



SUGAR MILL SECTION

YUTECH

YUTECH

SENSORS, ANALYZERS, TRANSMITTERS, INDICATORS AND CONTROLLERS

SUGAR MILLS:

DONNELLY CHUTE LEVEL, CANE BLANKET LEVEL, TOP ROLLER LIFT



SUGAR PROCESS & REFINERY:

pH, CONDUCTIVITY, BRIX AND CONSISTENCY BRIX, TEMPERATURE, CONDENSER CONTROL, CONTINUOUS BASKET FEED - CSD OR IRIS VALVE, CONSISTENCY BRIX BASED BATCH PAN CONTROL SYSTEM



BOILERS:

BAGASSE SILO LEVEL, TEMPERATURE AND DRAFT PRESSURE

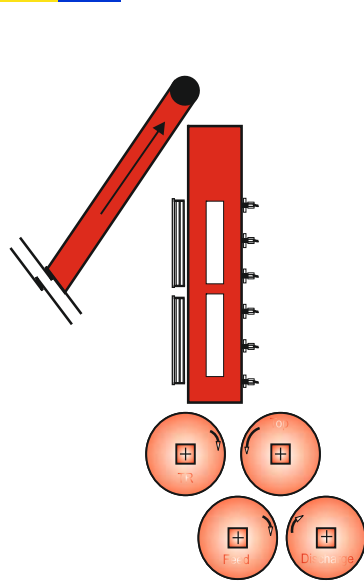


**COMPLETE AUTOMATION, INSTRUMENTATION, ANALYZER AND SENSOR SOLUTIONS
FOR ENTIRE SUGAR COMPLEX, UNDER ONE ROOF**

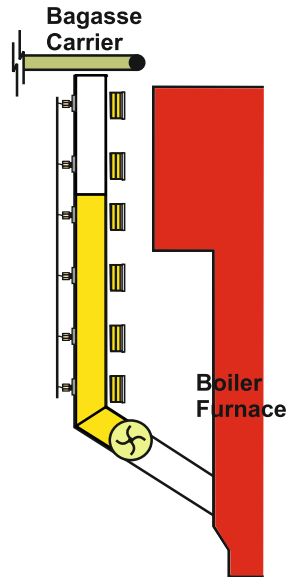
I MILLING I PROCESS I REFINERY I POWER PLANT I DISTILLERY I

**SUSTAINED GROWTH IN PRODUCTIVITY AND REVENUES
IMPROVED PRODUCT QUALITY
REDUCED CARBON FOOTPRINT**

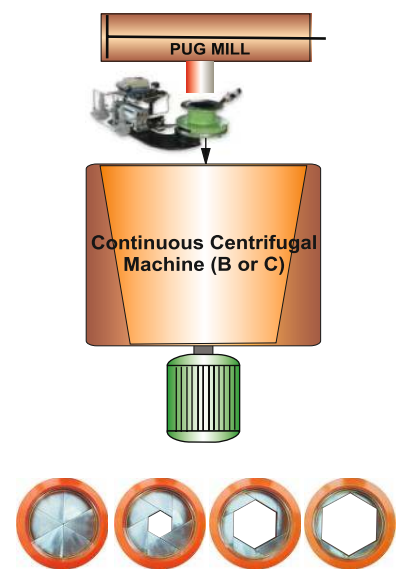
YUTECH - MAKE MORE MONEY



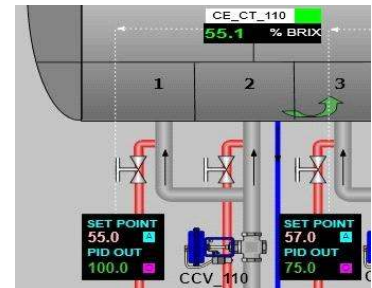
**IR LEVELSENSORS
FOR MILL DONNELLY CHUTES
H-E CANE BLANKET LEVEL AND
TOP ROLLER LIFT SENSORS**



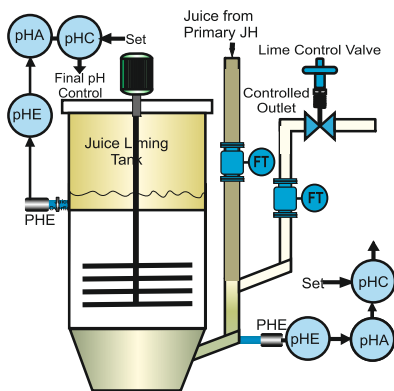
**IR LEVELSENSORS
FOR BOILER BAGASSE SILOS
THERMOCOUPLE TRANSMITTERS
DRAFT PRESSURE TRANSMITTERS**



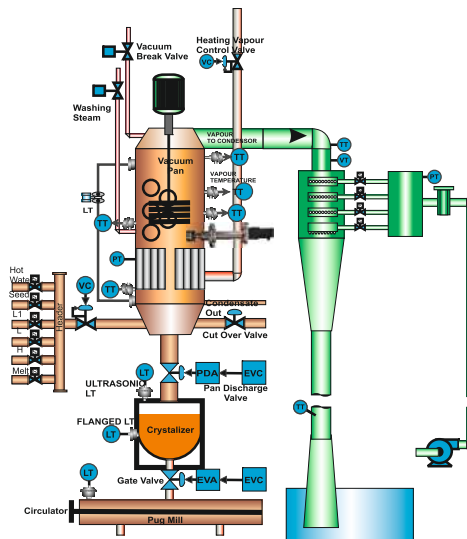
**CSD OR IRIS VALVE BASED
BASKET FEED CONTROLS**



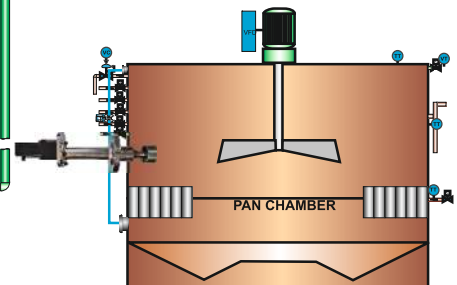
**BRUX ANALYZERS
AND CVP CONTROLS**



**pH ANALYZERS
AND CONTROLS**



**FLUID CONSISTENCY BRUX BASED
BATCH PAN
AND CONDENSERCONTROLS**

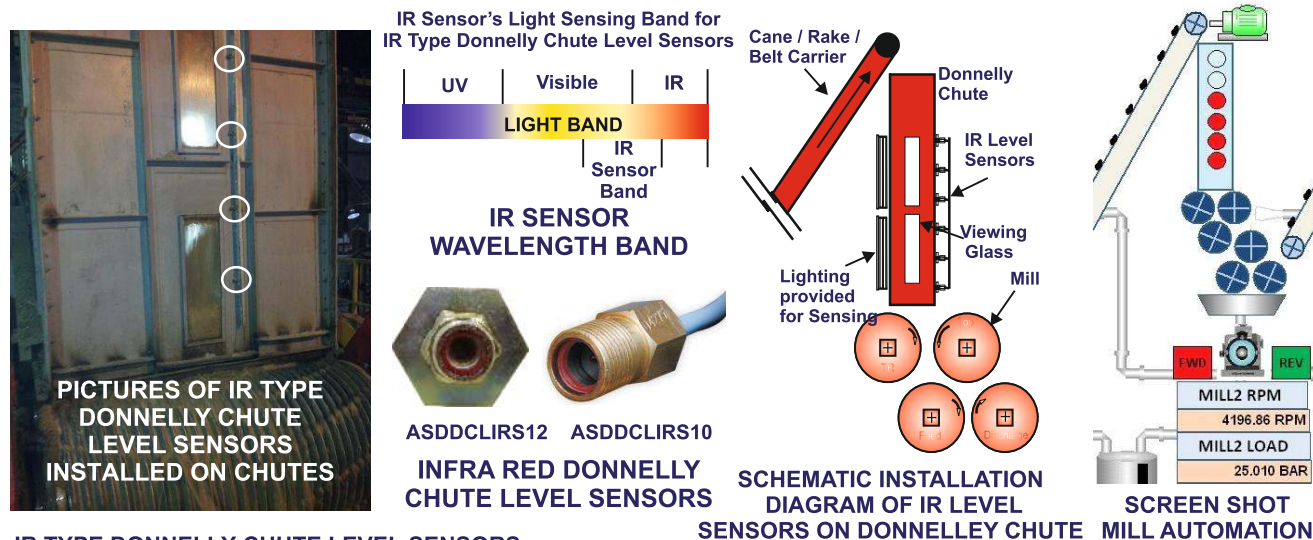


**FLUID CONSISTENCY
ANALYZERS BASED
VCP OR VKT CONTROLS**

ANALYZERS, INSTRUMENTS, SYSTEMS AND CONTROLS FOR:
SUGAR CANE MILLING
SUGAR PROCESS AND SUGAR REFINERY
PHARMA GRADE SUGAR PROCESS
CO-GENERATION POWER PLANT
DISTILLERY PLANT

LEVEL SENSING AND TRANSMISSION SYSTEM FOR SUGAR MILL DONNELLY CHUTE:

PLEASE SEE DATASHEET FOR PRODUCT CODE.



IR TYPE DONNELLY CHUTE LEVEL SENSORS:

- Sensing of Cane or Bagasse Level in Donnelly Chutes by Infra-Red Technology.
- 100% True Level Detection as IR Sensor Senses Accurate Level through Dirt, Juice Films on the Chute's inner wall, through Juice Mist created by Cane and Bagasse falling in the Donnelly Chute, through Bagasse Powder, and Hot Maceration Water Imbided in Bagasse.
- Raining Bagasse Compensation is Built-in the Sensors hence Level Sensing is accurate even through continuously falling Bagasse.
- Water-Proofing and Ingress Protected Enclosure is suited for Operation in Harsh Environments of the Donnelly Chutes and Bagasse Silos.
- IR Sensor Model ASDDCLIRS10 is used for sensing Levels in Donnelly Chute prior to Maceration and for sensing Levels in Bagasse Silo.
- IR Sensor Model ASDDCLIRS12 is suggested for Chute Level Sensing at higher Temperatures (up to 90°C) after Hot Water Maceration.
- No False Level Detections: In Conductivity Level Sensing Technologies, Sensor's contact with Juice Film, Juice Mist, Cane or Bagasse particles always lead to False Level Detection . YUTECH IR Sensors Completely Eliminate this Problem.
- IR Light is known for its Deep Penetration ability and hence is a Natural Choice for this Critical Sensing application.
- YUTECH's founder Mr. Arun Dalvi invented this Technique way back in 1986 & it is being used ever since for Chute Level Sensing.
- YUTECH IR Type Chute Level Sensing is now a Standard Practice in On-line Donnelly Chute and Bagasse Silo Level Detection.
- More than 500 Sugar Mills use YUTECH IR Sensors and Transmitters in India, Asia Pacific, West Asia and the African Continent.

DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM:

- 230 VAC Power Supply, 4-20mA, Separate Potential-Free Relay Output for each Level (IR6CR6 in Item Code denote 6 Levels, 1 Current Output and 6 Relay Outputs. For 8 Level System the this will change in Item Code as IR8CR8).
- System is available in 6, 8, 10, 12, and 16 Levels.
- IR or Capacitive type Level Sensing and Transmission System. Please see Product Code in the detailed Presentation available on our website.

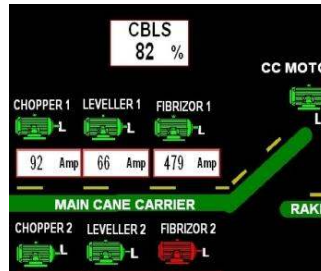
CAPACITIVE SENSORS AND TRANSMISSION SYSTEM:

- Sensing of Cane or Bagasse Level in Donnelly Chutes by Capacitive Technology.
- Raining Bagasse Compensation is Built-in the Sensors hence Level Sensing is accurate even through continuously falling Bagasse.
- Built-in Sequential operation compensate for Bagasse Pockets / Juice Films.
- The legendary Rugged and Reliable YUTECH Engineering.

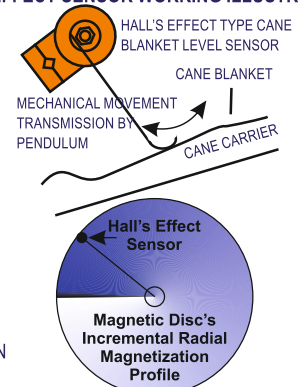


**YUTECH****HALL'S EFFECT TYPE CANE BLANKET LEVEL SENSORS, INDICATOR AND TRANSMITTER:**

PLEASE SEE DATASHEET FOR PRODUCT CODE.

HALL'S EFFECT SENSOR WORKING ILLUSTRATION**TRANSMITTER****CBL SENSORS**

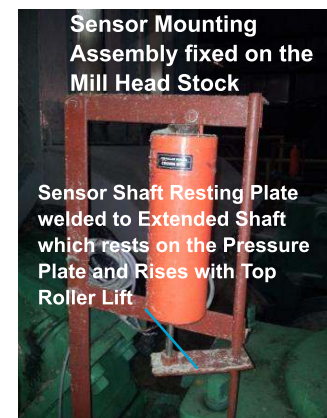
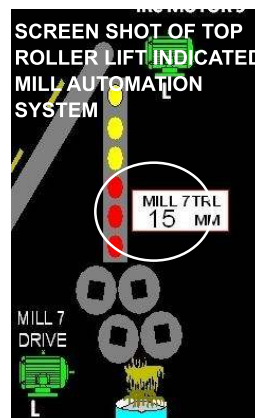
SCREEN SHOT OF HALL'S EFFECT TYPE CANE BLANKET LEVEL SENSOR IN MILL AUTOMATION



- Cane Level in Carrier is Primarily Sensed by a Pendulum riding on Cane Blanket which Mechanically Transmits the actual Blanket Level or Height to a Contact-less Hall's Effect Sensor. Hall's Effect Technology which is based on Electromagnetic Principle, thus Electronic Sensing is essentially Contact-less where the Sensor's Wiper moves over a Radial Strip of varying magnetism and thus being induced with a Voltage corresponding to that position which is then transmitted as Cane Blanket Level.
- 100% True Level Detection through Shocks and Vibrations.
- Extremely Rugged, Heavy Duty, Water-Proof, Ingress Protected Enclosure Protects the Sensor against all external abuse of being hit by Flying Cane pieces, Moisture, Dirt, Juice Mist and Wash Water.
- YUTECH's founder Mr. Arun Dalvi is the originally invented this Technique way back in 1986 and upgraded to Hall's Effect in 2006.
- More than 400 Sugar Mills use YUTECH CBL Sensors and Transmitters in India, Asia Pacific, West Asia and the African Continent.
- Specs: 230 VAC Power Supply, Input: CBL Sensor Dual Channel, Output: Dual Channel 4-20mA.

MILL TOP ROLLER LIFT SENSOR AND TRANSMITTER (Hall's Effect Or Ultrasonic Sensing Option):

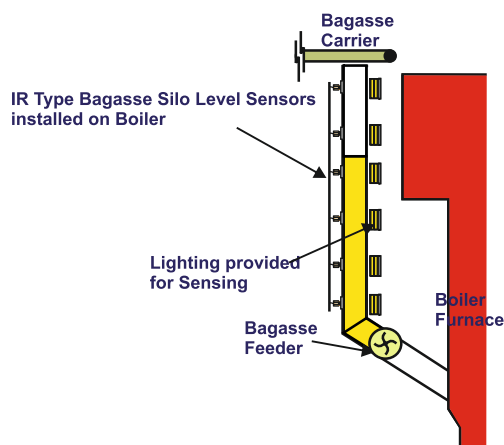
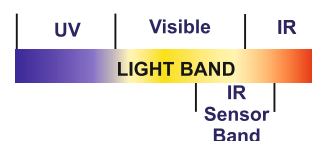
PLEASE SEE DATASHEET FOR PRODUCT CODE.

**TRANSMITTER****TRL SENSOR**

- Mill Top Roller Lift is Sensed by a Primary Telescopic Sensor whose Sensing End Rests on Mill Pressure Plate, which Mechanically Transmits the actual Lift to a Contact-less Hall's Effect Sensor. Hall's Effect Technology which is based on Electromagnetic Principle, thus Electronic Sensing is essentially Contact-less where the Sensor's Wiper moves over a Radial Strip of varying magnetism and thus being induced with a Voltage corresponding to that position which is then transmitted as Top Roller Lift (4-20mA from Indicator).
- In Ultra-Sonic Type Sensor, the Primary Sensor's Mechanical Movement is sensed by an Ultrasonic Sensor, which is then transmitted as Top Roller Lift (4-20mA from Indicator). Ultrasonic Sensing was added in 2019.
- Very Rugged, Heavy Duty, Water-Proof, Ingress Protected Enclosure provides 100% True Lift Detection even during Shocks and Vibrations generated by Full Load Milling Operation the Enclosure is very well capable of Protecting the Sensor against all external abuse of being hit by Cleaning Sticks by Workers trying to remove stuck Bagasse and also from Direct Hot Wash Water / Steam Spray during Mill Cleaning. Needless to say, it also Protects the Sensor against Moisture, Dirt, Juice Mist and Powdered Bagasse Particles. YUTECH's founder Mr. Arun Dalvi is the originally invented this Technique way back in 1992 and upgraded to Hall's Effect in 2006,
- Specs: 230 VAC Power Supply, Input: TRL Sensor Dual Channel, Output: Dual Channel 4-20mA.

**YUTECH****IR LEVEL SENSING AND TRANSMISSION SYSTEM FOR BOILER BAGASSE SILO:**

PLEASE SEE DATASHEET FOR PRODUCT CODE.

**SCHEMATIC DIAGRAM:
INFRA RED DONNELLY CHUTE
LEVEL SENSORS INSTALLATION****LEVEL SENSING AND
TRANSMISSION SYSTEM****ASDDCLIRS12 ASDDCLIRS10****INFRA RED DONNELLY
CHUTE LEVEL SENSORS**IR Sensor's Light Sensing Band for
IR Type Donnelly Chute Level Sensors**IR SENSOR
WAVELENGTH BAND**

- Sensing of Cane or Bagasse Level in Bagasse Silos by Infra-Red Technology.
- 100% True Level Detection as IR Sensor Senses Accurate Level through Dirt, Juice Films on the Silo's inner wall, through Bagasse Powder and Bagasse falling in the Bagasse Silos.
- Raining Bagasse Compensation is Built-in the Sensors hence Level Sensing is accurate even through continuously falling Bagasse.
- Water-Proofing and Ingress Protected Enclosure is suited for Operation in Harsh Environments of the Donnelly Chutes and Bagasse Silos.
- IR Sensor Model ASDDCLIRS10 and ASDDCLIRS12 both can be used for sensing Levels in Bagasse Silo.
- No False Level Detections: In Conductivity or Capacitive Level Sensing Technologies, Sensor's contact with Juice Film, Juice Mist, Cane or Bagasse particles, or Bagasse Powder always lead to False Level Detection. YUTECH IR Sensors Completely Eliminate this Problem.
- IR Light is known for its Deep Penetration ability and hence is a Natural Choice for this Critical Sensing application.
- YUTECH's founder Mr. Arun Dalvi invented this Technique way back in 1986 & it is being used ever since for Chute Level Sensing.
- YUTECH IR Type Chute Level Sensing is now a Standard Practice in On-line Donnelly Chute and Bagasse Silo Level Detection.
- More than 500 Sugar Mills use YUTECH IR Sensors and Transmitters in India, Asia Pacific, West Asia and the African Continent.
- Specs: 230 VAC Power Supply, 4-20mA, Separate Potential-Free Relay Output for each Level (Last Digit in Item Code denote number of Levels in the Indicator Cum Transmitter), Modbus TCP/IP on Ethernet.

DRAFT RANGE PRESSURE AND VACUUM TRANSMITTERS:**Draft Range Pressure &
Vacuum Transmitter**

Product Code	Input	Output	Power Supply	Range
ASDDTDC2WC1M	6mm Diameter Pressure Port	4-20mA on 2-Wire Transmitter	24VDC	0 - (+/-)1000mmWC, -500 to 500 mmWC
A12DTDC2WC1FM	6mm Diameter Pressure Port	4-20mA on 2-Wire Transmitter	24VDC	0 - (+/-)1000mmWC, -500 to 500 mmWC

Draft Pressure Transmitter can be used to measure Air / Safe Gas Pressures at room temperature. Non Wetted Diaphragm Type. Available in Panel and Field Mounted Enclosures.

THERMOCOUPLE TEMPERATURE TRANSMITTERS:**TC Temperature
Transmitter**

Product Code	Input	Output	Power Supply	Range
AISODCTKC1S	TC K-TYPE	4-20mA (Galvanically Isolated)	24VDC	-260 to 1370°C
A2WTKC1S	TC K-TYPE	4-20mA	24VDC	-260 to 1370°C
A12TTDCTCC1FM	TC K-TYPE	4-20mA	24VDC	-260 to 1370°C

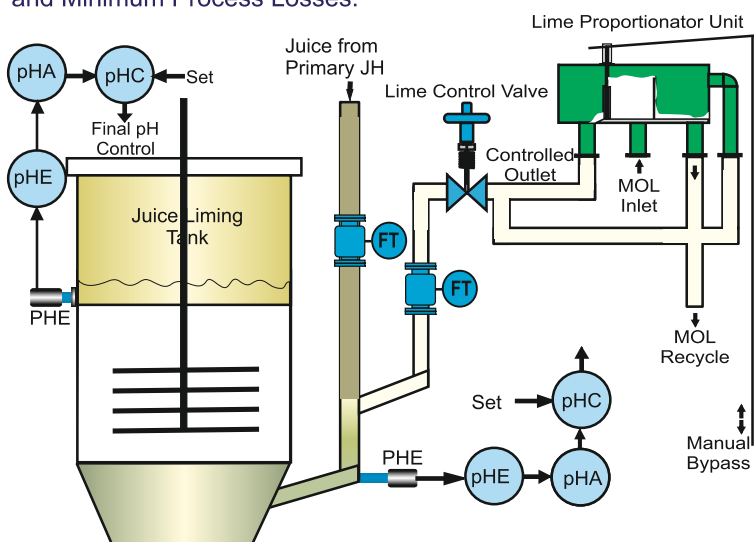
Isolating Temperature Transmitter for Thermocouples J, E, T, N, B, S and R are made to order and the Item Code (IC) can be changed by mentioning the TC Type as Item Code for K-Type AISODCTKC1S thus Item Code for S-Type AISODCTSC1S. Please send Enquiry to sale@yutech.in.

pH ANALYZER and pH CONTROL SYSTEM:

PLEASE SEE DATASHEET FOR PRODUCT CODE.

pH Analyzer and Electrode combination targets sensing of Hydrogen Ion Concentration (pH) which defines the Acidity or Alkalinity of Liquids or Syrups. YUTECH pH Analyzer works with any Combination Type pH Electrode and can accept RTD PT-100 Signal either from Separate Sensor or RTD embedded in pH Electrode.

pH Analyzer plays a crucial role in Sugar Process Automation and helps in Stabilizing the overall Sugar Process as well as Sugar Colour and Quality. Accurate pH reading ensures better Process Control and helps to maintain constant Massecuite / Melt / Molasses / Syrup pH thus results in Better Sugar Colour and Quality and Production Efficiency and Minimum Process Losses.



pH Analyzer



**pH Analyzer
and Controller**

SCHEMATIC DIAGRAM AND SCREEN SHOT: LIMING AUTOMATION OR pH CONTROL SYSTEM

pH Analyzer's Innovative Features for Ease of Operation and to save on Installation Cost and Materials:

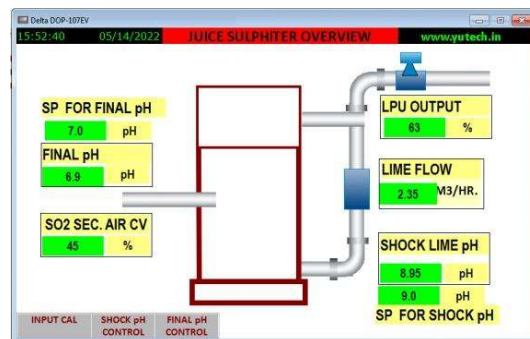
- Built-in pH Equation to Detect Electrode Decay: to Accurately Sense and Analyze change in Electrode Signal Strength and raise alarm in case of Electrode Decay to replace Electrode before it starts giving false signals.
- Built-in Temperature Compensation: to Accurately Sense, Analyze, Calculate and Derive pH within a Band of varying Temperature.
- Built-in PID Controller: Highly Accurate Fuzzy Logic PID Controller developed for Process Control and Flow Control Applications.
- Built-in 3-Point Auto/Manual Station to Select Control Output with Selector Switch for Local PID Output or DCS /PLC PID Output. or Manual Output for Trouble Shooting. This feature simplifies installation by eliminating need for installing a Junction Box and Extra wiring.

pH Analyzer Technical Specifications:

- Power Supply: 85-265VAC, 50-60Hz
- Enclosure: IP67 Field Mounted Dust and Moisture Proof
- Input: Ch-1: Signal from pH Electrode, Ch-2: RTD
- Calibration: From Keyboard / USB PC Access App
- Range: 0-14pH; Temperature Compensated Range: 2-14pH
- Accuracy: 0.1%
- Display: LED
- Output: Ch-1: 4-20mA Temperature Compensated pH;
- Output: Ch-2: 4-20mA PID / Auto-Manual; 2 Relay Outputs
- Communication: Ethernet - Modbus TCP/IP

pH Control System:

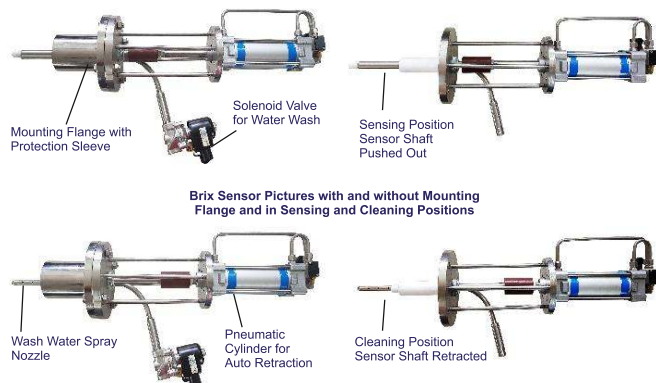
- Lime Proportionator Unit for Manual Operation.
- V-Notch Valve with Special Liming Attachment for Automatic Liming Control.
- Uses Built-in Fuzzy PID Logic or External Control Signal from DCS.



pH Control on PLC / DCS

BRIX ANALYZER:

PLEASE SEE DATASHEET FOR PRODUCT CODE.



**AUTO RETRACTABLE SELF CLEANING AND
WASHING BRIX SENSOR**



**BRIX ANALYZER WITH
AUTO PURITY
COMPENSATION**



**BRIX ANALYZER CUM
CONTROLLER WITH
AUTO PURITY
COMPENSATION**

FLUID CONSISTENCY-BRIX ANALYZER:

PLEASE SEE DATASHEET FOR PRODUCT CODE.



**FLUID CONSISTENCY BRIX ANALYZER CUM
CONTROLLER WITH AUTO LINEARIZATION PURITY
COMPENSATION**



FLUID CONSISTENCY-BRIX SENSOR

Brix Analyzer Applications:

In Sugar Process and Refinery for Measurement of Massecuite / Syrup Brix:

- Horizontal Continuous Vacuum Pans
- Molasses Conditioners, Sugar Melters, Crystallizers and Pug Mills

Fluid Consistency-Brix Analyzer Applications:

In Sugar Process and Refinery for Measurement of Massecuite / Syrup Brix:

- Batch type Vacuum Pans, Vertical Continuous Vacuum Pans (VCP / VKT), and Continuous Vacuum Pans
- Molasses Conditioners, Sugar Melters, Crystallizers and Pug Mills
- Open Pans and Boiling Vessels for Jaggery or Muscovado Production and in Khandsaris

In Distilleries and Breweries for Brix Measurement of Media like Liquor / Molasses / Ferment / Spentwash:

- Fermentation Tanks, Maturation Vessels, and Thickening Vessels
- Last Body of Spentwash Evaporators



YUTECH

YUTECH Brix Analyzers and Brix Sensors, target sensing of Suspended Solid Content (Brix) in Slurries or Syrups like Sugar Masecuite, Sugar Syrup, Sugar Melt and Molasses. Brix Analyzer plays a crucial role in Sugar Process Automation and helps in Stabilizing the overall Sugar Process.

YUTECH Fluid-Density-Brix Analyzer and Motorized Fluid-Density Sensor targets sensing the Fluid-Density of Slurries or Syrups like Sugar Masecuite, Sugar Syrup, Sugar Melt and Molasses. Fluid-Density-Brix Sensor, Senses Power consumed by Sensing Motorized Stirrer, inserted into the Vessel / Pan. The YUTECH Fluid-Density-Brix Analyzer and Control System is a State-of-the-Art System which Accurately Senses variation in Power and it's Built-in Fuzzy Logic, Analyzes, Calculates and Derives **Fluid-Density-Brix** with Fluid Level Compensation.

The YUTECH Intelligent Programmable Analyzer Product Family is based on State-of-the-Art System A15 Platform.

AUTO RETRACTABLE SELF CLEANING BRIX SENSOR (PRODUCT CODE: ASDBSRCW1EV03):

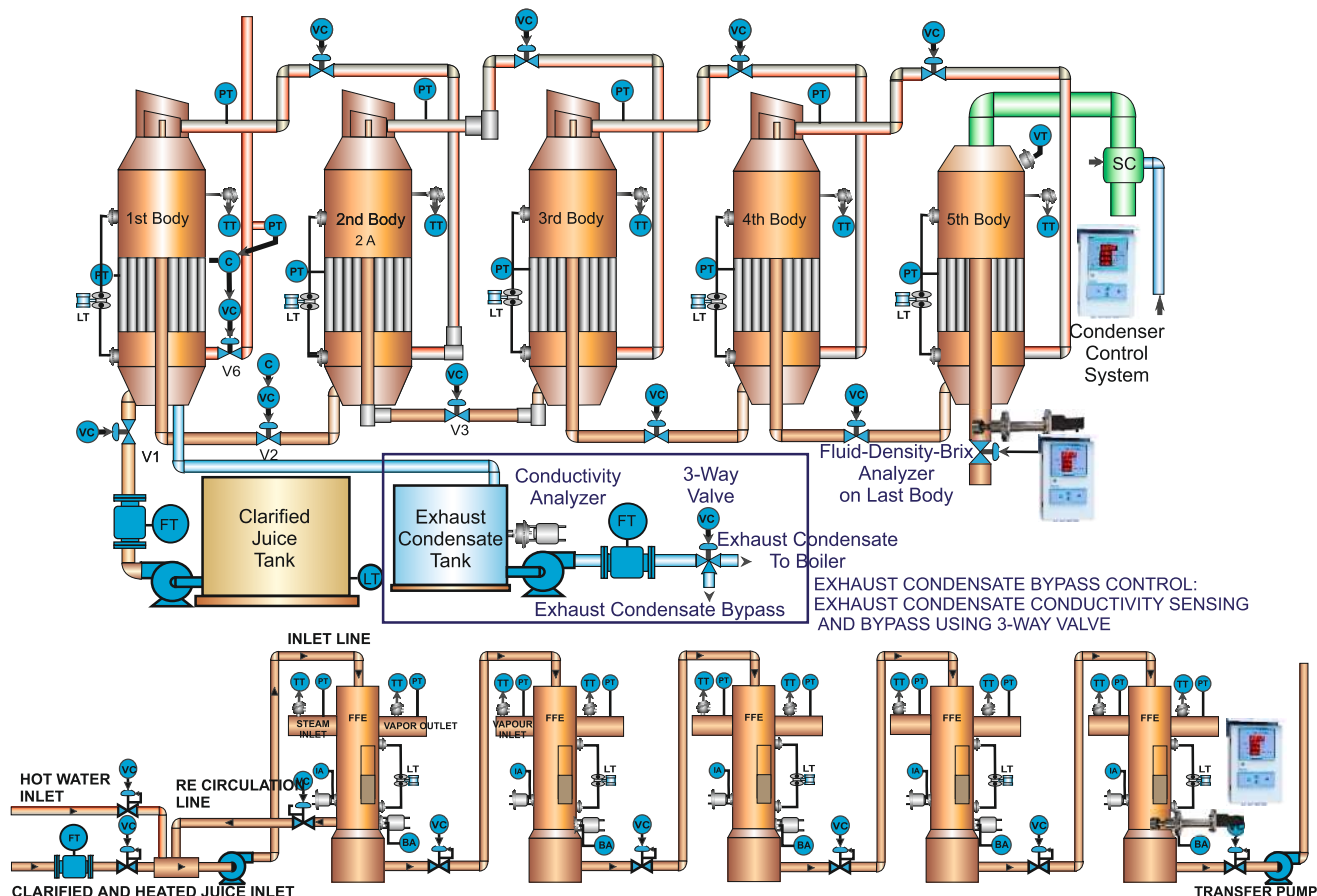
- Brix Sensor's Stainless Steel Electrode works on High Frequency Signal from the Brix Analyzer. And senses the Water Content in the Media with Stainless Steel Wash Water Spray Tube which forms the Reference Electrode.
- Temperature Compensation is achieved by RTD PT-100 Sensor's signal in the Brix Analyzer's Brix Algorithm.
- Sensor Electrode is coupled to a Pneumatic Cylinder for Automated Self Cleaning.

MOTORIZED FLUID-DENSITY SENSOR (PRODUCT CODE: ASDMFDS24DCC01):

- Motorized Fluid-Density Sensor's Stirrer is inserted in the Fluid whose Fluid-Density is to be measured, and as the Fluid Thickens or Dilutes, it's Physical Resistance posed to the Stirrer varies, the Motorized Fluid-Density Sensor's Power Demand also varies with this and it is measured by the Analyzer and converted into Fluid-Density-Brix.

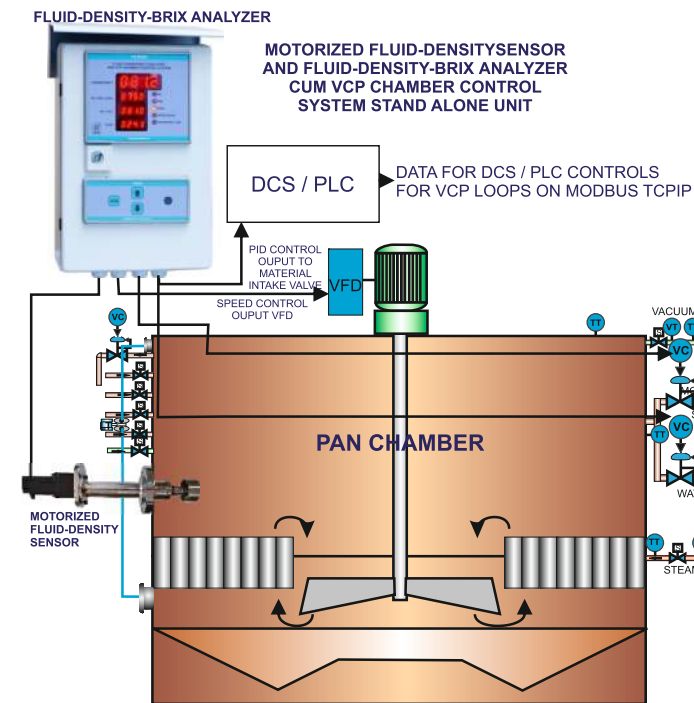
PLEASE SEE THE PRODUCT PRESENTATION AND DATASHEET FOR DETAILED SPECIFICATIONS.

RIISING FILM EVAPORATOR / FALLING FILM EVAPORATOR AUTOMATION USING FLUID-DENSITY-BRIX ANALYZER AND MOTORIZED FLUID-DENSITY SENSOR:

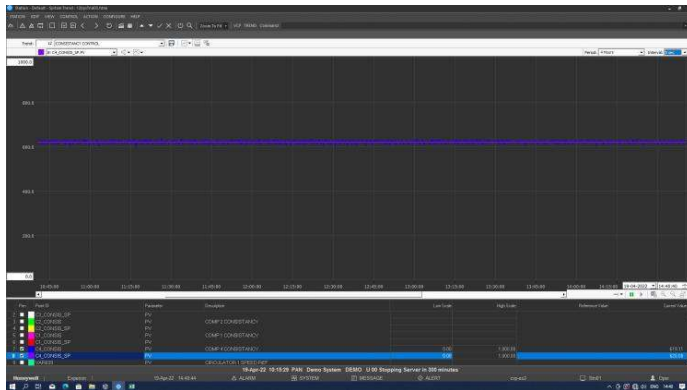


SCHEMATIC DIAGRAM: FALLING FILM EVAPORATOR AUTOMATION

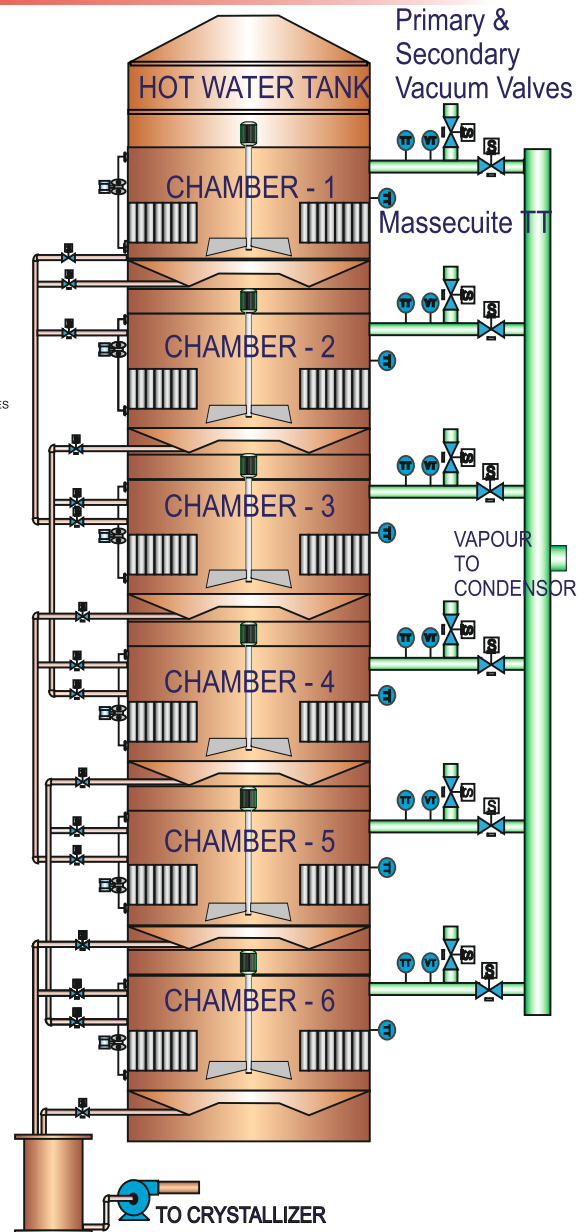
FLUID-DENSITY-BRIX ANALYZER CUM CONTROLLER AND MOTORIZED FLUID-DENSITY SENSOR BASED VERTICAL CONTINUOUS PAN AUTOMATION:



**MOTORIZED FLUID-DENSITY SENSOR AND
FLUID-DENSITY-BRIX ANALYZER CUM CONTROL SYSTEM
USED FOR VCP CHAMBER BRIX CONTROL
STANDALONE SYSTEM WITH PLC / DCS**



SCREEN SHOT: FLUID CONSISTENCY ANALYZER AND CONTROLLER OUTPUT GRAPH



AUTOMATION SCHEMATIC DIAGRAM: VKT OR VERTICAL CONTINUOUS VACUUM PAN WITH STIRRER USING YUTECH FLUID CONSISTENCY ANALYZER AND YUTECH VCP ALGORITHM

VERTICAL CONTINUOUS PAN INDIVIDUAL CHAMBER CONTROL:

- Fuzzy Logic Control based PID Controller for Material Intake Control based on Fluid-dENSITY-Brix.
- Automatic Water Intake Based on Fluid Consistency Brix.
- Level based Circulator Speed Control.

PLEASE VISIT OUR WEBSITE FOR DETAILED PRESENTATION AND DATASHEET OF YUTECH ANALYZERS, TRANSMITTERS, SENSORS, COMMUNICATIONS, CONTROLLERS, IRIS VALVES, PLC/DCS PROJECTS AND PROCESS AUTOMATION SYSTEMS. WEBSITE: www.yutechautomation.com AND www.yutech.in.



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FLUID-DENSITY-BRIX ANALYSER CUM CONTROLLER AND MOTORIZED FLUID-DENSITY SENSOR BASED BATCH PAN AUTOMATION:

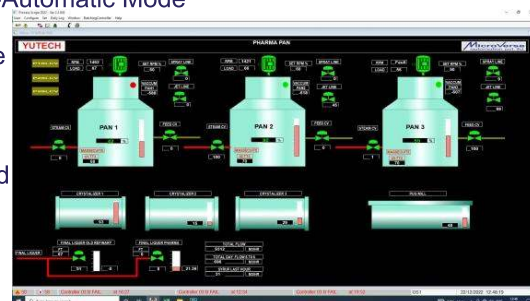
We target to achieve maximum throughput in the same Batch Time by proper control of process parameters to improve process dynamics resulting in consistent maximum capacity production, with the best possible grain size and sugar quality. The following Procedures are performed in a Controlled Manner.

Salient Features:

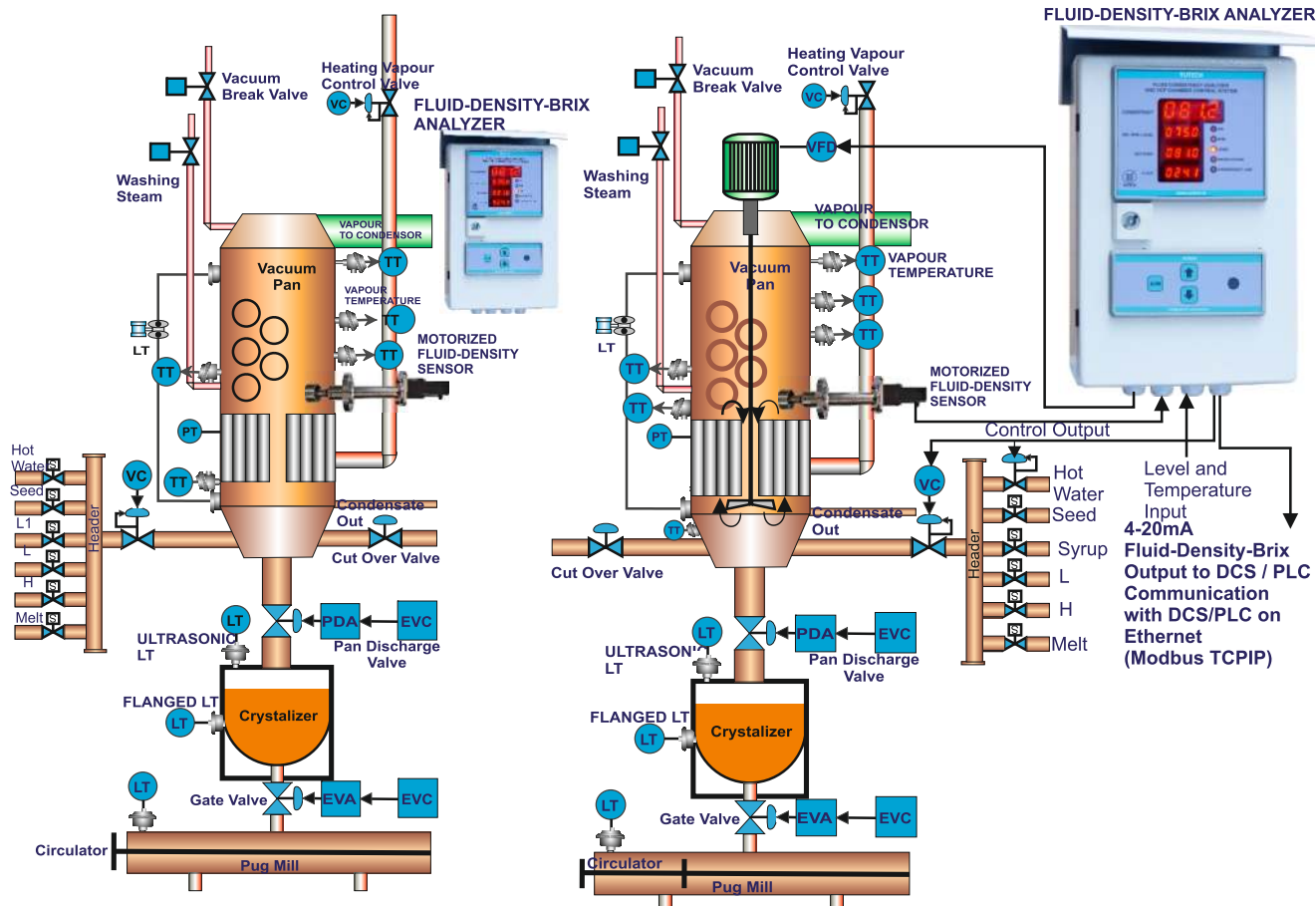
- Completely or Partially Automated Batch Operations starting with the press of the START Button.
- Vacuum Valves Open Signal and/or Indication generated automatically. Valves will open Automatically if Control Valve is installed else Pan Attendant will open the Valve Manually after seeing the Vacuum Valve OPEN Indication.
- Automatic Intake of Molasses / Syrup / Water as per Level and Brix or Consistency Set Point.
- Automatic Mechanical Circulator / Stirrer Speed Control with respect to Massecuite Level.
- Vacuum & Steam Valves Cut-Over Valve and Pan Drop Valve Indication and Control in Auto / Semi-Auto Mode.
- Indication and Control for all Pan Operations in Automatic / Semi-Automatic Mode
- Crystallizer, Pug-Mill Level Interlocks
- Complete Pan Cycle Control in Automatic / Semi-Automatic Mode

PURPOSE OF PAN AUTOMATION SYSTEM:

- Achieve proper Massecuite Turbulence (With Stirrer) and Heat Transfer with Controlled Consistency thus Increase Efficiency and Output per Batch thus obtain Optimum Capacity Utilization and Reduce Production Cost.
- Increase throughput per Batch.
- Increase number of Pan Strikes.
- Ultimately **INCREASE PROFITABILITY**

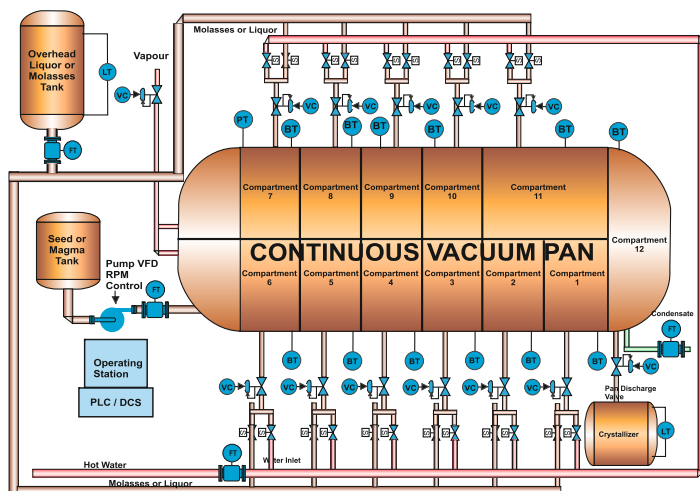


SCREEN SHOT: FLUID CONSISTENCY BASED
BATCH PAN CONTROL (DCS / PLC)

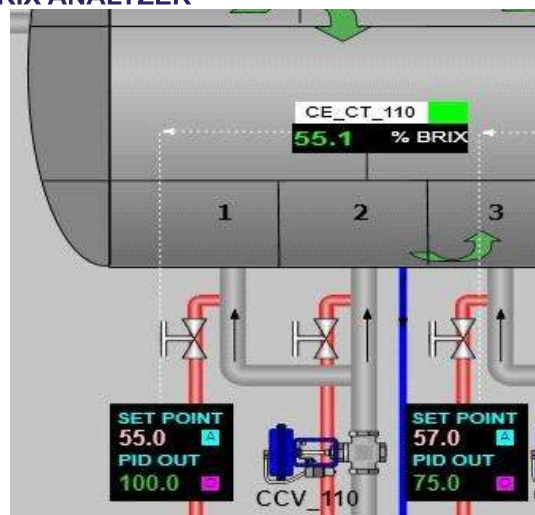


AUTOMATION SCHEMATIC DIAGRAM: BATCH TYPE VACUUM PAN (CONVENTIONAL AND WITH CIRCULATOR) USING YUTECH FLUID-DENSITY-BRIX ANALYZER AND YUTECH PAN-CON ALGORITHM.

**CONTINUOUS VACUUM PAN AUTOMATION:
BASED ON FLUID-DENSITY-BRIX OR HIGH FREQUENCY BRIX ANALYZER**

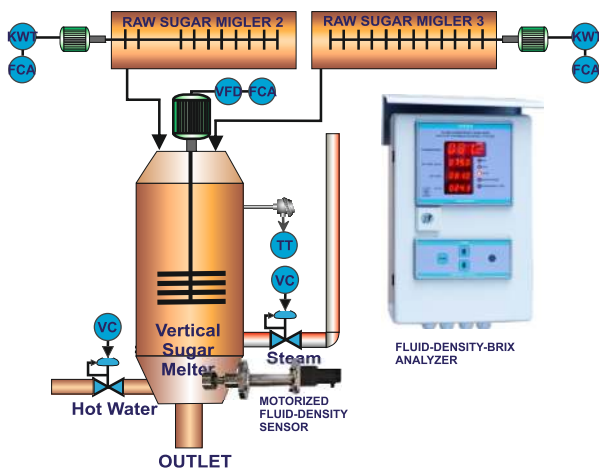


SCHEMATIC DIAGRAMS: CVP AUTOMATION

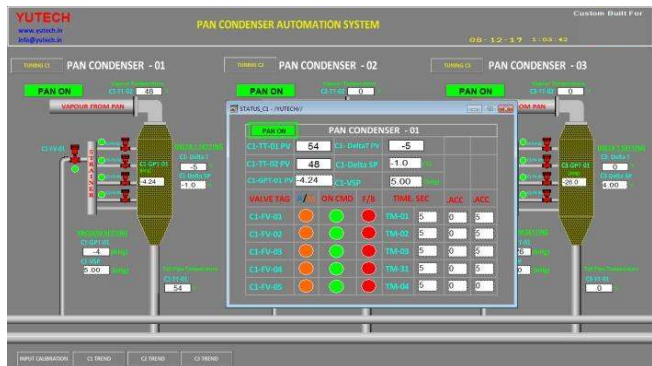


SCREENSHOT: CVP CHAMBER

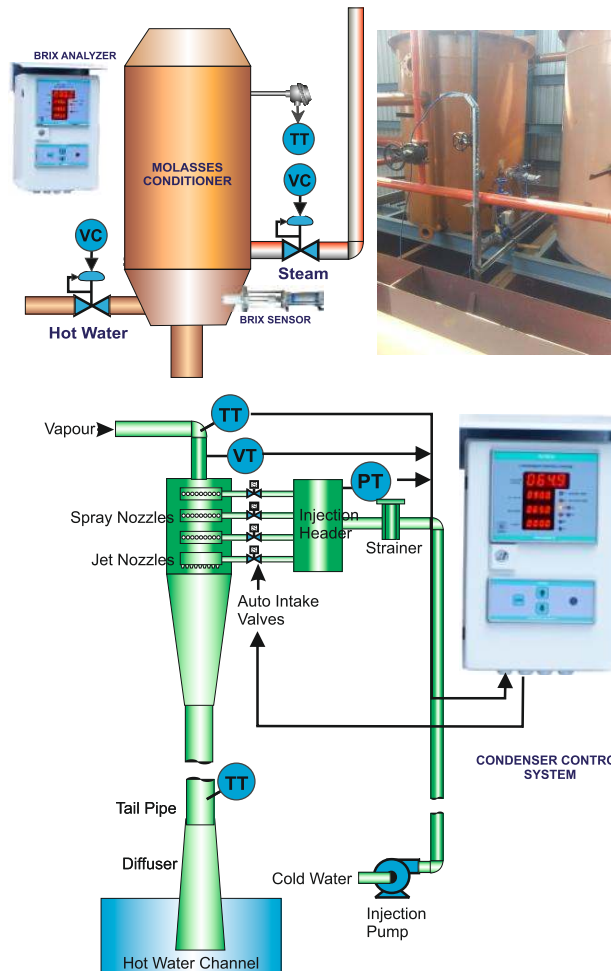
**SUGAR MELTER AUTOMATION:
FLUID-DENSITY-BRIX ANALYZER AND FLUID-DENSITY
SENSOR BASED CONTROL SYSTEM**



**AUTOMATIC MULTIPLE ENTRY CONDENSER AND
CONDENSER AUTOMATION:
CONDENSER CONTROL SYSTEM AS STANDALONE
CONTROLLER OR BASED ON PLC / DCS**

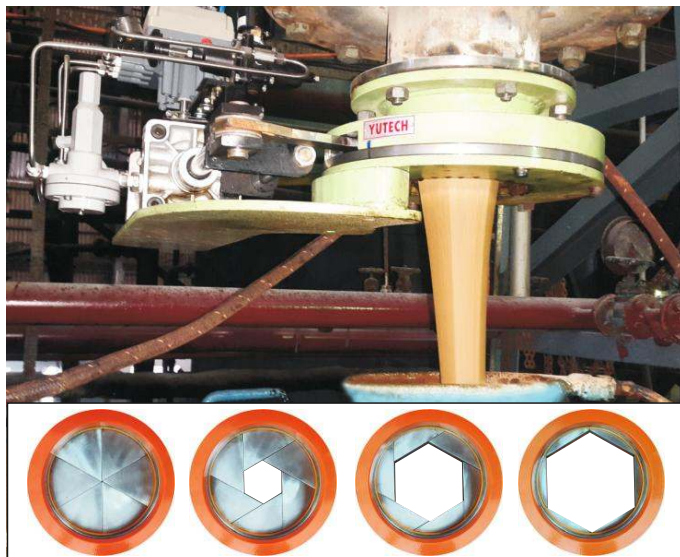


**MOLASSES CONDITIONER AUTOMATION:
BRIX ANALYZER AND SELF-CLEANING BRIX
SENSOR BASED CONTROL SYSTEM**



YUTECH

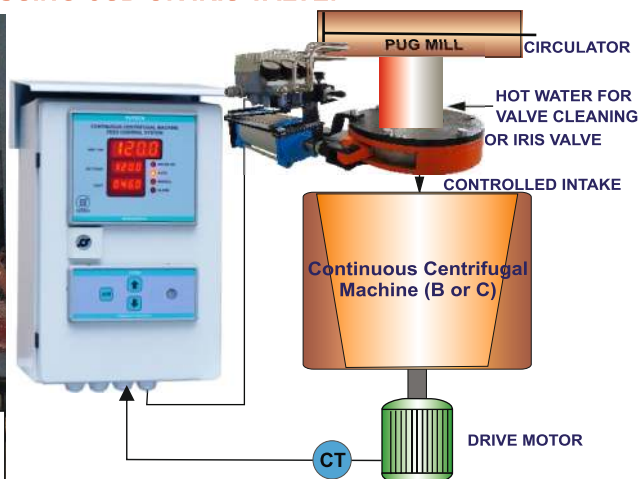
CONTINUOUS CENTRIFUGAL MACHINE AUTOMATION USING CSD OR IRIS VALVE:



**YUTECH CSD Pneumatic Control Valve
Automatically Feeds Continuous Centrifugal Machine**



CSD / IRIS VALVE



**CONTROLLER AND SCHEMATIC DIAGRAM
OF AUTO BASKET FEED CONTROL SYSTEM**



PNEUMATIC CSD / IRIS CONTROL VALVE

Concentric Split Diaphragm (CSD) Valve Features:

- YUTECH CSD or Iris Valve opens through the Centre thus facilitating perfect Masecuite Entry in the Centre of the Machine's Basket avoiding imbalance CSD Valve's Rugged Heavy Duty Construction absorbs all Shocks and Vibrations without affecting its functionality
- Actuation: Pneumatic Cylinder with Electro-Pneumatic Positioner / Electronic Actuator with Position Feedback
- Easy Maintenance and Calibration can be done by Customer's own In-house Instrumentation Team

Continuous Centrifugal Machine Automation Features and Advantages:

- YUTECH CSD Control Valve is perfect solution for Optimized Continuous Centrifugal (B and C Masecuite) Machine Operation.
 - Constant Intake with respect to Machine's Load Current ensures **Constant and Optimum Machine Operation while maintaining Constant Electric Load and Increase in Masecuite Purging Efficiency** (subject to constant Brix).
 - Central Opening creates a Hex Flow Profile and Masecuite falls exactly in the Basket's Center, this **Removes Basket Imbalance and hence Reduced Maintenance**.
 - Highly Accurate Machine Drive Motor Sensing and High Resolution PID Action ensure Smooth Operation
 - Controlled material Intake with respect to Drive Load Current ensures Constant Current as per Set-Point
 - Built-in Auto-Manual Station provided for trouble shooting, trials and start of machine after season resumes
 - Valve closes Automatically on if Drive Trips, thus prevents material loss
 - Masecuite Brix Measurement and Control can be additionally implemented using YUTECH Brix Analyzer Ensures Continuous and Constant Operation at Optimum Preset Load Current in a Closed PID Loop, thus ensuring
 - **Increased Throughput and Maximum Capacity Utilization.**
 - **Eliminates Wastage of Masecuite, Sugar, Power, Steam, Water, Time and Effort** by Avoiding Overflow.
 - **Increased Production of Better Sugar Quality in Lesser Time.**
- This System Reduces the Cost of Ownership, Saves Money and Consistently Creates Wealth**



GENERAL INSTRUMENTS

YUTECH

YUTECH INSTRUMENTS

ANALYZE TRANSMIT CONTROL COMMUNICATE

A10FM SERIES: 24VDC, POWER SUPPLY, RUGGED IP67 INDUSTRIAL PLASTIC ENCLOSURE:

A10FM Series Products are designed for Low Cost Local Industrial Indication and Control :

- 1 Channel - 16 Bit Universal Input, 1 Channel - 12 Bit AO and 2 Channel - Relay Output Indicator / Controller
- 4 Channel - DI Module
- 2 Channel - 2 Channel DO Combination Module

PANEL MOUNTED UNIVERSAL INDICATORS / CONTROLLERS:

A10 AND A10FM SERIES I/O PRODUCTS:

A10 Series: 24VDC or 85-265VAC, 50-60Hz., Power Supply, Panel Mounted or DIN Rail Mounted Enclosure:

The A10 Series Products are very Robust, Rugged and designed to endure the Harsh Industrial Conditions. They can be used as Local Indicators and Controllers. This Series also has a list of Jumbo Displays of various sizes.

The Jumbo Displays can be Custom made for Customer Specific requirement.

- Indicator / Controller: 2 Channel - 16 Bit Universal Input, 2 Channel - 12 Bit AO and 2 Channel - Relay Output
- Indicator / Controller: 1 Channel - 16 Bit Universal Input, 1 Channel - 12 Bit AO and 2 Channel - Relay Output
- Indicator / Controller: 2 Channel - 16 Bit AI, 2 Channel - 12 Bit AO and 2 Channel - Relay Output
- Indicator / Controller: 1 Channel - 16 Bit AI, 1 Channel - 12 Bit AO and 2 Channel - Relay Output
- Jumbo Display: 4, 6 or 8 Digit 1", 2", 4", 6", 8", 10", and 12" Digit Size, 1 Channel - 12 Bit AO and 2 Ch - Relay
- Jumbo Display: 4 Digit Dual Channel 1", 2", 4", 6", 8", 10", and 12" Digit Size 1 Ch - 12 Bit AO and 2 Ch - Relay

ISOLATION PRODUCTS:

A-ISO SERIES:

A10 Series: 24VDC or 85-265VAC, 50-60Hz., Power Supply, DIN Rail Mounted Enclosure:

This series sports a range of Galvanic Isolators and Galvanic Isolating Converters. Please check our Isolation Products Brochure and Datasheets.

Other YUTECH INSTRUMENTS Products:



A10 Series Field Mounted Transmitters, Controllers



A09 Series Auto / Manual Stations and Process Indicators, PID Controllers



Large or Jumbo Displays 1' to 12" digit size with Wireless Remote Calibrator



A15 Series Field Mounted Scanners with Ethernet (Modbus TCP/IP)



I/O Cards



CT Converter / AC Voltage Converter



Process Indicator



Isolation Barriers / Signal Converters / Isolating Repeaters



Temperature Indicator Controller



DIN Rail mounted RTD Transmitters



Head mounted RTD Transmitters



pH / Conductivity Meter (Laboratory)

For Complete Technical Details, please visit our website www.yutech.in or www.yutechautomation.com. You can download detailed presentations containing Technical Specifications, Salient Features etc., for this and other YUTECH Products and Systems. Please contact us on info@yutech.in.



**SUGAR PROCESS AND
REFINERY SECTION**

YUTECH INSTRUMENTS
ANALYZE TRANSMIT CONTROL COMMUNICATE

YUTECH

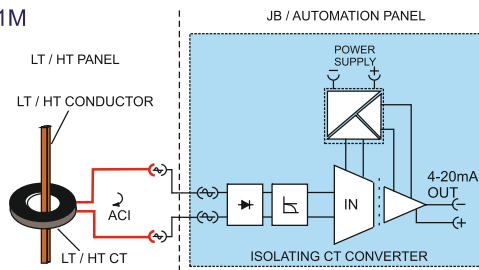
ISOLATING CT CONVERTER:

Product Code: AISOACLTCTC1M / AISOACHTCTC1M

Isolating CT Converter senses LT / HT CT's Current and converts it to standard 4-20mA while Galvanically Isolating this Signal.

Used to accurately sense Mills', Preparatory Devices' or other Drive Loads while always protecting the DCS / PLC / Controller from the High Voltage side.

It is a very reliable product from YUTECH and has a Huge installation base of over 400 Sugar Mills.



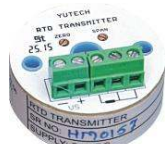
Drive Motor Load Sensing



SCREEN SHOT OF LOAD CURRENT INDICATED ON MILL AUTOMATION

RTD TEMPERATURE TRANSMITTER, INDICATOR:

Product Code: A2WRTC1HM, A2WRTC1S, AACUC1LDPM48



RTD Temperature Sensing, Indication, Control and Transmission Products are available in various options like Isolating, Non Isolating, Head-Mounted, Panel Mounted, Indicators, and Controllers with Re-Transmission 4-20mA Outputs, 2W Transmitters. For further details please download Temperature Products Datasheet from our Website.

I/IOT ENABLED FIELD MOUNTED I/Os, SCANNERS, UNIVERSAL INDICATORS / CONTROLLERS:

A15 SERIES I/O PRODUCTS:

Ethernet MODBUS TCP/IP Communication, 85-265VAC, 50-60Hz., Power Supply, Ip65 Enclosure:

The A15 Series sports a very Powerful High Speed CPU capable of handling Analytical Operations, Communications, Data Processing, and Control Operations. These Products can be Customized to become a Data Acquisition System, I/O Module, Scanner or a Local Controller. Data can be communicated over Ethernet or GSM Mobile Network. It can send Email or SMS.

- 14 Channel - 16 Bit AI, 1 Channel - 12 Bit AO and 14 Channel - Relay Output Combination Module
- 14 Channel - 16 Bit AI Module
- 8 Channel - 12 Bit AO Module
- 32 Channel - DI Module
- 32 Channel DO Module
- 16 Channel DI 16 Channel DO Combination Module



FIELD MOUNTED UNIVERSAL INDICATORS / CONTROLLERS:

A12 SERIES I/O PRODUCTS:

24VDC or 85-265VAC, 50-60Hz., Power Supply, Rugged Ip67 Metal Enclosure:

The A12 Series sports a Powerful High Speed CPU capable of handling Data Processing, Pre-fed Logic, Customized Displays and PID Control Operations. They can be used as Local Field Mounted Indicators or Controllers. These Products are very Robust, Rugged and designed to endure the Harsh Industrial Conditions.

- Indicator / Controller: 2 Channel - 16 Bit Universal Input, 2 Channel - 12 Bit AO and 2 Channel - Relay Output
- Indicator / Controller: 1 Channel - 16 Bit Universal Input, 1 Channel - 12 Bit AO and 2 Channel - Relay Output
- Indicator / Controller: 2 Channel - 16 Bit AI, 2 Channel - 12 Bit AO and 2 Channel - Relay Output
- Indicator / Controller: 1 Channel - 16 Bit AI, 1 Channel - 12 Bit AO and 2 Channel - Relay Output
- Function Display - 16 Bit AI, 1 Channel - 12 Bit AO and 2 Channel Relay Output Indicator / Controller





SUGAR PROCESS AND
REFINERY SECTION

YUTECH

THE YUTECH ADVANTAGE: ALL INSTRUMENTATION AND AUTOMATION SOLUTIONS UNDER ONE ROOF

YUTECH Provides all Specialized Sugar Mill, Sugar Process, Sugar Refinery, Boiler and Distillery Automation and Instrumentation Solutions, Researched, Developed and Implemented in Sugar Factory Environments of Indian, African and Asia Pacific Regions with an Experience of 42+ Years and 500+ Sugar Factories. YUTECH also manufactures Excellent Quality Mechanical Spare for Sugar Factories.

YUTECH SUGAR MILL PROCESS INSTRUMENTS

Measuring Sugars Brix By Brix

YUTECH AUTOMATION

THE SWEETENER TO SUCCESS

TURNKEY
AUTOMATION &
INSTRUMENTATION
SOLUTIONS FOR
PROCESS
AND POWER
INDUSTRIES

SUGAR MILL
AND PROCESS
INSTRUMENTS,
ANALYZERS,
SENSORS

YUTECH FLOW CONTROLS

CONTROL SAVE EARN

CSD OR IRIS
VALVES,
3-WAY VALVES,
SPECIAL
GATE VALVE FOR
LIME CONTROL

YUTECH

YUTECH AUTOMATION

THE SWEETENER TO SUCCESS

AFTER SALE
SERVICES,
MAINTENANCE
SERVICES &
MAINTENANCE
CONTRACTS

ALL SOLUTIONS
UNDER ONE ROOF

YUTECH MACHINES

GENERATE CONSISTENT REVENUE

SPECIAL
PURPOSE
MACHINES AND
HIGHEST QUALITY
MACHINED
MECHANICAL
SPARES

YUTECH INSTRUMENTS

ANALYZE TRANSMIT CONTROL COMMUNICATE

CONTROLLERS,
COMMUNICATIONS,
I/O CARDS, SENSORS,
TRANSMITTERS,
ISOLATION
BARRIERS



YUTECH

IN-HOUSE INSTRUMENTS, VALVES AND MACHINE MANUFACTURING:

- In-House Electronic Equipment Manufacturing and Testing Facility
- In-House Full-Fledged Machine Shop
- In-house Software Development at all Levels meaning Development in Micro Controller Assembly Language, C, C#.NET, VB.NET, SQL etc for our Electronic Equipment and Machines.

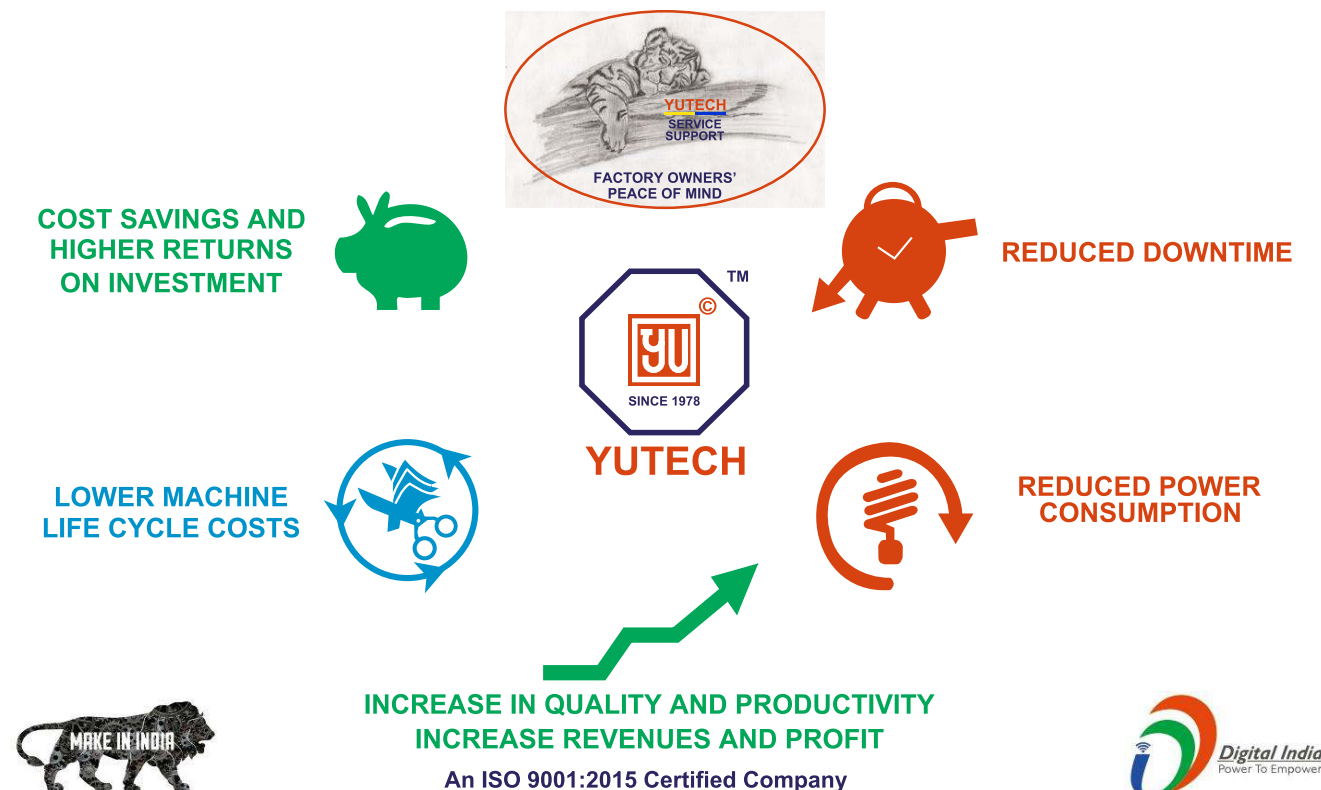
YUTECH AUTOMATION - SYSTEMS AND PROJECTS UNDERTAKEN

- DCS/PLC based Turnkey Sugar Factory, Refinery, Power Plant and Distillery Automation and Instrumentation
- Complete Mill House, Sugar Process House, Condensor, Centrifugal Automation on PLC / DCS / Controllers
- Customized Automation and Instrumentation of any Process Industry, Foundry and Heat Treatment Plants, Food and Beverages Plants, Chemical Plants, Starch Plants, Pharmaceuticals, Incinerators and Machines
- Automation and Instrumentation Service and Maintenance Contracts for Sugar Factory, Sugar Refinery, Power Plant and Distillery and Process Plants.

THE YUTECH ADVANTAGE IS: ALL SOLUTIONS UNDER ONE ROOF:

YUTECH Provides all Specialized Sugar Mill, Sugar Process, Sugar Refinery, Boiler and Distillery Automation and Instrumentation Solutions, Researched, Developed and Implemented in Sugar Factory Environments of Indian, African and Asia Pacific Regions with an Experience of 42+ Years and 500+ Sugar Factories. YUTECH also manufactures Excellent Quality Mechanical Spare for Sugar Factories.

INVEST IN YUTECH EQUIPMENT: IMPROVE YOUR PROFITS



Note: YUTECH reserves all rights to make any improvements and/or changes in any product or model as it deems fit from time to time.



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