



i4.0 – a jyoti initiative



Our approach



“Industry 4.0 liberates us from repetitive tasks. This freedom allows us to sense more, improvise our actions, focus on thought provoking creativity, make conscious decisions, execute world-changing ideas, and achieve highest level of awareness in our personal and professional lives.”

P G Jadeja,

CMD, Jyoti CNC Automation Limited



extrasensory perception (esp)

‘अतिसंवेदक धारणा’



vision

‘दृष्टि’



hearing

‘श्रवण’



taste

‘स्वाद’



smell

‘गंध’



touch

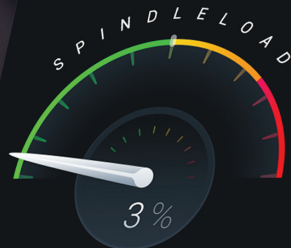
‘स्पर्श’

explore
your senses
with 7th Sense

propelling technology
prospering life

NX 3222 nvu

SIEMENS 828 D V04.07



Spindle

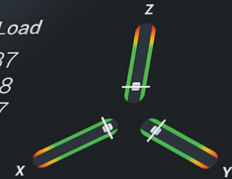
100%
RPM
796

Feed

100%
160
MM / MIN

Axis Load

x: 0.37
y: 2.48
z: 5.07



Batch Progress

Parts

10 / 15

Remaining Time

3 Hours

60%

Cycle Progress

Remaining Time

15 Minutes

60%

Customer:

Jyoti CNC Automation Ltd.

Job ID:

4531

Part Name:

Base

Program Name:

_N_I3_500_BOX_S2_BASIC_MPF



Thu Dec 20, 2018 1:17 PM





The Next-Gen Industry 4.0 Tool.

Redefining PPC
Plan. Produce. Complete.

Jyoti leads the fourth industrial revolution in CNC automation and manufacturing with 7th SENSE. The next generation's i4.0 tool that redefines the conventional PPC model to Plan. Produce. Complete.

Jyoti is committed to lead the way in India for this revolution with 7th SENSE.

7th SENSE is a highly automated machine capable of processing the most sophisticated operations in the industry. With technology and this passion, Jyoti introduces 7th SENSE an i4.0 machine capable of performing mundane and repeat tasks independently allowing humans to focus on the outcomes of these operations.

Cockpit

Comprehensive
Dashboard

OEE

Live Overall
Equipment Efficiency

Production

Scheduling & Productivity
Monitoring

Live

Machine Monitoring

Reports

Intelligent Reports

Health

Health Monitoring

Tool

Tool Life Management

Big Data

Cloud / Local data
Management

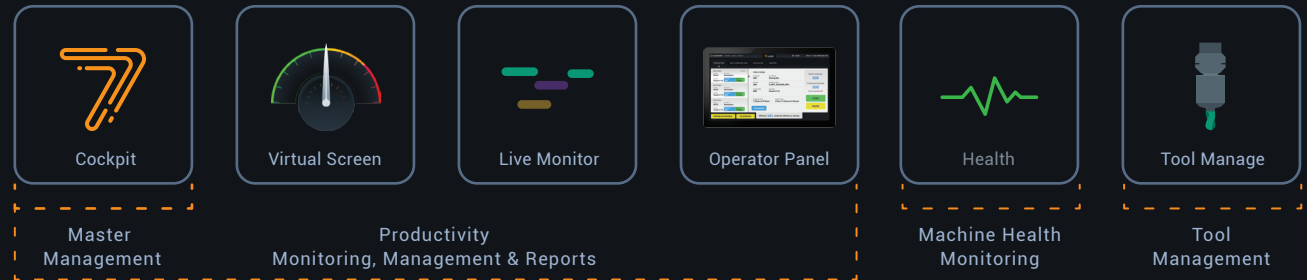
Alerts & Notification

Tailor Made Alerts & Notification
for Users





sets of features which combines productivity, health, monitoring & tool life management



With features like a virtual machine screen that displays an updated status of the process, intelligent navigation to reduce errors, and various smart reports that gives smart analysis of the processes and outcomes , leaving little for interpretation by humans. 7th SENSE also has a Cockpit(dashboard) that gives a quick overview of current tasks, completion stages, and other insights allowing humans to spend less time on measuring efficiency and productivity of the machine.

Features



● Machines



● Parts



● Shifts



● Production
Schedule



● Reports



● Users

7th Sense's features are ease to use

- ✓ Intelligent Machine Management
- ✓ Productivity Monitoring
- ✓ Daily Production Virtualization & Visualization
- ✓ Live Production Monitoring
- ✓ Live Machine Monitoring
- ✓ Virtual Machine Screen
- ✓ Current Event Monitoring
- ✓ Live Breakdown Alarms
- ✓ Live OEE
- ✓ Reports

- ✓ Live Machine Health Monitoring
- ✓ Machine Health Alarms Logs
- ✓ Machine Health Analysis
- ✓ Tool Management
- ✓ Dedicated operator Screen



Features / Productivity

Productivity with Live Monitoring, Scheduling & Reports



Cockpit



Live Monitor



Virtual Screen



Operator Panel

Master Modules & Features

- ✓ Machine, Part, Shift Management
- ✓ Production Scheduling Tool
- ✓ Daily Production Virtualization & Visualization
- ✓ Daily Task Manager
- ✓ Planned Downtime Management
- ✓ Reports
- ✓ Live Production Monitoring
- ✓ Live Machine Monitoring
- ✓ Virtual Screen
- ✓ Alarm Logs
- ✓ User Management (operator, Supervisor etc.)

Reports & Analysis

OOE, Down Time Analysis, Availability Chart, Good/Scrap Parts, Machine Utilization, Production Trend, Speed-loss Analysis, Cycle Time Analysis, Hourly Part Counts, Costing Analysis, QMS*

Alert & Notification

Part Tolerance Notification

Machine Downtime Notification

Auto Download Report

Email notification with all report data.





Health Monitoring & Alerts with **embedded SENSORS**

✓ Spindle

- Spindle Bearing Temperature
- Spindle Head Stock Temperature
- Spindle Vibration
- Spindle Load
- Spindle Power Utilization
- Spindle Run Hours

✓ Lubrication

- Axis Lubrication Oil Level
- Axis Lubrication Pressure
- Gear Box Lubrication Temperature
- Gear Box Lubrication Oil Level
- Gear Box Lubrication Filter Obstruct

✓ Coolant

- Coolant Flow Pressure
- Conveyor Coolant Level

✓ Chiller

- Chiller Temperature
- Chiller Flow Rate
- Spindle Bearing Chiller Flow

✓ Pneumatic

- Pneumatic Pressure

✓ Hydraulic

- Hydraulic Pressure Status
- Hydraulic Oil Level Status
- Hydraulic Oil Temperature

✓ Electrical & Power

- Electrical Cabinet Temperature
- Machine Power Consumption



Features / Tool Life Management

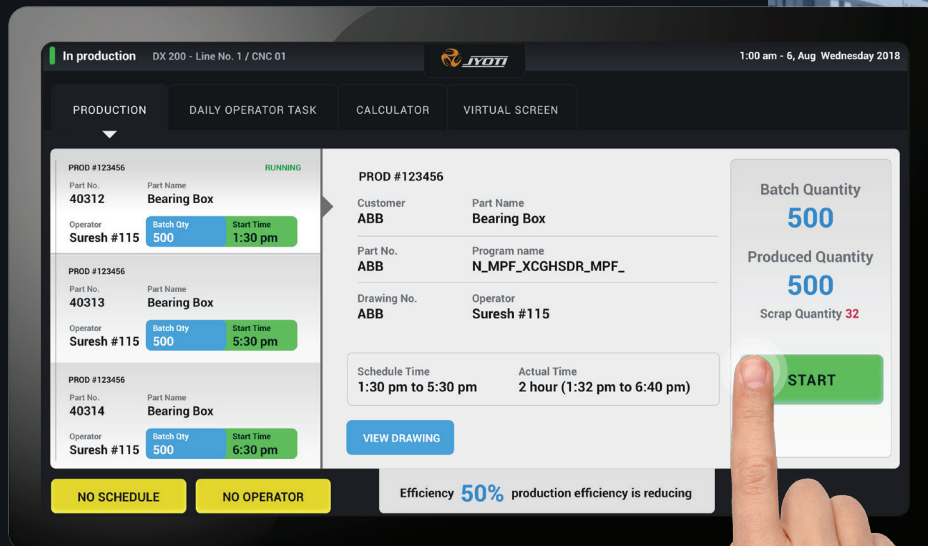


Tool Life Management

- ✓ Tool Life & Load Monitoring
- ✓ Tool Management
- ✓ User Management with customized table for Tool Life & Load Monitoring.
- ✓ Sister tool library management and linkage with tool life management by "7" and close cascading with NC-tool management.
- ✓ Tool Management with individual machine for users.
- ✓ Better accessibility of tools on floor by tool manager/tool store user.



Jyoti is taking industry 4.0 on next level with
Smart Operator Panel



Operator Panel

- ✓ Live production update
- ✓ Live machine schedule screen
- ✓ Live Downtime Reasons
- ✓ Drawing View in single tap
- ✓ Daily operator task
- ✓ Customized Screen availability



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