ACC
decoder

Hunter®

Power and Simplicity

Need an uncompromising controller for the most demanding landscapes? Hunter's Advanced Commercial Controller (ACC) is the industry's leading two-wire decoder controller for good reason.

This 99 station powerhouse can control irrigation over thousands of feet on a single pair of wires. Hunter's investment in two-wire control technology has created an irrigation dream team of robust, powerful in-ground decoder modules, combined with the proven ACC controller platform.

Of course, the ACC Decoder also delivers real time flow monitoring, built-in remote control, standalone ET adjustment, and everything you'd expect from a technology leader— except complexity.

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01 Remote Control Ready
Pre-wired to directly accept Hunter ICR or ROAM remote controls —plug and go.

02 Easy Modular Upgrade to Two-way Communication with Central Control
Simple plug-in modules upgrade ACC to hardwire, modem, or radio control from central control software.

03 Information Button
Provides programming help, irrigation reports, and displays actual flow in real time. Also used to unlock advanced features.

04 Large Backlit LCD
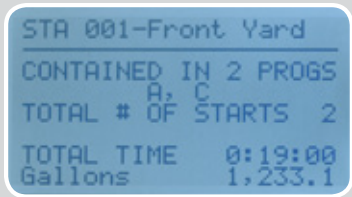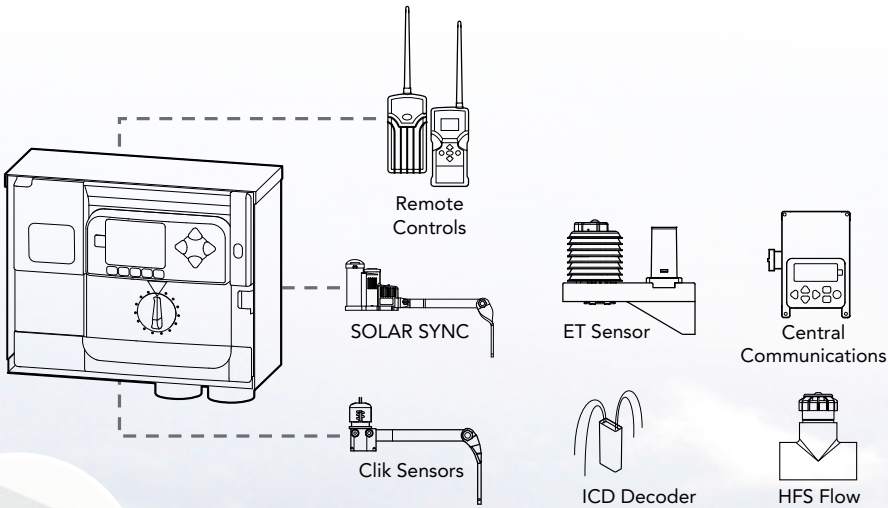Adjustable contrast for easy viewing in both dim conditions and bright sunlight.

05 Facepack Features
Named Programs and Stations • Cycle and Soak • Pause/Resume • Flow Learning Mode By Station • Day of Week/Interval 1–31 Days/Odd or Even Schedules (by program) • Non-Water Windows • Non-Water Days • Delay Between Stations (by program) • Sensor Shutdown by Program • Programmable Contact Information • Easy Retrieve Save and Restore
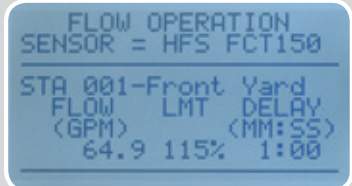
06 USB 2.0 Input
Flash updates to the latest version of ACC, with free downloads from www.hunterindustries.com. Keep your ACC current with the latest features from Hunter. Also permits local programming of controller settings from laptop PC with IMMS software.
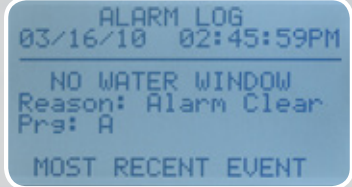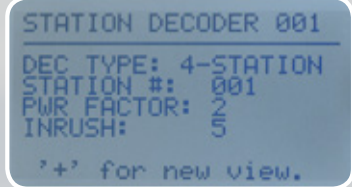
Easy-to-Read Backlit LCD Screen

Remote Controls
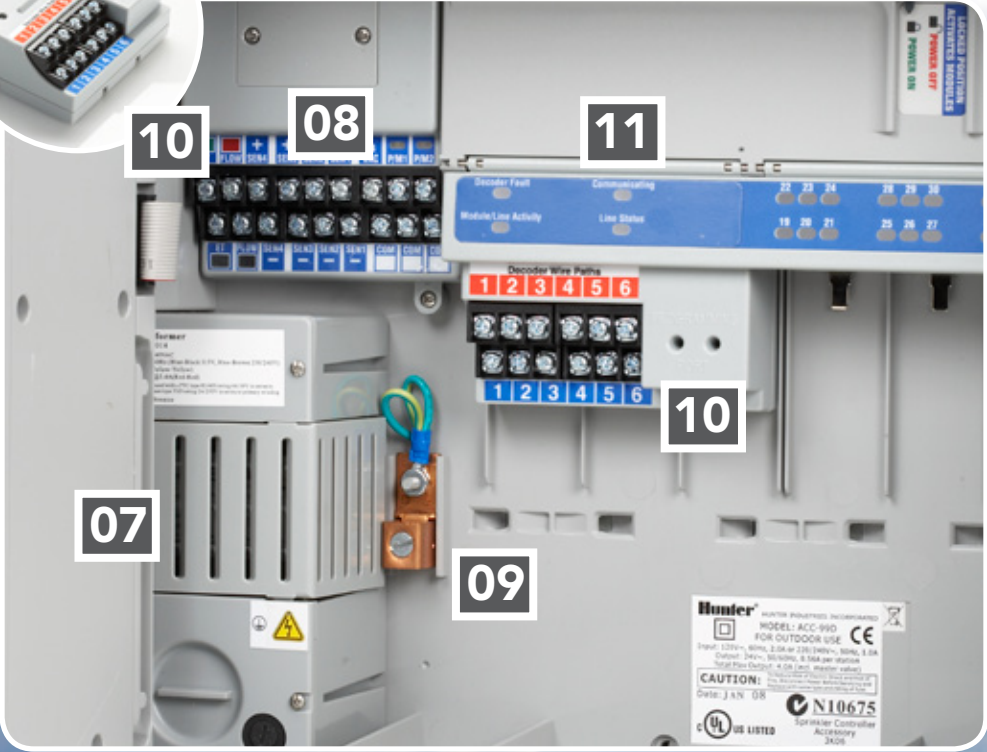
SOLAR SYNC

ET Sensor

Central Communications

Clik Sensors

ICD Decoder

HFS Flow

10 **08** **11**

07 **09** **10**

Hunter HUNTER INDUSTRIES INCORPORATED
MODEL: ACC-99D
FOR OUTDOOR USE
CAUTION:
Date: JAN 08
N10675
Sprinkler Controller Accessory 3X06

STA 001-Front Yard
CONTAINED IN 2 PROGS
          A, C
TOTAL # OF STARTS   2

TOTAL TIME   0:19:00
Gallons   1,233.1

Irrigation Summaries

FLOW OPERATION
SENSOR = HFS FCT150

STA 001-Front Yard
  FLOW   LMT   DELAY
 (GPM)   (MM:SS)
   64.9 115%   1:00

Learned Flow Database

ALARM LOG
03/16/10 02:45:59PM

  NO WATER WINDOW
Reason: Alarm Clear
Prg: A

MOST RECENT EVENT

Alarm Log (up to 250 events)

STATION DECODER 001

DEC TYPE: 4-STATION
STATION #: 001
PWR FACTOR: 2
INRUSH: 5

'+' for new view.

Decoder Setup

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07 **Transformer**
120/230 VAC transformer with global approvals, built-in surge protection, and enough power to run up to 6 programs at once.

08 **Multiple Sensor Capability**
Accommodates devices for weather and flow to provide automatic system shutoff in abnormal conditions, and water-saving adjustment for local ET.

09 **Copper-clad Earth Ground Lug**
Heavy duty connection for earth grounding of controller system. Advanced PTC surge protection throughout the controller relies on this industrial-strength connection.

10 **ADM99**
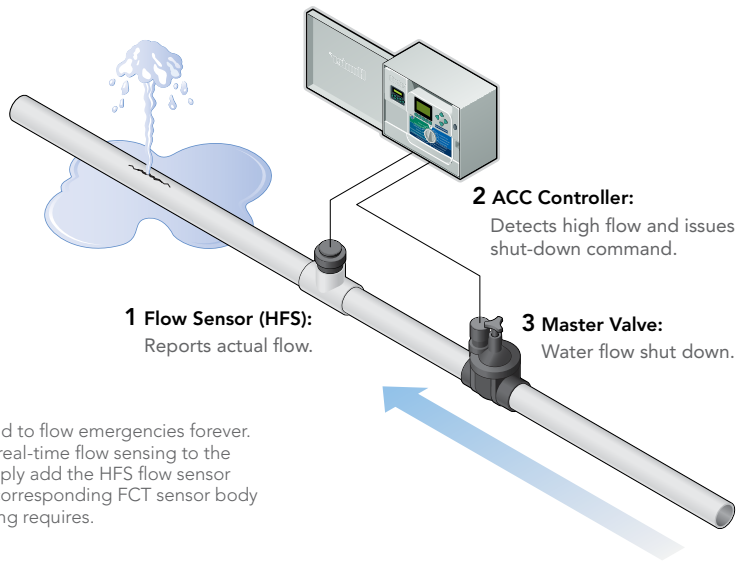Heavy-duty decoder output module controls up to 99 decoder stations and 2 pump/master valve outputs.

11 **Hunter ICD Decoders**
1-, 2-, 4-, and 6-station waterproof modules with two-way communication and integrated surge protection.

Decoders

ICD-HP Wireless Decoder Programmer
Program, test, and diagnose decoders without disconnecting any wires. The ICD-HP uses wireless induction to program and communicate with new or installed decoders, right through the decoder body. Never waste another waterproof connector.

2 **ACC Controller:**
Detects high flow and issues shut-down command.

1 **Flow Sensor (HFS):**
Reports actual flow.

3 **Master Valve:**
Water flow shut down.

Put an end to flow emergencies forever. To bring real-time flow sensing to the ACC, simply add the HFS flow sensor and the corresponding FCT sensor body your piping requires.

Real-Time Flow Sensing: Immediate Response to Abnormal Flows

ACC can be equipped with an HFS flow meter, and record and report actual flow totals in gallons or liters. The ACC can also be directed to learn typical flow by station, and then troubleshoot high or low flow conditions to station level. When paired with a Normally Closed Master Valve, this can prevent waste and damage, while continuing to operate normal stations.

Power, Flexibility, Reliability: In a Package Your Crews Can Already Operate

Hunter's remarkable ACC-99D decoder output module simplifies decoder installation and troubleshooting. The ability to operate (and add) large numbers of irrigation solenoids over a single pair of wires has never been easier or more competitive. Best of all, ACC-99D is programmed like the rest of your controllers, with simple dial-and-button controls.

Electrically efficient decoders permit simultaneous operation of up to 12 solenoids, plus dual Pump/Master Valve combinations.

ACC-99D provides true two-way decoder control: each decoder confirms its on/off commands and status back to the controller, every time it is activated.
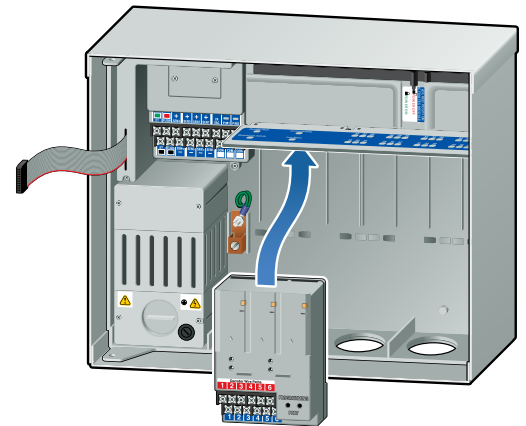
Put Sensors Where They're Needed the Most: Remote Sensors via Two-Wire

Hunter Rain-Clik with instant shut-off.

Each ACC-99D controller may have one flow sensor (responding to station level) and up to four sensors (with individual program-level response). Sensors may be connected in any combination of direct wire to the controller's main module or remotely via the sensor decoder (ICD-SEN).

Each sensor decoder can monitor up to two remote sensors over the same two-wire path used for decoder/solenoid activation (up to 15,000 feet). ICD-SEN can monitor weather sensors such as the Mini-Clik®, Rain-Clik™, Freeze-Clik®, Wind-Clik®, Mini-Weather Station, or the HFS Flow Sensor.

Each sensor may have its own alarm response pre-programmed, regardless of how it is connected.

## ACC Solar Sync: Easy, Automatic Water Savings for Decoders

The standalone, water-saving solution the industry has been waiting for. The ACC Decoder Controller connects directly to Hunter's revolutionary Solar Sync sensor for automated weather adjustment and maximum water savings.

Solar Sync measures on-site evapotranspiration (ET) and adjusts ACC run times accordingly. All other ACC controller functions remain the same. All 99 decoder stations and each of the 6 automatic programs will operate normally but smarter.

Adjustments are tracked in the controller logs and visible in the main display. Any program may be exempted from automatic adjustment, if desired.

The Solar Sync sensor will also serve as the controller's Rain and Freeze shutdown sensor.
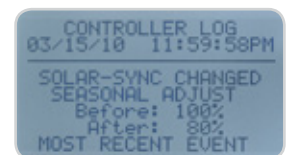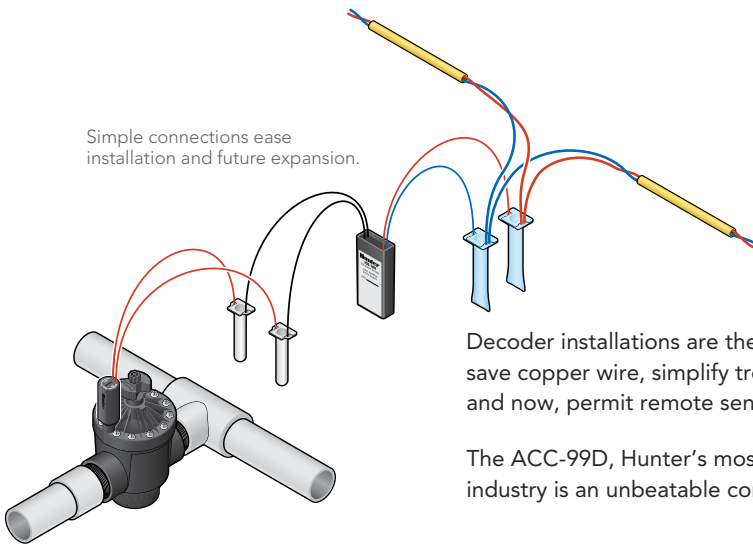
The Leader in Two-Wire Control

ACC-99D uses two-wire decoders to control up to 99 stations without giving up the arsenal of features in the ACC. With the powerful overlapping, stacking array of programs, as well as dual programmable Pump/Master Valve outputs, real-time flow monitoring, and up to four programmable sensor inputs, you can take full advantage of this controller's high capacity.

Decoder installations are the fastest growing technology in irrigation control. Why? Because they save copper wire, simplify troubleshooting, allow rapid addition of new stations, minimize trenching, and now, permit remote sensor operation over the two-wire path.

The ACC-99D, Hunter's most powerful controller, teamed with the most versatile decoders in the industry is an unbeatable combination for large sites with changing needs.

Decoders, Wiring, and Wire Paths: Simple to Design and Install

Each ACC-99D permits operation of 99 stations over one or more two-wire "paths" to the field. The full line of decoders comes in 1-, 2-, 4-, and 6-station waterproof configuration. You can even add in-line sensor decoders to monitor remote sensors, via the two-wire paths.

Up to 6 different paths out of the controller may be used to make the most efficient use of wire, to minimize trenching and disruption of landscaping.

Hunter's color-coded, twisted pair IDWIRE is a cost-effective, easily-installed, direct burial wiring solution that resists surges and electrical noise, while providing high tensile strength for permanent in-ground installation. The wire may also be spliced to follow piping in complex installations.
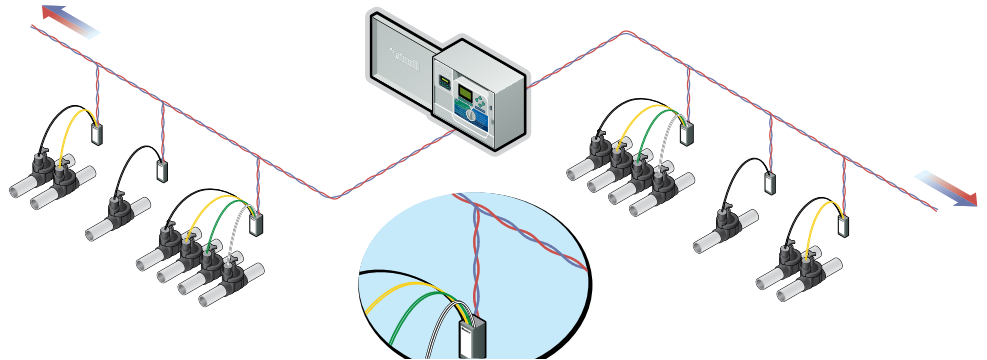
Earth Grounding: The Hunter Difference. Every ICD decoder has lightning surge suppression, built in. Connect every 12th decoder to earth ground hardware (minimum) and there are no additional surge suppression devices required.

Integrates Seamlessly with Hunter Irrigation Management and Monitoring System™

The ACC is designed to upgrade to a satellite controller in Hunter's IMMS, the affordable two-way central control system. IMMS can program and monitor a network of irrigation controllers over wide areas from a computer at a central location. Add an internal communications module for connection to a computer via cable, radio, dial-up telephone, or GSM cell phone, and get the big picture of irrigation control from your office. Add optional ET Sensors as needed to sample conditions in micro-climates, and have your central computer automatically base water use on evapotranspiration, as measured on-site. The IMMS system simplifies programming, saves water with ET control, monitors water usage with optional flow meters, and watches over your landscape investment for alarm conditions.

Now available with map-based navigation and control.

Plug-in Module   ET Sensor   Wall Mount   Plastic Pedestal   Metal Pedestal

Charts and Specs

BASE MODELS

ACC-99D = 2-Wire decoder controller with 99 station capacity, metal cabinet

ACC-99DPP = 2-Wire decoder controller with 99 station capacity, plastic pedestal

OPTIONS
USER-INSTALLED

(blank) = No option
PED = Optional metal pedestal for metal cabinet models

ACC-99D

DECODERS — SPECIFY SEPARATELY

ICD-100 = Single-station decoder with surge suppression and ground wire

ICD-200 = 2-station decoder with surge suppression and ground wire

ICD-400 = 4-station decoder with surge suppression and ground wire

ICD-600 = 6-station decoder with surge suppression and ground wire

ICD-SEN = 2-input sensor decoder with surge suppression and ground wire

PED

Note: Each decoder includes 2 waterproof connectors for red and blue wires.
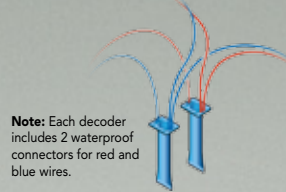
COMMUNICATION OPTIONS — SPECIFY SEPARATELY

| MODELS	OPTIONS	PURPOSE
ACC-COM-HWR = Hardwire/radio module	(blank) = No option	Supports hardwire and radio communication options
ACC-COM-POTS = Dial-up modem module (also supports radio & hardwire)		Supports dial-up telephone line input, in addition to hardwire and radio communication sharing
ACC-COM-GSM = CSD cellular module (also supports radio & hardwire)	E = International frequencies	Supports GSM mobile input, in addition to hardwire and radio communication sharing (cell service required)

ACC-COM-HWR

USER-INSTALLED OPTIONS — SPECIFY SEPARATELY

MODELS	DESCRIPTION	PURPOSE
ACC-HWIM	Hardwire interface module, required for hardwire connections	Provides surge-protected terminals for hardwired cable connections
RAD3	UHF radio module (North America), 450-470 MHz	UHF radio module for wireless connections *(license and antenna required and not included)*
RAD460INT	UHF radio module (International), 440-480 MHz *Consult factory for other international frequency ranges*	UHF radio module for wireless connections, international only *(license and antenna required and not included)*
APPBRKT	Communication bracket for plastic pedestals	Holds com modules and accessories in plastic pedestal *(not required in wall mounts)*

ACC-HWIM

OPTIONAL FLOW SENSOR — SPECIFY SEPARATELY

MODELS	DESCRIPTION
HFS = ACC and I-CORE compatible flow sensor	Includes sensor only. Use with ACC and I-CORE controllers, sensor requires FCT for pipe installation (sold separately)

HFS

ID WIRE MODEL GUIDE

14 AWG/2 MM² STANDARD DECODER CABLE (UP TO 10,000 FT./3KM)

ID1GRY	Gray jacket
ID1PUR	Purple jacket
ID1YLW	Yellow jacket
ID1ORG	Orange jacket
ID1BLU	Blue jacket
ID1TAN	Tan jacket

12 AWG/3.3 MM² LONG RANGE, HEAVY-DUTY DECODER CABLE (UP TO 15,000 FT)

|	
ID2GRY	Gray jacket
ID2PUR	Purple jacket
ID2YLW	Yellow jacket
ID2ORG	Orange jacket
ID2BLU	Blue jacket
ID2TAN	Tan jacket
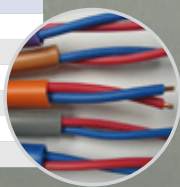
MODELS — SPECIFY SEPARATELY

FCT-100 = 1" Schedule 40 sensor receptacle tee

FCT-150 = 1½" Schedule 40 sensor receptacle tee

FCT-158 = 1½" Schedule 80 sensor receptacle tee

FCT-200 = 2" Schedule 40 sensor receptacle tee

FCT-208 = 2" Schedule 80 sensor receptacle tee

FCT-300 = 3" Schedule 40 sensor receptacle tee

FCT-308 = 3" Schedule 80 sensor receptacle tee

FCT-400 = 4" Schedule 40 sensor receptacle tee

FCT-100

HFS FLOW SENSOR FCT FITTING MODELS

Model	Material	Dia (in)	Dia (mm)
FCT-100	Sch. 40 (white)	1	25
FCT-150	Sch. 40 (white)	1.5	37
FCT-158	Sch. 80 (gray)	1.5	37
FCT-200	Sch. 40 (white)	2	50
FCT-208	Sch. 80 (gray)	2	50
FCT-300	Sch. 40 (white)	3	75
FCT-308	Sch. 80 (gray)	3	75
FCT-400	Sch. 40 (white)	4	100

All tees are glue/slip type fittings.
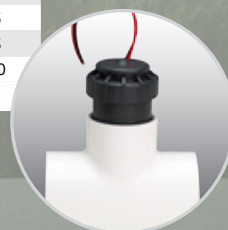
DIMENSIONS

- ACC Cabinet: 12⅜" H x 15½" W x 6⁷⁄₁₆" D (31.3 cm H x 39.3 cm W x 16.4 cm D)
- ACC Metal Pedestal: 37" H x 15½" W x 5" D (92 cm H x 39.3 cm W x 12.7 cm D)
- ACC Plastic Pedestal: 38⅜" H x 21⁹⁄₁₆" W x 15⅞" D (97.5 cm H x 54.6 cm W x 40.3 cm D)
- Decoders:
  ICD-100, 200, ICD-SEN - 3⅝" H* x 1½" W x ½" D (92 mm H* x 38 mm W x 12.7 mm D)
  ICD-400, 600 - 3⅝" H* x 1¾" W x 1½" D (92 mm H* x 46 mm W x 38 mm D)
- Wire leads (all) - 18" L, 18 AWG dia. (46 cm L, 1 mm dia.) *Not including wire leads.

SPECIFICATIONS AND FEATURES

- Transformer Input: 120/230 VAC, 50/60 Hz, 2 A max at 120 V, 1 A max at 230 V
- Transformer output: 24 VAC, 4 A
- Decoder Line (path) output: 34 V p-p
- Decoder Power draw: 0.3 mA (standby), 40 mA per active output
- Solenoid capacity: 2 standard 24 VAC Hunter solenoids per output within spec wire runs, up to 14 solenoids max simultaneous (includes dual P/MV outputs)
- Decoder Wiring: Twisted red/blue pair in PE jacket (see ID Wire table)
- Wiring, Decoder to solenoid: standard pair to 150 ft./45 m (twisted improves surge resistance)
- 6 two-wire output paths to field decoders
- Two-way confirmation of decoder activation
- Two-way monitoring of Hunter sensor connections (ICD-SEN)
- Diagnostic LEDs with line status, signal activity, decoder and status
- Programmable decoder station IDs (from controller panel or ICD-HP handheld programmer)

ACC-99D Decoder Systems include all standard features of the ACC controller, including:

- 6 Automatic programs, with 4 custom manual (auxiliary) programs
- Dual pump/master valve outputs programmable by station
- 1 flow meter (diagnostics to station level) and up to 4 Clik sensor inputs (programmable to program level)
- Programmable overlap or SmartStack™ by program with simultaneous station groups.
- Seasonal adjust, 0 to 300% in 1% increments
- Flow learning mode by station with programmable alarm thresholds
- Station run times up to 6 hours with programmable delay between stations (up to 6 hours)
- Programmable rain delay up to 31 days
- Non-volatile memory and calendar
- SmartPort® equipped for wireless remote control
- Test program feature allows for quick system checks
- IMMS central system compatible
- Upgrade to ET or Solar Sync capability