

# CASE STUDY : JBM GROUP (CNC MACHINES)



Ingenious Techzoid is one of the emerging technology company in the field of Industrial Automation and Industry 4.0.



## AT A GLANCE

### Challenges

- CNC m/c 'reliable' utilization data was a big challenge. M/c 'Job' planning for bed utilization was a big issue.
- Machines being old and varied Makes (HAAS, nobody was able to connect), OEMs of being little help.

### Scope:

- Implement Industry4.0 solution on approx. 35 CNC machines in the group
- Operational metrics : OEE, Bed utilization, Availability, Spindle speed, Axis positions, m/c program upload & analytics
- Machine health : Downtime reasons, Pareto analysis, MTTR, MTBF and analytics

### Benefits

- Real time and reliable data from machine for Maintenance as well as Operations.
- Real time triggers for anomalies as configured



"For over 04 years, we've been developing new technology for enterprises of all sizes. We believe in delivering exceptional results for our clients by gaining an in-depth understanding of needs, customer requirements and combining it with a perfect combination of strategy driven innovative skills to its highest level of execution

**HIS Group Ingenious**

## OBJECTIVES

To maximise the utilization of CNC machines and minimize the sub contracting being done.

## SOLUTIONS

- Ingenious Techzoid's PMS & CBM solution for all Operational & Maintenance parameters.
- Ingenious Techzoid's IOT Gateway for smooth wireless transmission of data to cloud for global visibility.

## BENEFITS

### Benefit One

M/c Utilization ~ 9%

### Benefit Two

M/c Bed Utilisation ~ 20%

### Benefit Three

M/c Downtime~ 12%

### Benefit Four

Sub-contracting \$ ~ 9%



Entity name	Part Name	Running Mode	Total Downtime	Machine Utilization	Machine Status	Connected				
VF-03	PB-123	MEM	51.63 min	25 %		YES				
VF-04	PB-12320-PUNCH-BK-SIDE-A	MDI_JOG	251.15 min	6 %		YES				
VF-06	PB-12340-HOUSHING-J	MEM	33.17 min	26 %		YES				
VF-09	PB-123	MEM	194.13 min	17 %		YES				

# Machine Overview

Part Name

PB-123

Plan Cutting Time

0.00 Mins

Actual Cutting Time

14290.00 Mins

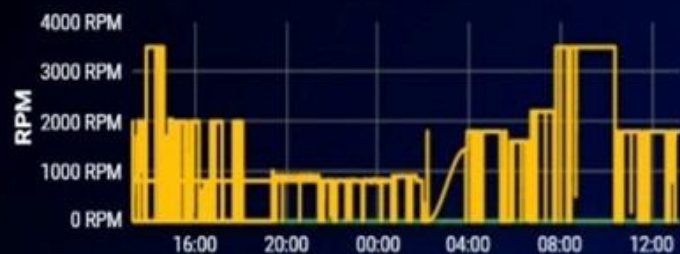
Total Cutting Time

14282 Mins

Machine Utilization

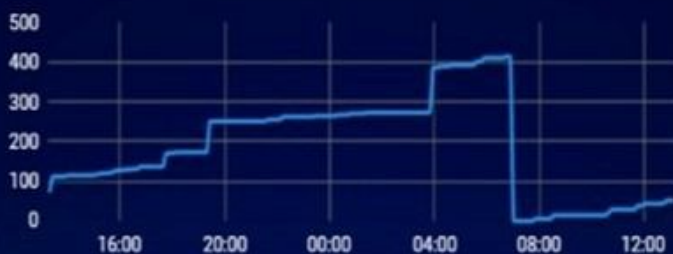
25.23 %

Spindle RPM



Plan Spindle RPM Spindle Rpm

Total Downtime



Total Downtime

Running Status

BUSY

Plan Spindle RPM

0

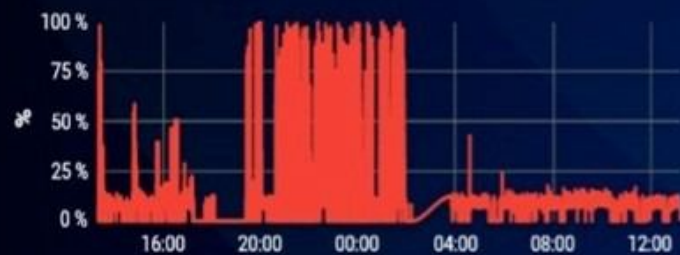
Spindle Loads

0.00 %

Spindle RPM

1797

Spindle Load



Spindle Loads


Machine & Bed Utilization



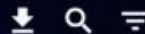
Bed Utilization Machine Utilization








	L(mm)	W(mm)	H(mm)
Machine Size	1016	635	508
Part Size	0	0	0
Bed Utilization (%)			0.00

## VF-06: Downtimes

 Realtime - last 7 days

## Breakdowns



Name	Category	Reason	Duration	Start time ↓	Stop time	
VF-06	Planned	Tool Setting	2:49	2022-07-26 05:06:40	2022-07-26 05:09:29	
VF-06	Planned	Tool Setting	3:13	2022-07-26 01:09:26	2022-07-26 01:12:39	
VF-06	Planned	Program Loading	0:59	2022-07-26 00:33:39	2022-07-26 00:34:39	
VF-06	Planned	Tool Setting	2:43	2022-07-26 00:08:39	2022-07-26 00:11:22	
VF-06	Planned	Tool Setting	0:59	2022-07-26 00:01:39	2022-07-26 00:02:39	
VF-06	Planned	Tool Setting	2:0	2022-07-25 23:47:39	2022-07-25 23:49:39	
VF-06	Planned	Tool Setting	1:59	2022-07-25 23:40:39	2022-07-25 23:42:39	

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