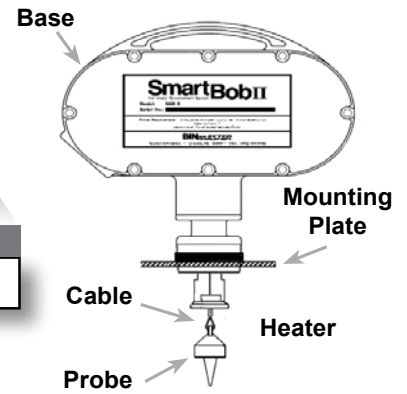


# SmartBob II

Mark X if none								
Sample								
SBR.1	A	1	035	M1	H	X	X	XX



**Pipe Extension Length** (use XX if none)  
Entered in inches up to XX inches

**Pipe Extensions** (use X if none)  
**V:** SBPE-1 - Pipe Extension - CPVC 1 In.  
**S:** SBPE-2 - Pipe Extension - SS 1 In.

**Options** (use X if none)  
**T:** HT - High Temp Option  
**S:** SHT - Super High Temp Option  
**B:** SS - Submersible Solids Option  
**H:** HM - Horizontal Mounting Option

**Heater** (use X if none)  
**H:** H - Gearbox Heater - 115 VAC  
**H:** H - Gearbox Heater - 230 VAC

**Mounting Plate** (use XX if none)  
**M1:** Mounting Plate - 0 Degree Powder Coated Aluminum, 5.13" diameter bolt circle  
**M2:** Mounting Plate - 0 Degree Powder Coated Steel, 7" diameter bolt circle  
**M3:** Mounting Plate - 5 Degree Powder Coated Steel, 7" diameter bolt circle  
**M4:** Mounting Plate - 10 Degree Powder Coated Steel, 7" diameter bolt circle  
**M6:** Mounting Plate - 15 Degree Powder Coated Steel, 7" diameter bolt circle  
**M7:** Mounting Plate - 20 Degree Powder Coated Steel, 7" diameter bolt circle  
**M8:** Mounting Plate - 24 Degree Powder Coated Steel, 7" diameter bolt circle  
**M5:** Mounting Plate - 30 Degree Powder Coated Steel, 7" diameter bolt circle  
**M10:** Mounting Plate - 35 Degree Powder Coated Steel, 7" diameter bolt circle  
**M9:** Mounting Plate - 40 Degree Powder Coated Steel, 7" diameter bolt circle  
**MX:** No Mounting Plate

**Cable Length** (begin with 0 if less than 100 ft.)  
Entered in feet up to 150 feet

**Cable Type**  
**1:** C1 - Cable - Nylon Jacketed  
**2:** C2 - Cable - Teflon Jacketed  
**3:** C3 - Cable - Bare SS  
**4:** C5 - Cable - FDA Nylon Jacketed

**Probe**  
**A:** B1 - Sensor Probe - SS Heavy Spike Bob  
**B:** B2 - Sensor Probe - Magnetic SS Heavy Spike Bob  
**C:** B3 - Sensor Probe - 4 In. SS Inverted Cone Bob  
**D:** B4 - Sensor Probe - 6 In. SS Inverted Cone Bob  
**E:** B5 - Sensor Probe - 32 Oz. Plastic Digestible Bottle Filled  
**F:** B6 - Sensor Probe - 32 Oz. Plastic Digestible Bottle Empty  
**I:** B9 - Sensor Probe - 6 In. SS Sphere Float Bob  
**K:** B11 - Sensor Probe - Glass Spike Bob  
**L:** B12 - Sensor Probe - 32 Oz. Small Diameter Plastic Digestible Bottle Wax and Steel Balls  
**M:** B13 - Sensor Probe - 6 in. SS Sphere Teflon Coated  
**N:** B14 - Sensor Probe - 6 In. SS Sphere Float Bob

## SmartBob II Base Model

**SBR.1:** SBR II 115 - SmartBob2 Remote Sensor 115 VAC  
**SBR.2:** SBR II 230 - SmartBob2 Remote Sensor 230 VAC  
**SBA.1:** SBR AO 115 - SmartBob2 AO Remote Sensor 115 VAC  
**SBA.2:** SBR AO 230 - SmartBob2 AO Remote Sensor 230 VAC

# SMARTBOB II

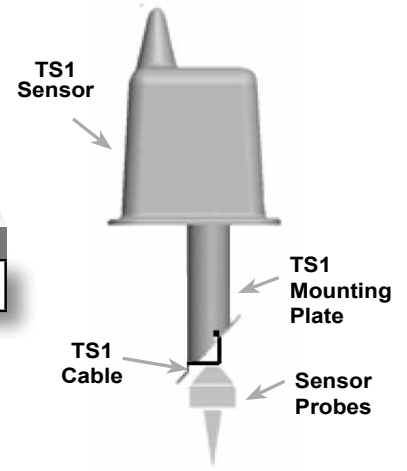
ORDER CODE	DESCRIPTION	LIST PRICE
<b>BASE</b>		
<b>SBR.1</b>	SBR II 115 - Microprocessor-driven SmartBob2 remote sensor, 115 VAC, corrosion-resistant polycarbonate enclosure, air inlet port, hazardous location approved, C/US listed for Class II, Groups E, F, G	Call for price
<b>SBR.2</b>	SBR II 230 - Microprocessor-driven SmartBob2 remote sensor, 230 VAC, corrosion-resistant polycarbonate enclosure, air inlet port, hazardous location approved, C/US listed for Class II, Groups E, F, G	Call for price
<b>SBA.1</b>	SBR AO 115 - Microprocessor-driven SmartBob2 AO remote sensor, 115 VAC, corrosion-resistant polycarbonate enclosure with integrated 4-20 mA output. The SmartBob AO is a stand-alone analog transmitter that includes automatic measurement initiation and two configurable relay outputs.	Call for price
<b>SBA.2</b>	SBR AO 230 - Microprocessor-driven SmartBob2 AO remote sensor, 230 VAC, corrosion-resistant polycarbonate enclosure with integrated 4-20 mA output. The SmartBob AO is a stand-alone analog transmitter that includes automatic measurement initiation and two configurable relay outputs.	Call for price
<b>PROBE</b>		
<b>A</b>	B1 - Stainless steel heavy spike bob probe	Call for price
<b>B</b>	B2 - 416 Stainless steel heavy spike bob probe	Call for price
<b>C</b>	B3 - Weighted 4" Stainless steel inverted cone for light solids	Call for price
<b>D</b>	B4 - Hollow 6" Stainless steel inverted cone for liquid applications	Call for price
<b>E</b>	B5 - Plastic digestible bottle 32 oz. filled with paraffin wax	Call for price
<b>F</b>	B6 - Plastic digestible bottle empty, to be filled with 32 oz. of material in field	Call for price
<b>I</b>	B9 - 6" Stainless steel sphere float for liquid, slurry, and light powder applications	Call for price
<b>K</b>	B11 - Glass spike bob filled with 32 oz. sand	Call for price
<b>L</b>	B12 - Plastic digestible bottle 32 oz. wax & stainless steel balls	Call for price
<b>M</b>	B13 - 6" Stainless steel Teflon coated sphere float for liquid, slurry, and light powder applications	Call for price
<b>N</b>	B14 - Teflon coated Stainless steel heavy spike bob probe	Call for price
<b>CABLE TYPE</b>		
<b>1</b>	C1 - ft. of Nylon jacketed 7 x 19 stainless steel cable for temperatures up to 250°F with 270 lb. tensile strength and SureDrop system.	Call for price
<b>2</b>	C2 - ft. of Teflon jacketed 7 x 19 stainless steel cable for temperatures up to 500°F with 270 lb. tensile strength and SureDrop system.	Call for price
<b>3</b>	C3 - ft. of bare 7 x 19 stainless steel cable for temperatures up to 1,000°F with 270 lb. tensile strength and SureDrop system.	Call for price
<b>5</b>	C5 - ft. of FDA approved Nylon jacketed 7 x 19 stainless steel cable for temperatures up to 250°F with 270 lb. tensile strength and SureDrop system.	Call for price

# SMARTBOB II

ORDER CODE	DESCRIPTION	LIST PRICE
<b>MOUNTING PLATE</b>		
<b>M1</b>	M1 - 0° Mounting plate, 3" NPT, powder coated forged aluminum, 5.13" diameter bolt circle	Call for price
<b>M2</b>	M2 - 0° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M3</b>	M3 - 5° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M4</b>	M4 - 10° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M6</b>	M6 - 15° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M7</b>	M7 - 20° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M8</b>	M8 - 24° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M5</b>	M5 - 30° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M10</b>	M10 - 35° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M9</b>	M9 - 40° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>HEATER</b>		
<b>H</b>	H - 115 VAC Gear box heater for SBR	Call for price
<b>H</b>	H2 - 230 VAC Gear box heater for SBR	Call for price
<b>OPTIONS</b>		
<b>T</b>	HT - SmartBob II high temperature option for process temperatures above 250°F and not to exceed 500°F. Includes a 12" long, 3" diameter galvanized pipe standoff to extend the remote sensor away from heat source, a 1" stainless steel pipe extension fitted with a Teflon cable guide keeps the sensor probe out of the standpipe and level with the vessel top.	Call for price
<b>S</b>	SHT - SmartBob II super high temperature option for process temperatures above 500°F and not to exceed 1000°F. Includes a 36" long, 3" diameter galvanized pipe standoff to extend the remote sensor away from heat source, a 1-1/4" galvanized pipe extension fitted with a bronze cable guide keeps the sensor probe out of the standpipe and level with the vessel top. All Delrin pulleys are replaced with aluminum pulleys in the super high temperature option.	Call for price
<b>B</b>	SS - SmartBob II submersible solids option lowers a weighted heavy stainless steel spike bob from the top of a vessel, diving through the liquid to measure the submersed solids in the liquid. Includes a 3" CPVC pipe extension.	Call for price
<b>H</b>	HM - SmartBob II horizontal mounting option	Call for price
<b>PIPE EXTENSIONS</b>		
<b>V</b>	SBPE-1 - Pipe Extension - CPVC 1 In. (6" minimum and 60" maximum)	Call for price
<b>S</b>	SBPE-2 - Pipe Extension - SS 1 In. (6" minimum and 60" maximum)	Call for price

# TS1

Mark X if none									
Sample									
TS1.1	J	4	040	M2	H	W	V		24



**Pipe Length** (use XX if none)  
Entered in inches up to 24 inches

**Pipe Extensions** (use X if none)  
V: SBPE-1 - Pipe Extension - CPVC 1 In.

**Options** (use X if none)  
W: WT - TS1 Built-In 900 MHz Wireless Transceiver  
Z: ZBM - TS1 Built-In ZigBee Module

**Heater** (use X if none)  
H: H - TS1 Motor Gearbox Heater - 115 VAC

**Mounting Plate**  
**M1:** Mounting Plate - 0 Degree Powder Coated Aluminum, 5.13" diameter bolt circle  
**M2:** Mounting Plate - 0 Degree Powder Coated Steel, 7" diameter bolt circle  
**M3:** Mounting Plate - 5 Degree Powder Coated Steel, 7" diameter bolt circle  
**M4:** Mounting Plate - 10 Degree Powder Coated Steel, 7" diameter bolt circle  
**M6:** Mounting Plate - 15 Degree Powder Coated Steel, 7" diameter bolt circle  
**M7:** Mounting Plate - 20 Degree Powder Coated Steel, 7" diameter bolt circle  
**M8:** Mounting Plate - 24 Degree Powder Coated Steel, 7" diameter bolt circle  
**M5:** Mounting Plate - 30 Degree Powder Coated Steel, 7" diameter bolt circle  
**M10:** Mounting Plate - 35 Degree Powder Coated Steel, 7" diameter bolt circle  
**M9:** Mounting Plate - 40 Degree Powder Coated Steel, 7" diameter bolt circle  
**MX:** None  
**MA:** 30° Mounting Plate with Welded 6" Standpipe  
**MB:** 40° Mounting Plate with Welded 6" Standpipe  
**MS:** 4.5 In. Standpipe with No Mounting Plate

**Cable Length** (use Ø in front of 2-digits)  
Entered in feet up to 60 feet

**Cable Type**  
4.: C4 - Cable - Braided Nylon

**Probe**  
**G:** B7 - Sensor Probe - 16 Oz. Plastic Digestible Bottle Filled  
**H:** B8 - Sensor Probe - 5 In. SS Sphere Float Bob  
**J:** B10 - Sensor Probe - Polyethylene Spike Bob

**SmartBob TS1 Base Model**  
**TS1.1:** TS1-60 115 - SmartBob TS1 Remote Sensor 115 VAC  
**TS1.2:** TS1-60 230 - SmartBob TS1 Remote Sensor 230 VAC

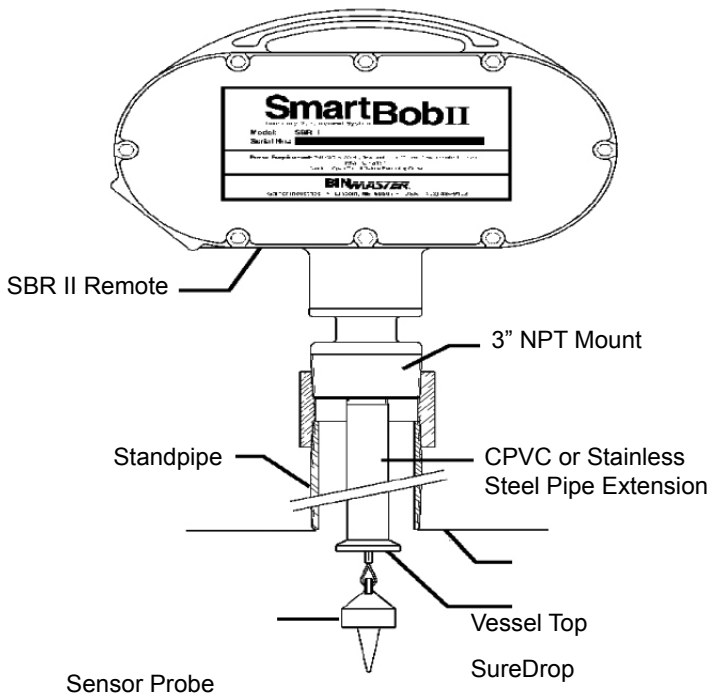
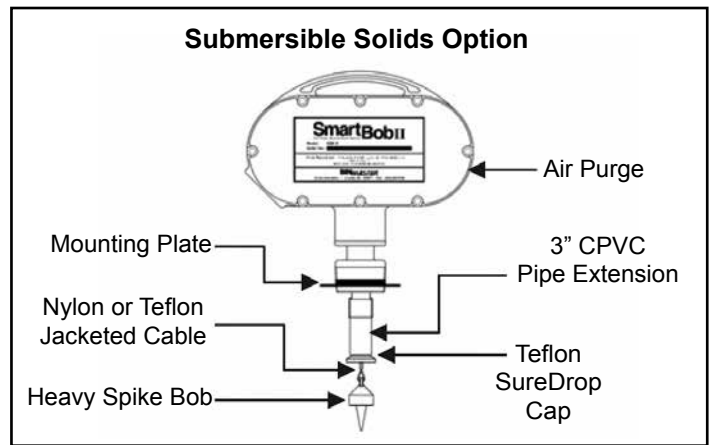
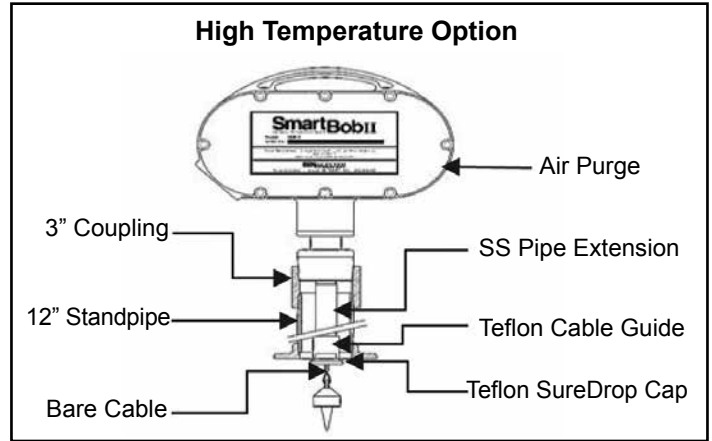
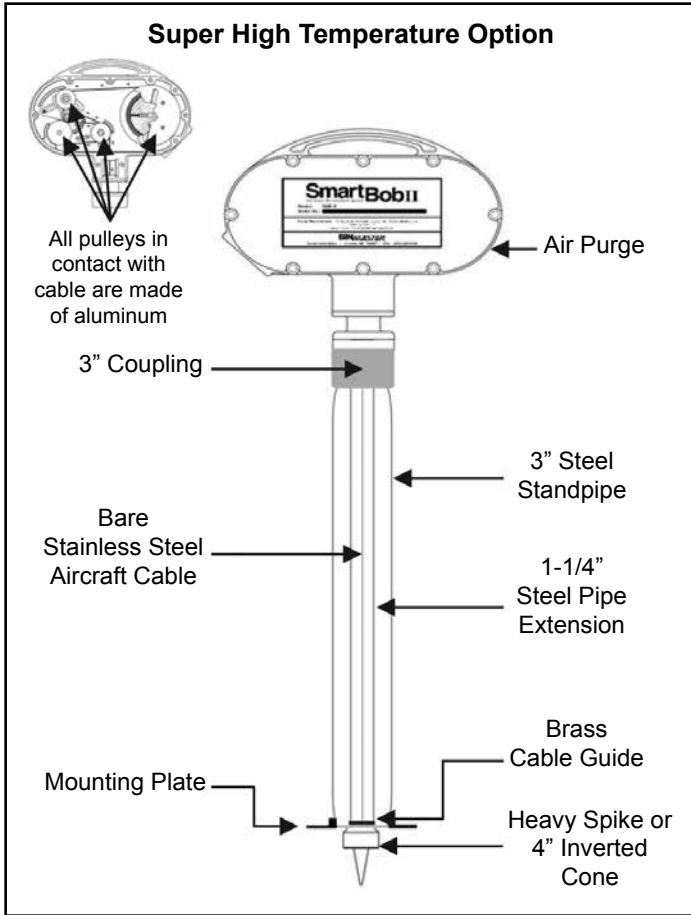
# SMARTBOB TS1

ORDER CODE	DESCRIPTION	LIST PRICE
<b>BASE</b>		
<b>TS1.1</b>	TS1-60 115 - Microprocessor-driven SmartBob-TS1 remote sensor, 115 VAC, corrosion-resistant, rotomolded polyethylene enclosure, 0 to 60' measuring range	Call for price
<b>TS1.2</b>	TS1-60 230 - Microprocessor-driven SmartBob-TS1 remote sensor, 230 VAC, corrosion-resistant, rotomolded polyethylene enclosure, 0 to 60' measuring range	Call for price
<b>PROBE</b>		
<b>G</b>	B7 - Plastic sensing digestible bottle filled with 16 oz. of paraffin wax	Call for price
<b>H</b>	B8 - Hollow 5" stainless steel spherical float for liquid or light powder applications	Call for price
<b>J</b>	B10 - Polyethylene weighted spike bob	Call for price
<b>CABLE TYPE</b>		
<b>4.</b>	C4 - ft. of braided nylon cable for SmartBob TS1.	Call for price
<b>MOUNTING PLATE</b>		
<b>M1</b>	M1 - 0° Mounting plate, 3" NPT, powder coated forged aluminum, 5.13" diameter bolt circle	Call for price
<b>M2</b>	M2 - 0° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M3</b>	M3 - 5° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M4</b>	M4 - 10° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M6</b>	M6 - 15° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M7</b>	M7 - 20° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M8</b>	M8 - 24° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M5</b>	M5 - 30° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M10</b>	M10 - 35° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>M9</b>	M9 - 40° Mounting plate, 3" NPT, powder coated carbon steel, 7" diameter bolt circle	Call for price
<b>MA</b>	MF7 - 30° Mounting plate with welded 6" standpipe	Call for price
<b>MB</b>	MF8 - 40° Mounting plate with welded 6" standpipe	Call for price
<b>MS</b>	M12 - 4.5 in. Standpipe with no mounting plate	Call for price
<b>HEATER</b>		
<b>H</b>	H - 115 VAC Gear box heater for TS1	Call for price
<b>OPTIONS</b>		
<b>W</b>	WT - TS1 Built-in 900 MHz wireless transceiver	Call for price
<b>Z</b>	ZBM - TS1 Built-in ZigBee module	Call for price
<b>PIPE EXTENSIONS</b>		
<b>V</b>	SBPE-1 - Pipe Extension - CPVC 1 In. (6" minimum and 60" maximum)	Call for price

# SMARTBOB ACCESSORIES

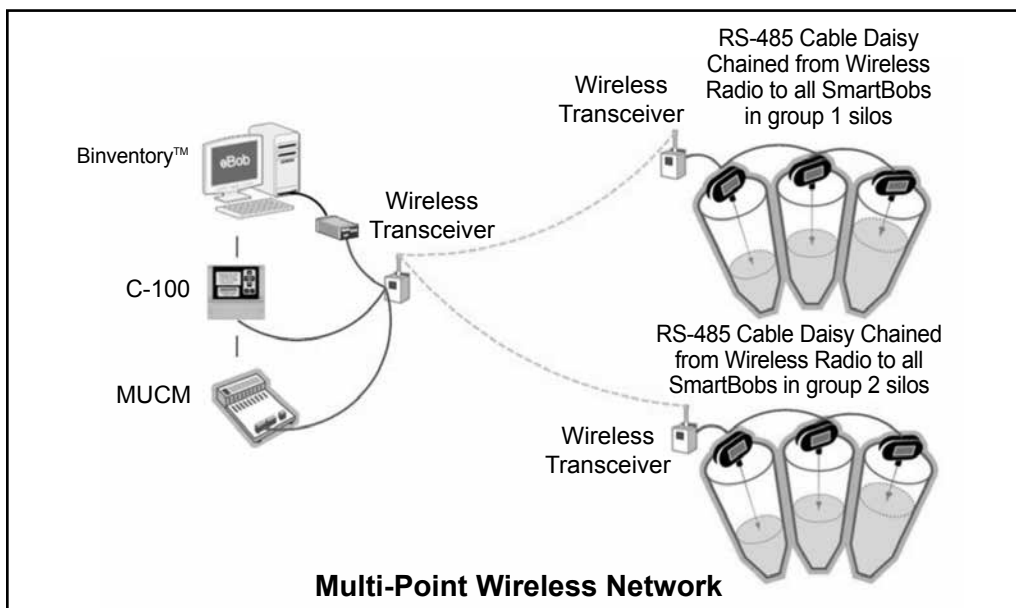
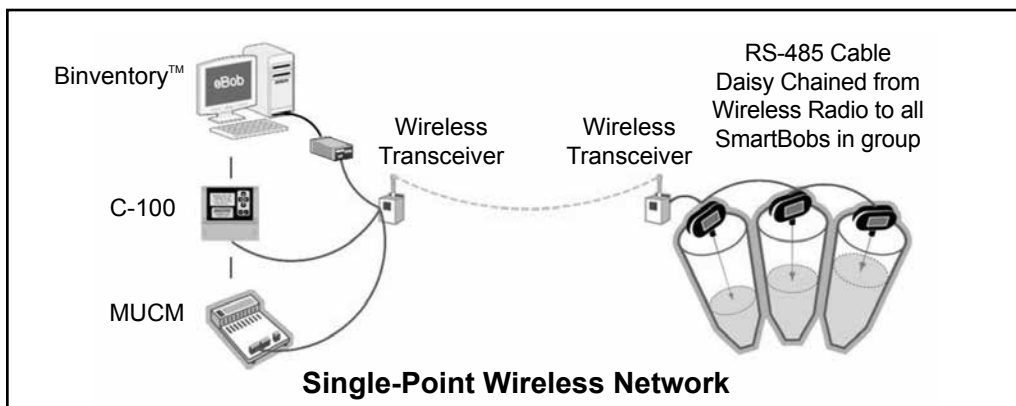
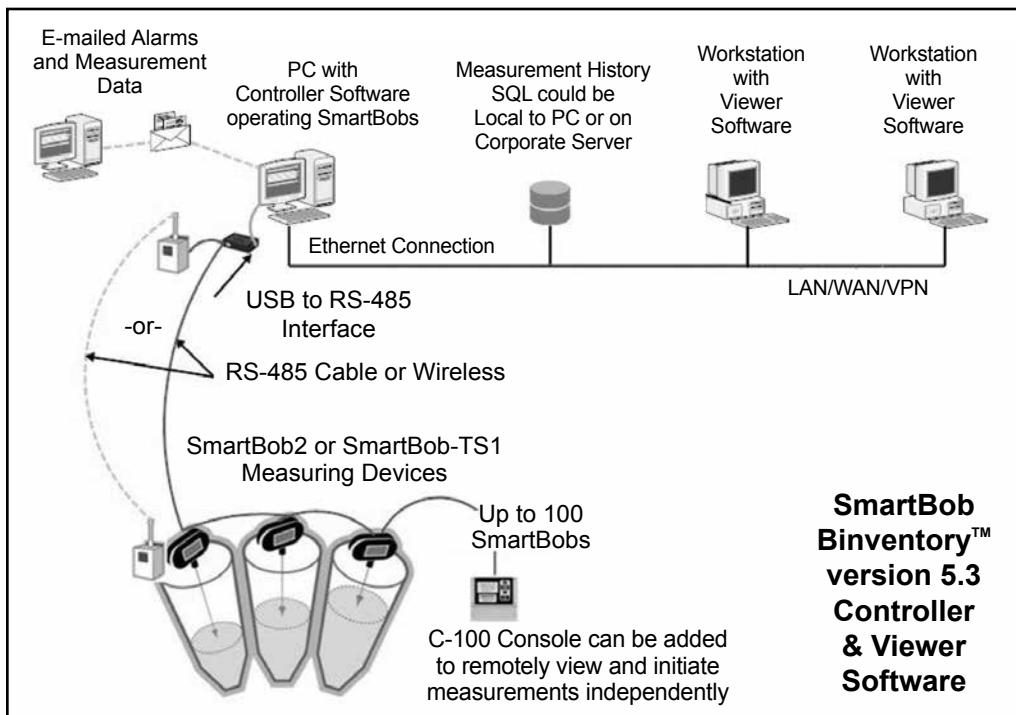
DESCRIPTION	LIST PRICE	PART NUMBER
<b>CONSOLES</b>		
C-100 - Control console for 1 to 128 bins, wall mount console with LCD display, NEMA 4X or 24 VDC. Measurement formats can be displayed as headroom percentage, headroom height, headroom weight, product percentage, product height and product weight. Vessel configuration and user settings are stored in non-volatile memory and will be retained during a power failure. The C-100 has one 4-20 mA output and remote start contact to provide a traditional interface to a PLC/DCS system for 1 SmartBob sensor.	Call for price	730-5094
C-100-MB - Modbus control console allows Modbus serial masters to gather data from SmartBob2 or SmartBob-TS1 sensors. Modbus protocol is defined as a master/slave protocol, meaning a device operating as a master (the host PC or PLC controller) will poll the Modbus control console operating as a slave. The master will write data to the control console registers, as well as read the data from the control console registers.	Call for price	730-5124
C-50 - Analog expansion box with vertical slots available for 6 analog cards (four 4-20 mA analog loops per card). Must be powered with 24 VDC.	Call for price	530-5110
C-50 Analog expansion card.	Call for price	530-0596
<b>TRANSFORMERS</b>		
XFMR-13 - 100-230 VAC / 24 VDC, 15 W, switching power supply to power C-100	Call for price	730-0318
PSDC-5 Power Supply 90-264 VAC converted to 24 VDC 1 A to power C-100 and C-50	Call for price	399-0030
PSDC-4 - 24 VDC / 30 VA, NEMA 4X enclosure mounted power supply	Call for price	730-0577
<b>COMMUNICATION MODULES</b>		
MUCM Profibus communication tophat	Call for price	344-0004
MUCM DeviceNet communication tophat	Call for price	344-0003
XFMR-14 - MUCM wall mounted power supply	Call for price	388-0049
MESR901 - gateway bridge can be used to integrate the C-100MB (Modbus serial master) on a Modbus TCP/IP network. With Modbus TCP/IP, the message is "wrapped" and sent over a computer network instead of serial data cables.	Call for price	344-0011
<b>BINVENTORY</b>		
Binventory controller software with graphical display and inventory history in a SQL database for up to 99 SBR II remote sensors.	Call for price	730-0537
Binventory Client Viewer software allows multiple-user updating through a GUI front end to a shared SQL database. One Binventory client software package is required per site where the Binventory server software is running. The Binventory client software can be installed on up to five PCs.	Call for price	730-0538
<b>WIRELESS</b>		
WTI-19 - Indoor wireless transceiver unit with 4dBi omnidirectional antenna and cable adapter, 115 VAC power supply, and standard RS-232C DB-9 (female) connector	Call for price	730-0443
WL-19 - Indoor / outdoor standard (-20°F to +140°F) wireless transceiver unit NEMA 4X with 4dBi omnidirectional antenna, selectable 115 VAC / 230 VAC, RS-485 connection terminal	Call for price	730-0514
WL-19 - Indoor / outdoor standard (-20°F to +140°F) wireless transceiver unit NEMA 4X with 900 MHz directional Yagi antenna, selectable 115 VAC / 230 VAC, RS-485 connection terminal	Call for price	730-0515
WL-LAK - Lightning arrestor kit. Recommended as additional protection for antennas mounted in exposed locations. Kit includes arrestor, mounting kit and instructions. (Note, these are ONLY needed when external antennas are used with the WT-19 module.)	Call for price	530-0534
YDA - Yagi directional antenna	Call for price	730-0431
<b>SERIAL CONVERTERS</b>		
RS-232 to RS-485 interface used to connect computer serial port to RS-485 network when using Binventory software.	Call for price	730-0202
Isolated USB to RS-485 converter used to connect USB port to RS-485 network.	Call for price	530-0174
Mini USB	Call for price	530-0570
UESP211 - TCP-IP to serial communication adapter	Call for price	344-0006
ft. of Allen-Bradley blue hose RS-485 data cable, 20 AWG shielded twin axial, twisted pair, low capacitance, Belden #9463 or equivalent.	Call for price	398-0090

# SmartBob II Remote Options



The CPVC pipe extension is an optional feature that is screwed to the 3" NPT SmartBob2 mount. The pipe extension keeps the sensor probe from being pulled up into the standpipe, functions as a bushing, and keeps the cable from fraying on sharp objects if the sensor probe swings while taking a measurement. It also functions to keep the sensor probe flush with the vessel top. The extension pipes are available in CPVC, galvanized pipe, or stainless steel. They are available in custom lengths from 4" to 20'. The reason for a longer extension is so the SmartBob2 remote can be mounted on a catwalk above the vessel and the sensor probe extended down to the vessel top for easy access to the remote.

# SmartBob2 & TS1 Wireless





# SmartBob II & TS1 Control Options

