

Waddington Electronics Inc.

Loop Controls

03/01/07



The Problem Solvers

Standard and Custom

Loop Controls

- Sona-Trol
- Probe-Trol
- Photo-Trol
- Super Dancer

Unruly loop controls cost you thousands of dollars in LOST PRODUCTION, SCRAP and TOOLING DAMAGE

At Waddington electronics we tame loop control problems and regain control of your coil processing equipment. We offer a variety of loop control systems that can be tailored to your application.

Proper loop controls can increase tooling life, eliminate damage to coil stock, relieve maintenance people to do real maintenance and keep your coil processing lines running smoother

Dragging stock across the floor carries cement dust into your tooling, causing tooling wear and premature failure. Unstable and tight loops cause miss-feeds and distortion of the stock. Starting and stopping of machinery causes material marking and uneven rewinding.

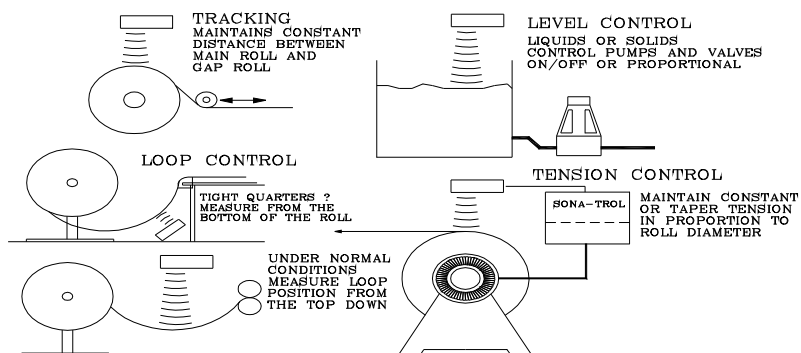
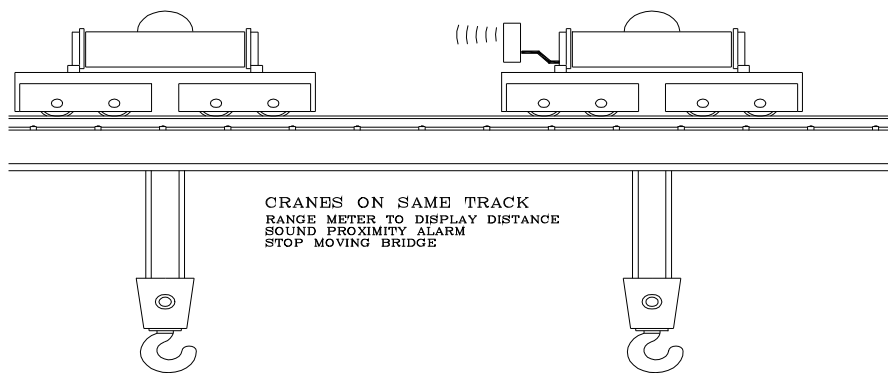
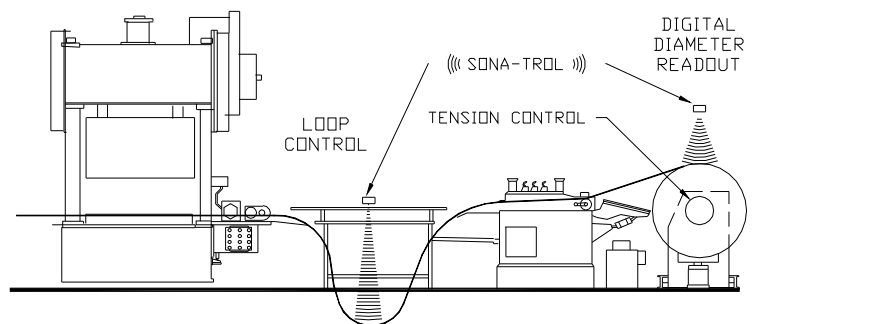
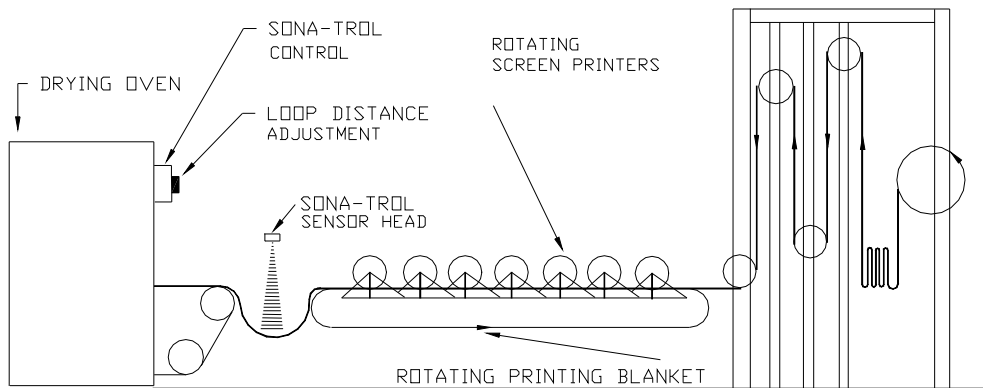
Waddington loop controls increase profits and reduce down time!!

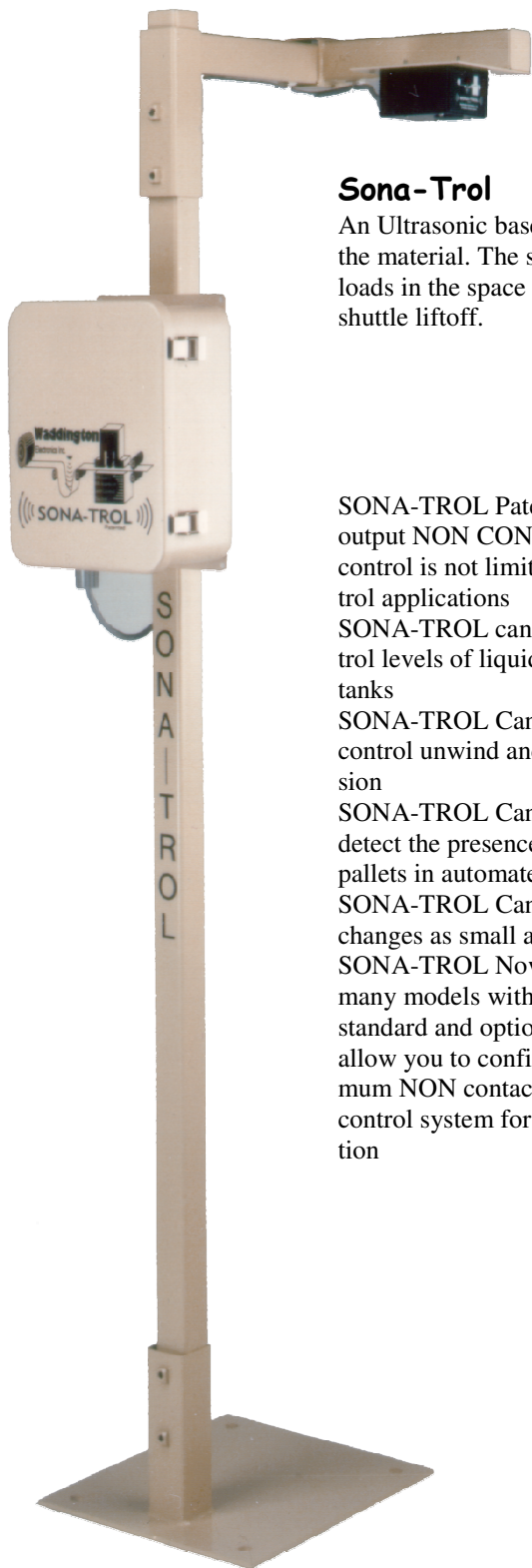
About Us

Waddington Electronics has delivered industrial equipment to the machine tool and metal stamping industries for over 50 years.

We built the company on quality products and we intend to keep building on that foundation.

Loop Controls for all Industries





Sona-Trol

An Ultrasonic based system Sona-Trol controls free loops without contacting the material. The same system is used to measure roll diameters. Position loads in the space shuttle cargo bay and to monitor the first few inches of shuttle liftoff.

SONA-TROL Patented analog output NON CONTACT loop control is not limited to loop control applications
SONA-TROL can be used to control levels of liquids and solids in tanks
SONA-TROL Can be used to control unwind and rewind tension
SONA-TROL Can be used to detect the presence or absence of pallets in automated warehouses.
SONA-TROL Can measure changes as small as .010 inches
SONA-TROL Now comes in many models with a variety of standard and optional features that allow you to configure the optimum NON contact sensing and control system for your application

Strip Bounce

Includes an exclusive circuit that allows use in applications where bouncing strips are likely to cause false measurements. This proprietary circuit detects false signals and rejects them allowing SONA-TROL to give proper take-up and Payoff smoothness regardless of strip bounce or sway.

ST-6 STANDARD FEATURES

Adjustable distance (from sensor) zero offset

Adjustable gain

Operating Range: 1.5 to 20 feet

Adjustable receiver sensitivity

Sensor head cable length: 10 feet

Oil-tight JIC controller enclosure

Electrically-isolated sensor head

An exclusive circuit, for use in loop control applications where bouncing strips are likely to cause false measurements. This proprietary circuit detects false signals and rejects them, allowing SONA-TROL to provide proper take-up or pay-out smoothness regardless of strip bounce or sway.

Built-in provisions for external control of measurement rate. This is often used in applications where SONA-TROL operates in conjunction with a programmable controller, an external computer, or one of the sequencers described below.

ST-6 OPTIONAL FEATURES

Dual sensors for wide sensing area

Multiple limit switch outputs (up to 20 per sensor)

Adjustable measurement repetition rate

Multiple sensor array sequencer (up to 128 sensors)

Digital or analog readout for object distance (from sensor) or height

Scaled readouts to measure the volume of liquids or solids contained in storage tanks

Wide range of voltage outputs

Current loop output: 0 to 10 MA or 4 to 20 MA

Sensor head cable length: up to 1000 feet

High resolution sensor head; detection distance range: 2 inches to 20 inches

To Order Call: 1-401-781-3904

SY-2 SYNCHRONIZER FEATURES

The SY-2 is a two-channel synchronizer that allows the use of two sensor heads in close proximity to each other. It does this by connecting the external measurement control input of two SONA-TROL ST-6 circuit boards. The SY-2 controls when transmit will occur, eliminating interference between controls.

SY-8 SYNCHRONIZER FEATURES

The SY-8 is an eight channel synchronizer that can control the sequence and measurement rate of up to eight SONA-TROL controls. This board also connects to the external rate control input of the ST-6 main circuit board.

OTHER OPTIONS

RMS Output Board

PID Output Board

Output: 0 to 10 MA or 4 to 20 MA

12 Bit Binary Output Isolated 5 to 15 V Logic

Analog Multiplier

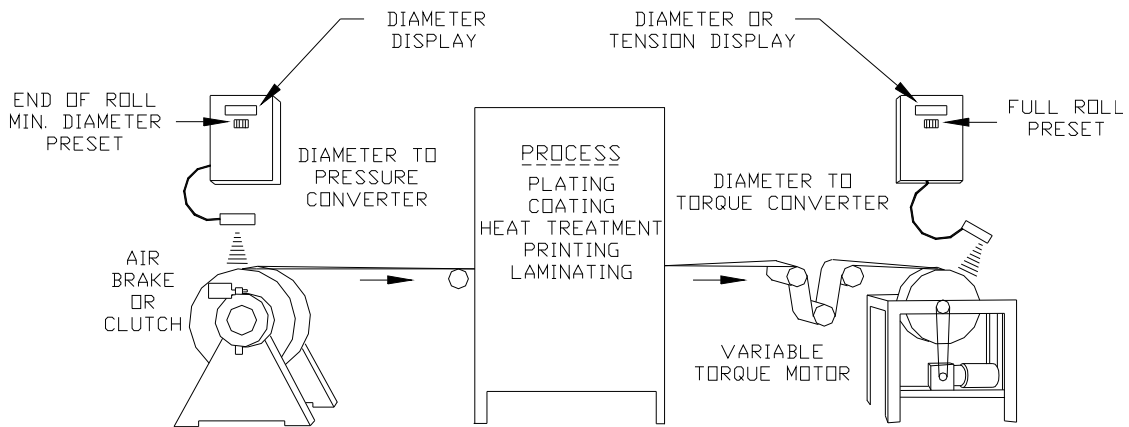
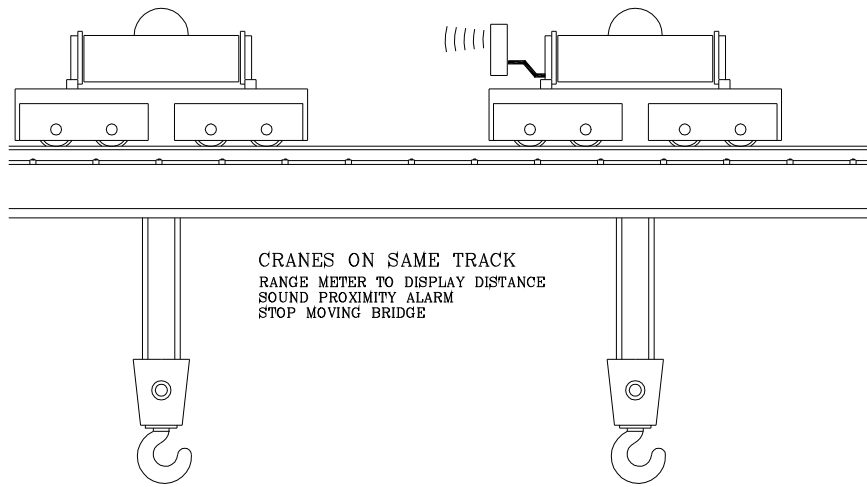
0 to 78 PSI Output

0 to 90 VDC Output

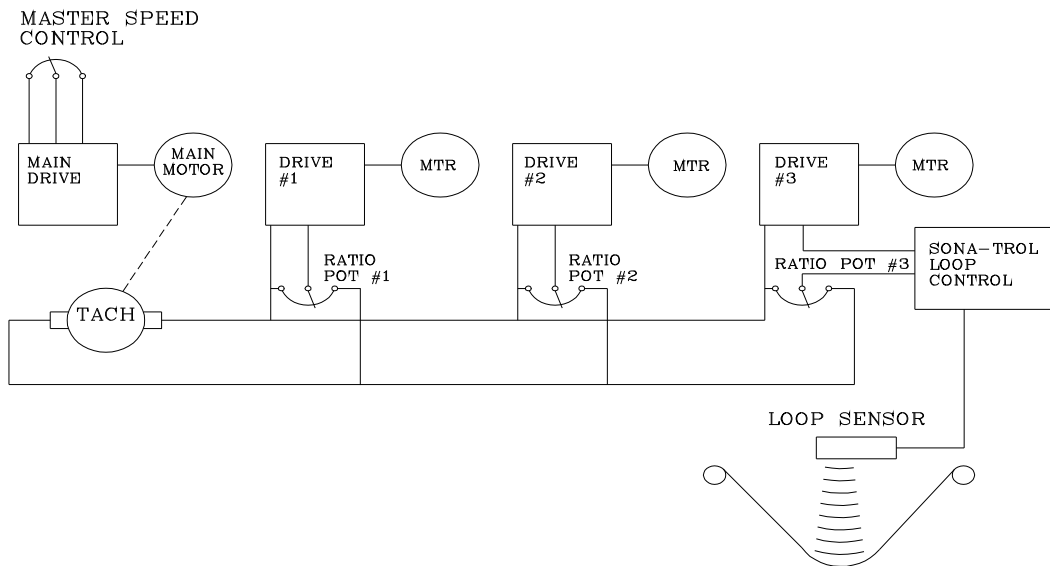
Acoustic Horn

Extended range sensor head 6 inches to 20 feet

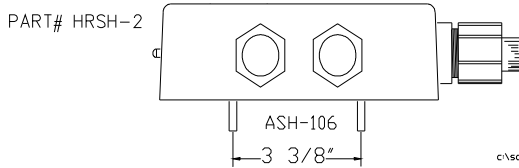
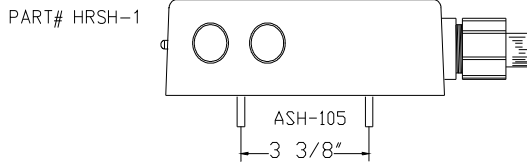
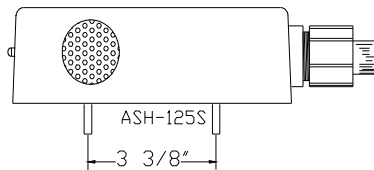
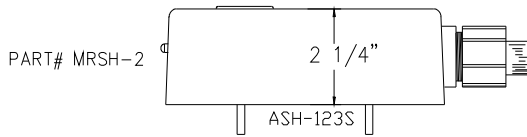
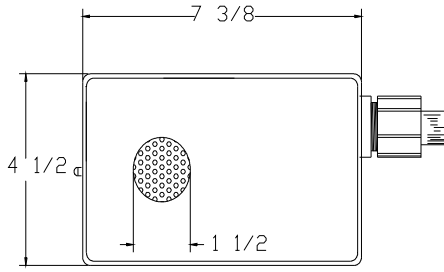
See EZ-Circuit Analog Function Modules catalog for additional options



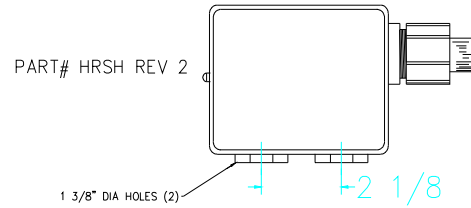
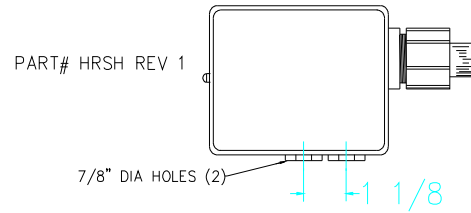
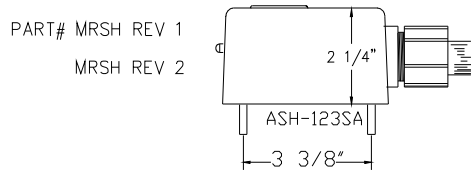
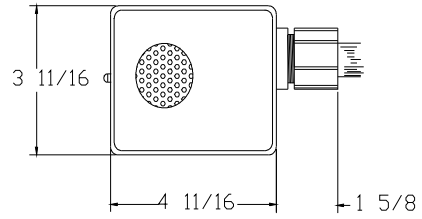
TACH-FOLLOWER SYSTEM



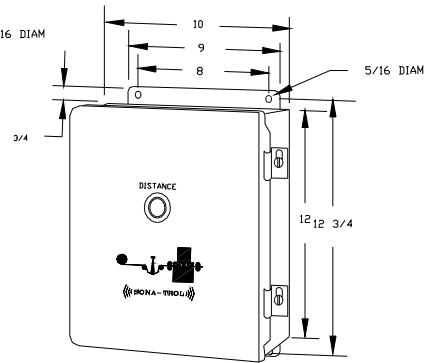
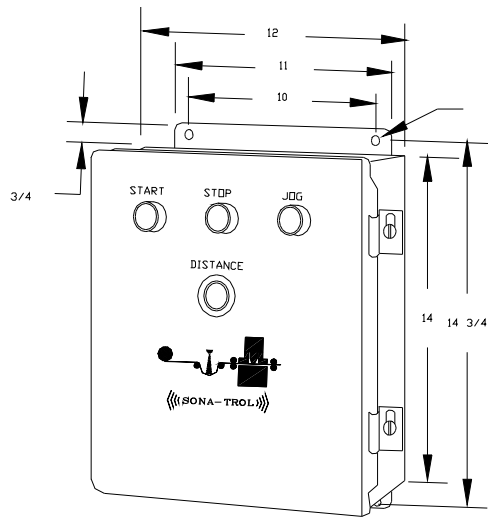
OLD STYLES



NEW STYLES



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Loop Control Options

| Part Number | Description | Model Number | |
|--------------------|---|-----------------------|--------------------|
| WE-STA-LFO1 | AC Line Filter | | LFO-1 |
| WE-STA-TAP1 | Percent Taper Option | | TAP-1 |
| WE-Sta-lb1t,lb1b | Additional Limits (Top Or Bottom) | | lb1-* |
| we-sta- | Limit Thumbwheel Set point Switch | | TW-1 |
| we-sta-8777 | Extra Length Of Sensor Cable | | 8777 |
| we-sta-v0230 | 220 VAC 50hz Line Option | | vo-230 |
| we-sta-rp1 | Remote Distance (Ten Turn) | | rp-1 |
| we-sta-rp2 | Remote Gain Pot (Ten Turn) | | rp-2 |
| we-sta | Payout / Take up Switch | | t-1 |
| we-sta-fr1 | Forward/Reverse switch (W/Drive Only) | | fr-1 |
| we-sta-utf1 | Upper Time Filter | | tf-1 |
| we-sta-mrsh2r1 | Additional Sensor Head | | mrsh-2/r1 |
| *mrsh-Rev.1, | 5"-20" Best For Diameter Measurement | | |
| we-sta-mrsh2r2 | Additional Sensor Head | | mrsh-2/r2 |
| mrsh-2-Rev.1, | 18"-20" Best For Loop Control | | |
| we-sta | Additional Sensor Head (W/Fixed Gain) | | mrsh-2 fg |
| we-sta-hrsh1 | Additional Sensor Head (High Resolution 3-24) | hrsh-1(e201/215) | |
| we-sta-hrsh2 | Additional Sensor Head (High Resolution 5-48) | hrsh-2(e201/150) | |
| we-sta-ma020 | 4-20 ma Output | mao-20 | |
| we-sta-ma010 | 0-10 ma Output | mao-10 | |
| we-sta-bob1 12 Bit | Binary Output Isolated 5-15 V Logic) | bob-1 | |
| we-sta-sy2msy-2 | Sequencer (Master Option) | sy2-m | |
| we-sta-sys | (Slave Option) | sy-s | |
| we-sta-sy8 | Sy-8 Sequencer | sy-8 | |
| we-sta-stand1 | Sensor Head Stand | stand-1 | |
| we-sta-rms1 | Rms Converter | rms-1 | |
| we-sta-raac1 | Rapid Air Adapter Cable | raac-1(old style) | |
| we-sta-raac2 | Rapid Air Adapter Cable | raac-2(new style) | |
| we-sta-raac2j | Rapid Air Adapter Cable | raac-2j(w/jog option) | |
| we-sta-mux1 | Analog Multiplier | mux-2 | |
| we-sta-div2 tci-3 | analog Divider | div-1 | |
| we-sta-bso1 | Base Speed Option (Auto/Man ssw & Meter) | bso-1 | |
| we-sta-aom1 | Analog Output Meter | aom-1 | |
| we-sta-dms1 | Digital Display (Scaleable) | dms-1 | |
| we-sta-cdd1 | Digital Display (Calibrator) | cdd-1 | |
| we-sta-ao1 | 0-78 PSI Air Output | ao-1 (i/p) | |
| we-sta-ao2 | 0-78 psi Air Output System | ao-2 | |
| we-sta-ao3 | 0-78 psi Air Output | ao-3 (e/p) | |
| we-sta-ea01 | Extra Analog Output (Normal) | ea0-1 | |
| we-sta-eaon1 | Extra Analog Output (Inverted) | eaon-1 | |
| we-sta-enc1210 | Extra Enclosure 12x10 | encl1210 | |
| we-sta-hvao1 | 0-90 VDC Output | hvao-1 | |
| we-sta- | Air Purge Box | aps-1 | |
| we-sta-ssxd1 | Stainless Steel Sensor | ssxd-1 | |
| we-sta-sssh1 | Stainless Steel Sensor Head | sssh-1 | |
| we-sta- | Stainless Steel Sensor Head w/Cap | sssh-w/cap | |
| we-sta-ah1 | Acoustic Horn For mrsh Type Transducers | ah-1 | |
| we-sta- | pid Output Option | pid-2 | |
| we-sta-df1 | Dust Filter For Transducers | df-1 | |
| pc-enc-10008 | Stainless Steel Sensor Encl. w/ss Sensor | we-sta-sum1 | Line Speed Summing |
| | sum-3 | | |

Super Dancer

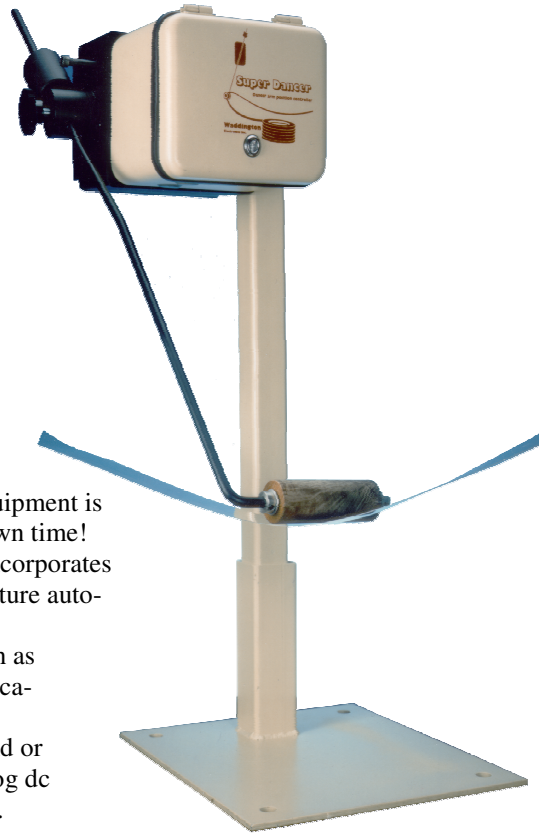
Electronic Dancer Arm

Position Controller

SUPER DANCER incorporates state of the art electronic circuitry which eliminates the use of a typical potentiometer. Most dancer arm applications use potentiometers which have a very short life span and cause very expensive down time. By eliminating the potentiometer there is virtually no physical wear and tear eliminating down time.

SUPER DANCER state of the art electronic circuitry allows easy adjustments of your loops zero to full speed set points. There is no need for repositioning the potentiometer to allow for a different loop height or changing dancer arm gears for a different RPM /inch speed range. These adjustments may be made while equipment is still in operation which eliminates even more costly down time! SUPER DANCER state of the art electronic circuitry incorporates PID output functions as a standard feature. The PID feature automatically intergrates to achieve minimum loop height changes and is a must for fast changing line speeds such as Roll Forming applications and high speed feeding applications!

SUPER DANCER can be applied in straightener, rewind or unwind applications, etc.. and supplies an isolated analog dc voltage to control virtually any DC or AC drive control.



Complete system including dancer arm assembly

WE-EZA-SD1

Basic Analog Output (0-10vdc) system (less dancer arm)

WE-SDA-SD1R

Optional Top or Bottom Limit Relay module

WE-EZA-LB2

Other models & options are available. Can be supplied with a DC or AC drive control as a complete turnkey package

Tension Control

... For paper, plastic, metal and textiles

Controls tension
Measures diameter
Controls all types of brakes and clutches
Replaces ratio calculators
Works with load cells if required
Taper Tension option
Versatile economical and reliable

Displays actual diameter to $\pm .01$ "
Features end of roll or minimum diameter presets
Easy to Install and interface with existing controls
Versatile, economical and reliable.
SONA-TROL is an efficient and low cost system for controlling tension and determining unwind and rewind diameters. SONA-TROL Diameter measurement systems can be used to compliment load cell based tension control systems. SONA-TROL Replaces diameter and ratio calculators and provides superior accuracy and provides diameter information at zero speed.

SONA-TROL combines sonar principles and technology with state of the art digital and analog electronics.
SONA-TROL is unaffected by material inconsistencies, dirt, lint and variations in line voltage. SONA-TROL replaces electromechanical follower arms and diameter calculators. Tension is controlled precisely from the point where the material comes off a roll to ensure constant tension despite out of round rolls.



TC-6 TENSION Control

STANDARD Capabilities:
Displays roll diameter to ± 0.1 "
(± 0.01 " optional)
Displays actual tension in pounds
End of roll or minimum diameter presets
Adjustable distance zero offset
Adjustable gain
Adjustable receiver sensitivity
6" to 20' operating range
10' sensor head cable
Electrically isolated sensor head

To Order Call: 1-401-781-3904

Oil-tight JIC enclosure

OPTIONAL FEATURES:

Limit switch outputs

Digital or analog readout of distance, height, or diameter of

AO-2 Air Output

EO-2 0-90 v DC output

Specifications:

Electrical Supply voltage 120 or 230 vac 25/12 mA

Pneumatic Input pressure up to 100 psi

Flow 23cv

Filtration Included

Lubrication not needed

Pneumatic output 0-100psig Max

Physical

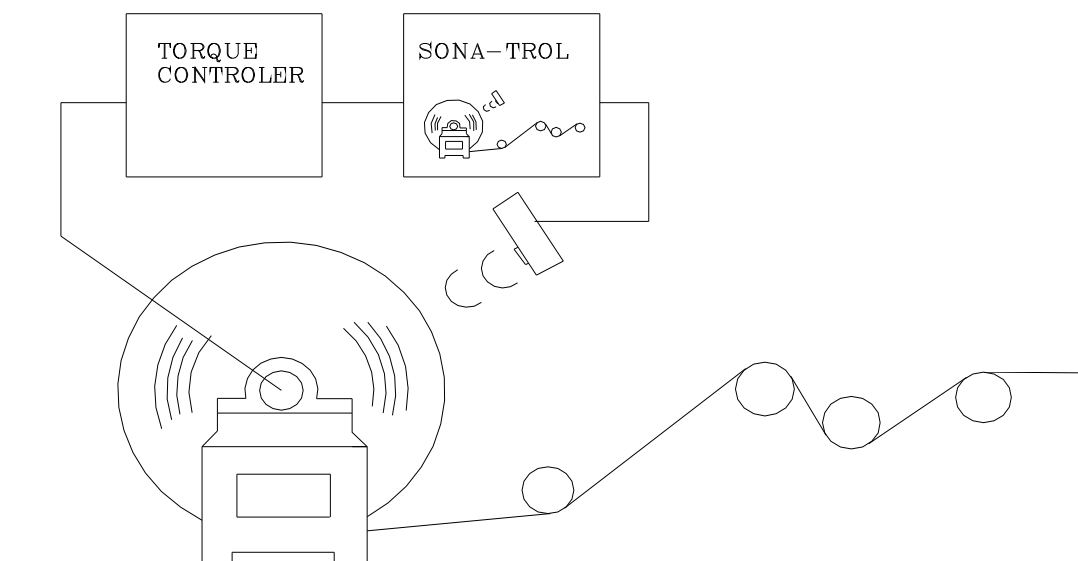
Air input 1/4 inch NPT

Air output 1/4 inch NPT

SONA-TROL DIAMETER TO TORQUE APPLICATION

THE OUTPUT OF THE SONA-TROL SENSOR CAN BE SENT INTO AN I/P CONVERTER OR ELECTRIC BRAKE OR CLUTCH CONTROLLER TO SET THE TORQUE PROPORTIONAL TO THE DIAMETER OF THE ROLL OF MATERIAL

EXCELLENT RESULTS HAVE BEEN OBTAINED WITH AIR, OIL, DC MOTOR, MAGNETIC PARTIAL, EDDY CURRENT AND FRICTION BRAKES AND CLUTCHES

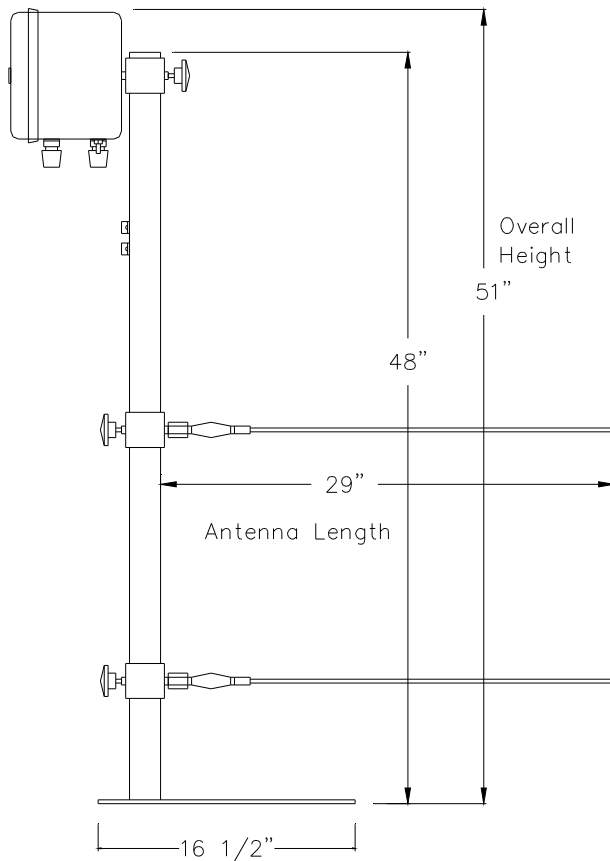


Probe-Trol

Touch probes with a difference
Probe-Trol is a variable speed touch probe system that finds the line speed and gives ultra smooth payoff and take-up

Photo-Trol

Non Contact Loop Light system
Ultra Smooth payout and take up
Finds line speed and holds it



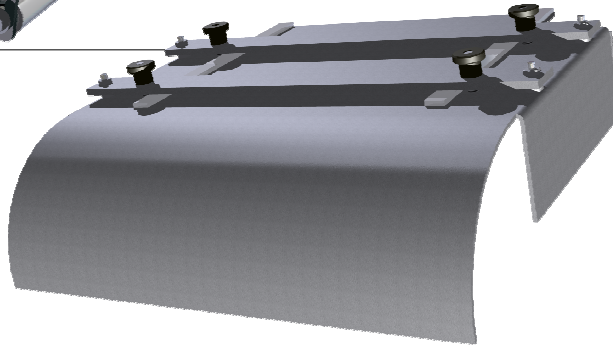
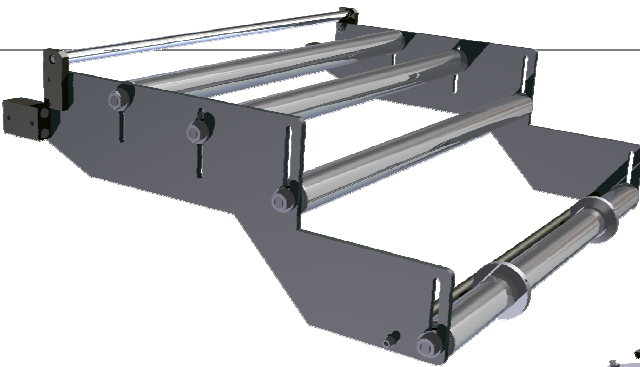
Base Dimensions:
16 1/2" X 14 1/2"

In the press room Consistency is the name of the game and inconsistent control of stock loops can cause all kinds of problems. Consistent loop size insures that your press feeder sees the same stock inertia and weight, this minimizes slippage. Keeping the stock from being bent or kinked after straightening insures that the material will travel freely through the die during the feed portion of the stamping cycle.

Upgrade your existing machinery with Probe-Trol for Smoother running payoff's and take-ups. No operator adjustments make it easy to use and the integrator type control insures smoother running machinery and more consistent loop size. Probe-Trol comes in Several models including models that come with Rapid Air adapter cables making installation as simple as plugging in the connector. Probe-Trol can also be custom configured for your application, and can be supplied with A.C. or D.C. motor speed controllers of any horsepower.

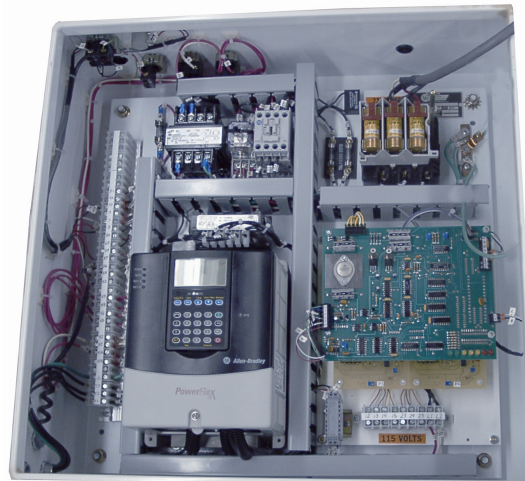
Additional components

- Adjustable guides**
- Cascade rollers**
- Machine bases**
- Custom solutions**



Need a complete packaged control system

Just tell us what you need.





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