.1 mmHg	mmHg, inHg, mbar, psi, kPa, ATM	1 point

Instrument Only Specifications (at Ambient Temperature)

pH		-2.60 to 16.60	±0.1 mV (0.01 pH units)	0.1 mV (0.01 pH units)		
ORP		-1999 to +1999 mV	±0.5 mV	0.1 mV		
Conductivity		0.0 to 200 mS/cm each range	±0.1% FS ±1 digit for uS/cm to 0.1 mS/cm (range dependent)	0.0001 mS/cm or 0.1		
Dissolved Oxygen		0.00 to 90 mg/L; 0 to 550%	±0.2% FS (550% air saturation) ±1 digit (with 1.25 PE membrane at 10°C)	0.01 mg/L; 0.1% air saturation		
Temperature		-10 to 100.00°C	±0.2% FS ±1 digit	0.1°C	°C, °F, K	

* Lab-grade cables include 605107, -108, -109, 605177, -178, -179 ** Derived parameters can include resistivity, salinity, specific conductance, and total dissolved solids
*** ISE sensors for freshwater only; 17-meter maximum depth

60510, **20** or **30**

6051030 or **2030**

6051010 or **1020**

605790 Quatro

605780

605202 or **203**

605101, **102** or **103**

605104, **105** or **106**

Order Guide

Step 1: Order Instrument

☐ **Instrument 6050000** includes Data Manager software, the ProComm II communications saddle, and USB cable

Step 2: Order Cable(s)

All cables include temperature; cables over 1 meter include cable management kit; cables with conductivity include sensor (no need to order conductivity sensor)

☐ **60510**: **1, 4, 10, 20** or **30** meter: ISE[1]/temp
☐ **60520**: **1, 4, 10, 20, 30** or up to**100** meters[2]: DO/temp
☐ **60530**: **1, 4, 10, 20** or **30** meter: conductivity/temp
☐ **6051010**: **1, 4, 10, 20** or **30** meter: ISE/ISE/temp
☐ **6051020**: **1, 4, 10, 20** or **30** meter: ISE/DO/temp
☐ **6051030**: **1, 4, 10, 20** or **30** meter: ISE/conductivity/temp
☐ **6052030**: **1, 4, 10, 20** or **30** meter: DO/conductivity/temp
☐ **605790**: **1, 4, 10, 20** or **30** meter: ISE/ISE/DO/conductivity/temp
☐ **605107**: 1–meter single junction pH sensor & cable
☐ **605177**: 4–meter single junction pH sensor & cable
☐ **605108**: 1–meter single junction ORP sensor & cable
☐ **605178**: 4–meter single junction ORP sensor & cable
☐ **605109**: 1–meter single junction pH/ORP sensor & cable
☐ **605179**: 4–meter single junction pH/ORP sensor & cable

Step 3: Order Sensor(s)

☐ **605202**: Galvanic DO
☐ **605203**: Polarographic DO
☐ **605780**: Self-stirring BOD (2-meter cable included)
☐ **605101**: pH (ISE)
☐ **605102**: ORP (ISE)
☐ **605103**: pH/ORP combination (ISE)[3]
☐ **605104**: Ammonium (ISE)
☐ **605105**: Chloride (ISE)
☐ **605106**: Nitrate (ISE)

1 ISEs include pH, ORP, Ammonium, Nitrate, Chloride
2 Special order cables in 10-meter increments up to 100 meter available
3 Not recommended on 6051010 or 605790 cables. Only pH would appear.

No tools are required to install the sensors.

3824

Step 4: Order Solutions

- ☐ **3167:** 1,000 µs/cm conductivity solution (8 pints)
- ☐ **3168**: 10,000 µs/cm conductivity solution (8 pints)
- ☐ **3169**: 50,000 µs/cm conductivity solution (8 pints)
- ☐ **3682**: Zobell, ORP solution (125 mL)
- ☐ **3824**: pH 4, 7, 10 buffers (2 pints each)
- ☐ **3841**: 1 mg/L ammonium solution (500 mL)
- ☐ **3842**: 10 mg/L ammonium solution (500 mL)
- ☐ **3843**: 100 mg/L ammonium solution (500 mL)
- ☐ **3885**: 1 mg/L nitrate solution (500 mL)
- ☐ **3886**: 10 mg/L nitrate solution (500 mL)
- ☐ **3887**: 100 mg/L nitrate solution (500 mL)
- ☐ **5580**: Confidence Solution® to verify pH, ORP and conductivity data (not for cal)

603077

603075

603074

063507

603069

605978

603062

Step 5: Order Accessories

- ☐ **603059**: Flow Cell, Standard, 203 mL
- ☐ **603077**: Flow Cell Kit, 1- or 2-Port Sensor (includes 603059 & 603078)
- ☐ **606850**: Quatro Cable Flow Cell
- ☐ **603078**: Flow Cell Adapter, Single Port (used with 603059)
- ☐ **603056**: Flow Cell Mounting Spike
- ☐ **603075**: Carrying Case, Soft-Sided
- ☐ **603074**: Carrying Case, Hard-Sided
- ☐ **603069**: Belt Clip
- ☐ **063517**: Ultra Clamp
- ☐ **063507**: Tripod
- ☐ **603062**: Cable Management Kit
- ☐ **605978**: Weight, Sensor/Cable, 4.9 oz.
- ☐ **063019**: Weight, Sensor/Cable, 24 oz., 3”
- ☐ **063020**: Weight, Sensor/Cable, 51 oz., 6”
- ☐ **603070**: Shoulder Strap
- ☐ **605170**: Electrode Lab Stand

Please visit YSI.com/accessories for more information

Go to the youtube.com/ysiinc page to view a video on ordering the Pro Plus

Who's Minding the Planet?®

To order or for more information, contact YSI Environmental.

+1 937 767 7241
www.YSI.com

YSI Environmental
1700/1725 Brannum Lane
Yellow Springs, Ohio 45387
+1 937 767 7241
+1 937 767 9353 fax
environmental@ysi.com

SonTek/YSI
+1 858 546 8327
inquiry@SonTek.com

YSI Integrated Systems & Services
+1 508 748 0366
systems@ysi.com

AMJ Environmental
+1 727 565 2201
info@amjenviro.com

YSI Australia
+61 7 390 17223
acorbett@ysi.com

YSI Gulf Coast
+1 225 753 2650
gulfcoast@ysi.com

YSI Hydrodata
European Support Centre
+44 1462 673581
europe@ysi.com
ireland@ysi.com

YSI (Hong Kong) Limited
+852 2891 8154
hongkong@ysi.com

YSI South Asia
+91 989 122 0639
sham@ysi.com

YSI Middle East (Bahrain)
+973 39771055
halsalem@ysi.com

YSI/Nanotech (Japan)
+81 44 222 0009
nanotech@ysi.com

YSI China
+86 10 5203 9675
beijing@ysi-china.com

ISO 9001
ISO 14001
(Yellow Springs facility)

Pure Data for a Healthy Planet, We Know D.O., Confidence Solution and Who's Minding the Planet are registered trademarks of YSI Incorporated. YouTube is a registered trademark. Teflon is registered trademark to DuPont.

Specifications are subject to change.
Please visit www.YSI.com to verify all specs.

©2009 YSI Incorporated
Printed on recycled paper in USA
W14-03 0310

How Tough is TOUGH?

Here's a real-life story from one of our customers... "We were sampling with our Pro Plus off a 30-40 foot bridge. The river was high and muddy, and strong enough to quickly pull our sensor and cable downstream. And because the hand strap wasn't tightened, our Pro Plus was jerked out of our operator's grasp. We realized it was gone; completely submerged at a depth of about 10-15 feet.

Exactly a week later, with the flow down, we went back to look for it. Two lab employees wearing life jackets and swim gear started up-river, using a long pole to scrape the bottom of the river. Which is where we first found the cable, and then the meter. We set up the Pro Plus and...it worked! Even after a week at the bottom of a muddy river bed. We were amazed. Which just goes to show the quality of your meters."

Application Notes

visit ysi.com/applications

A557 **Silver Streak Bass (Aquaculture)**

A567 **ORP in Wastewater (Wastewater)**

A570 **Busseron Creek Watershed (Surface Water)**

A572 **Miami Conservancy District (Surface Water/Groundwater)**

WE KNOW D.O.™

visit ysi.com/weknowDO

View Dissolved Oxygen technology webinars, videos, selection guides, product spec sheets and more at our dissolved oxygen resource page.

Videos YouTube

visit youtube.com/ysiinc

View product demos, field studies, and instrument installations.

FSC
Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber
Cert no. SW-COC-000897
www.fsc.org
© 1996 Forest Stewardship Council

ECO CALCULATIONS REPORT

YSI, Inc. saved the following resources by using New Leaf Opaque made with 100% post-consumer recovered fiber.

trees	energy	greenhouse gas	waste water	solid waste
7	2 million BTUs	635 lbs CO_2	3057 gal	186 lbs

www.newleafpaper.com