

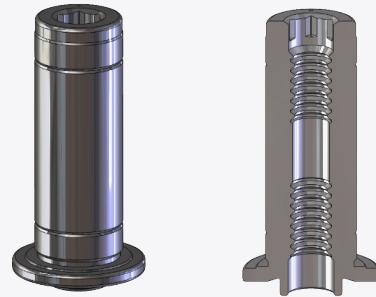
# Mechanical Assembly Business Unit

## Pivot Assembly Product Introduction

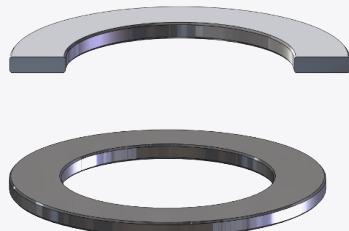


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**MinebeaMitsumi**  
*Passion to Create Value through Difference*



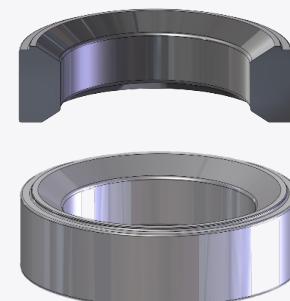
**SHAFT**



**HUB CAP**

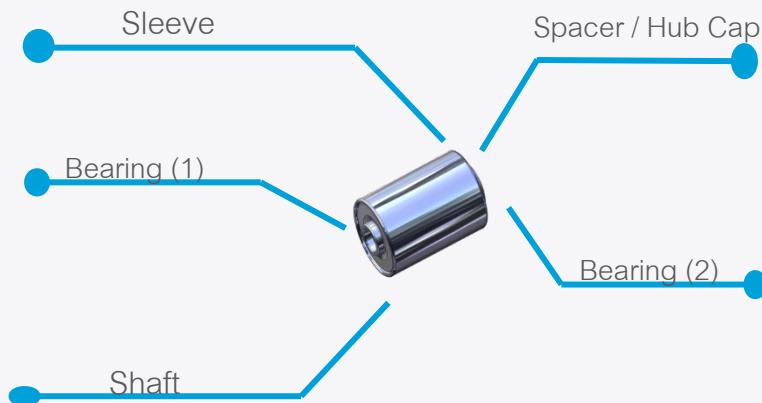


**SLEEVE**

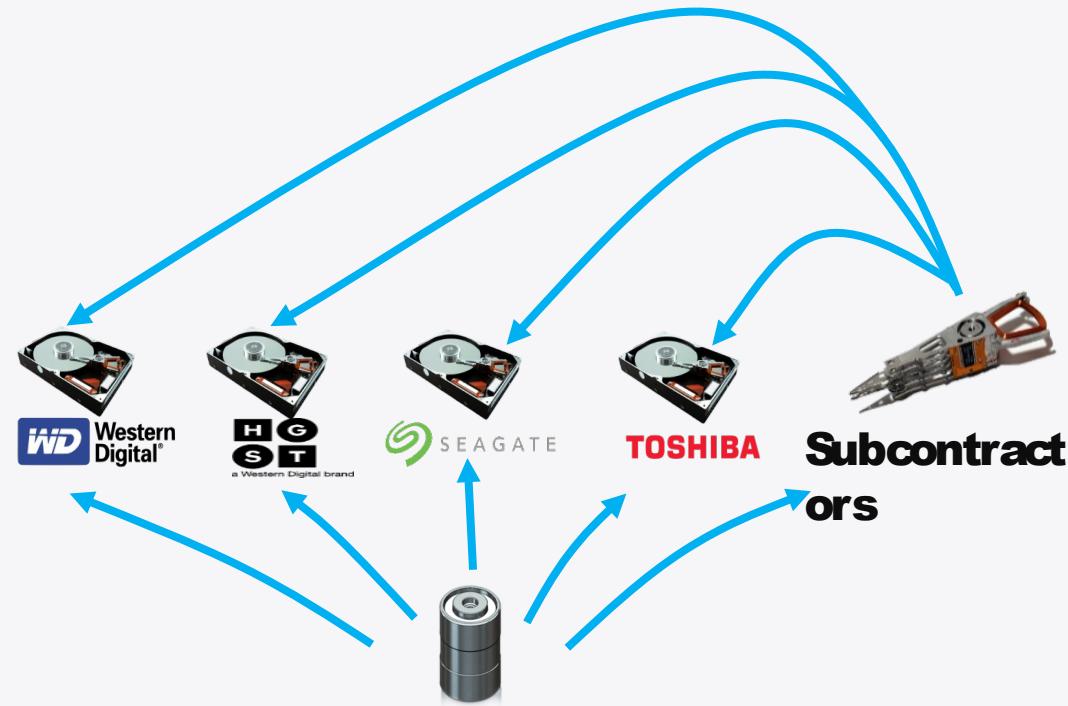


**SPACER**

# Product of GM-MA



## Pivot Assembly



## Customers

# FUNDAMENTALS OF METAL CUTTING & MACHINING PROCESS



**BM165 MODEL**

MINEBEA MITSUMI THAILAND CO., LTD.



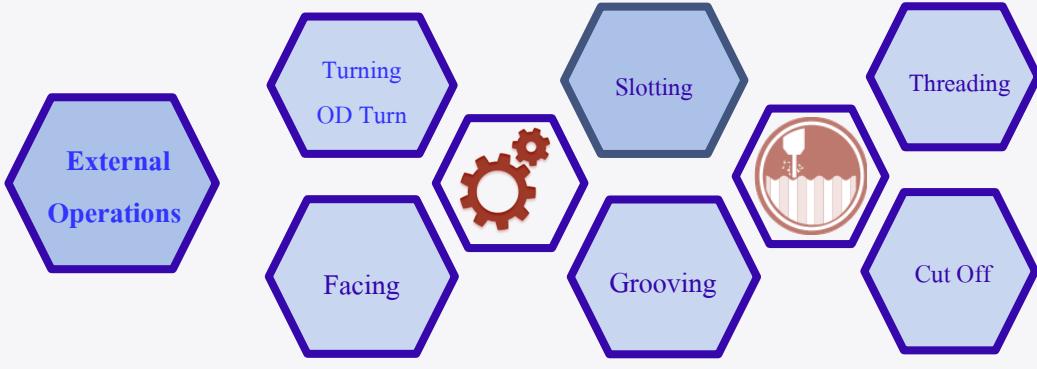
**DIVISION G/M PRODUCTION TURING**

# MACHINING OPERATIONS

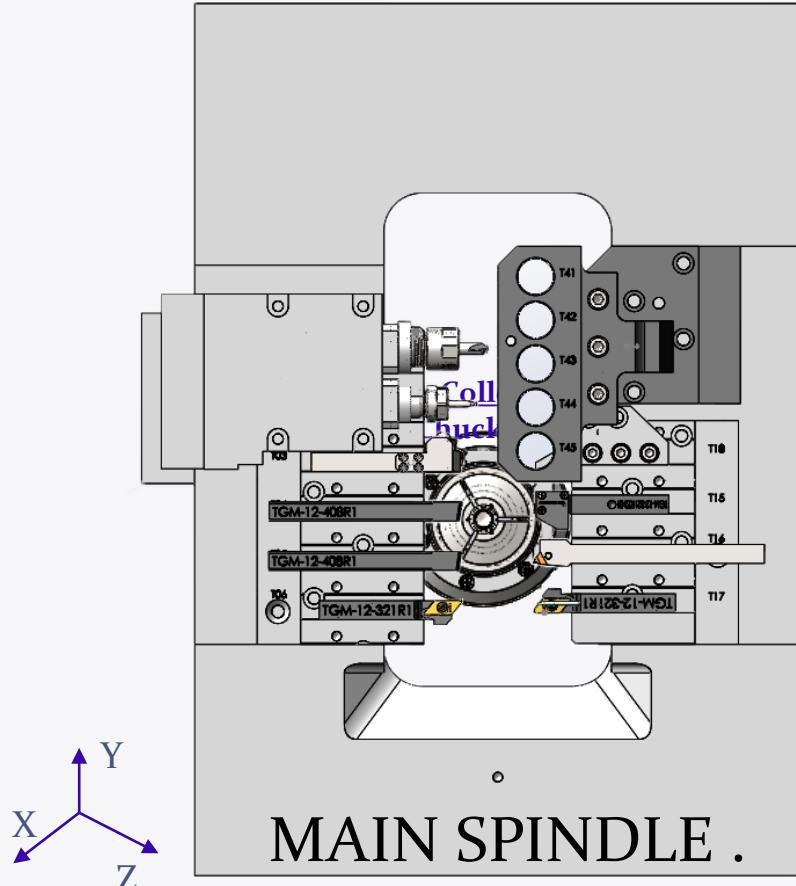


- ✓ Performed on a machine in **GM division** by **CNC** lathe machine : Fanuc program.
- ✓ Variations of **Turning** that are performed on a **BM165 ( TSUGAMI )** Support Mat'l size  $\varnothing$  3.0 – 16.0 mm.

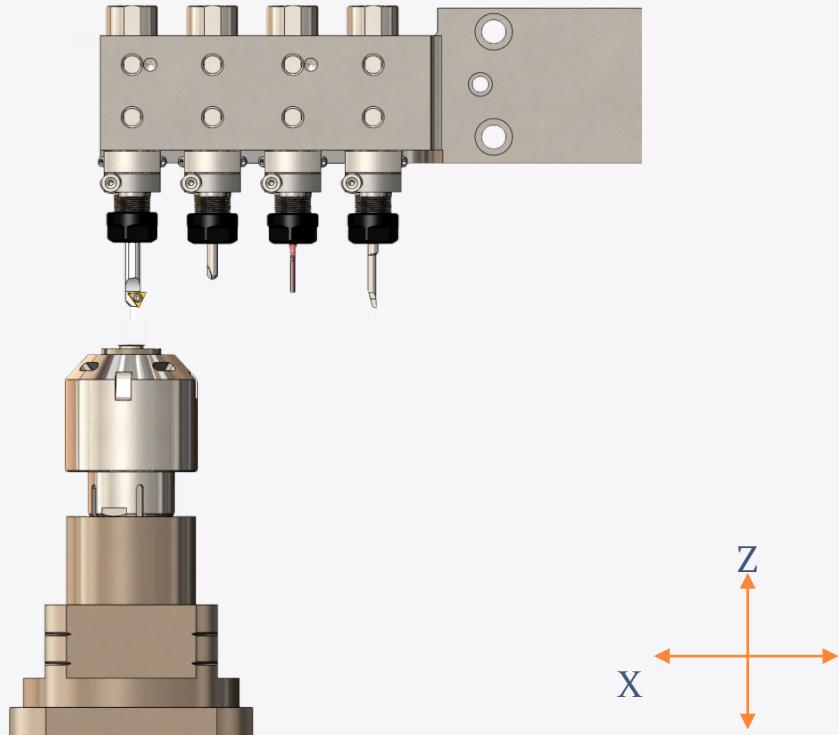
# MACHINING OPERATIONS



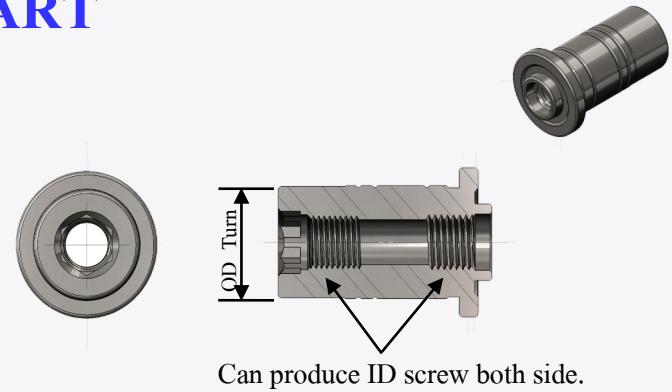
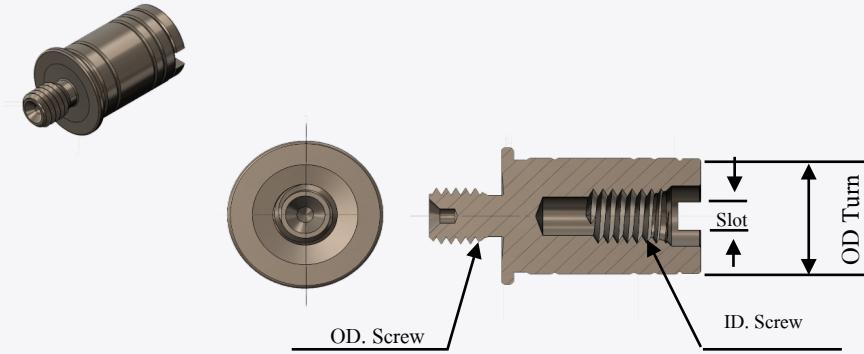
# SIMULATION CUTTING



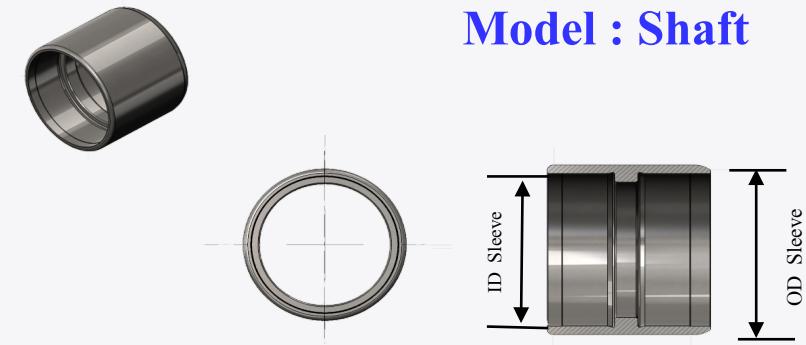
BACK SPINDLE .



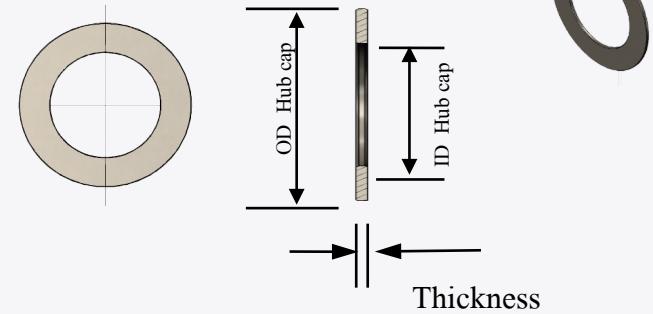
# EXAMPLE : MODEL PART



## Model : Shaft

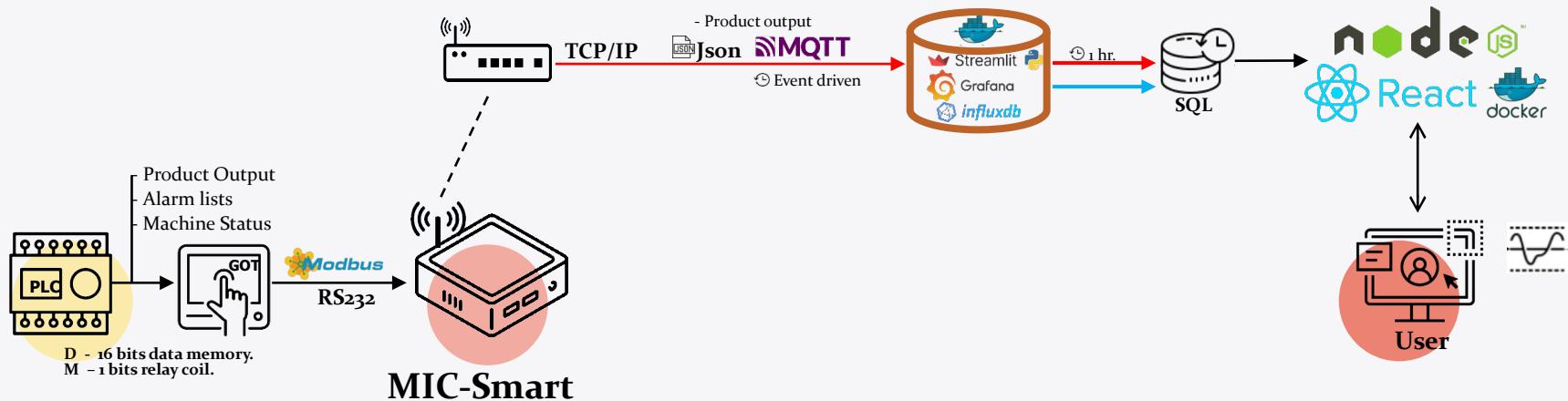


## Model : Sleeve

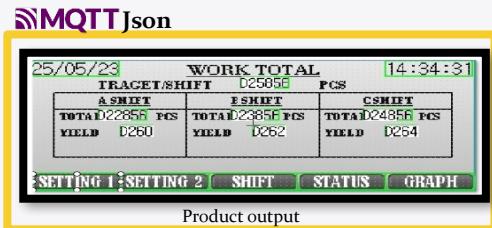


## Model : Hub cap.

# GMMA Machine monitoring system



**Machine / GOT**  
Description , Detail

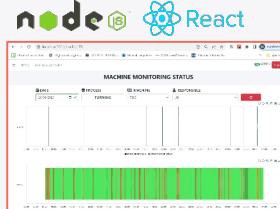


**IoT Gateway**  
Description , Detail



**Database Server**  
Description , Detail

**Web Dashboard**  
Description , Detail



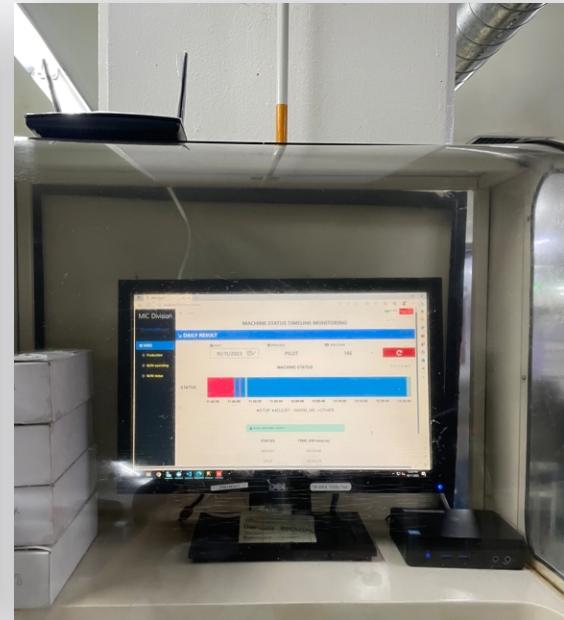
# INSTALLATION



Machine/GOT



Router & Access point



Database Server

# Machine Monitoring System for BM165 Model : MMS Project.



# Thank you

