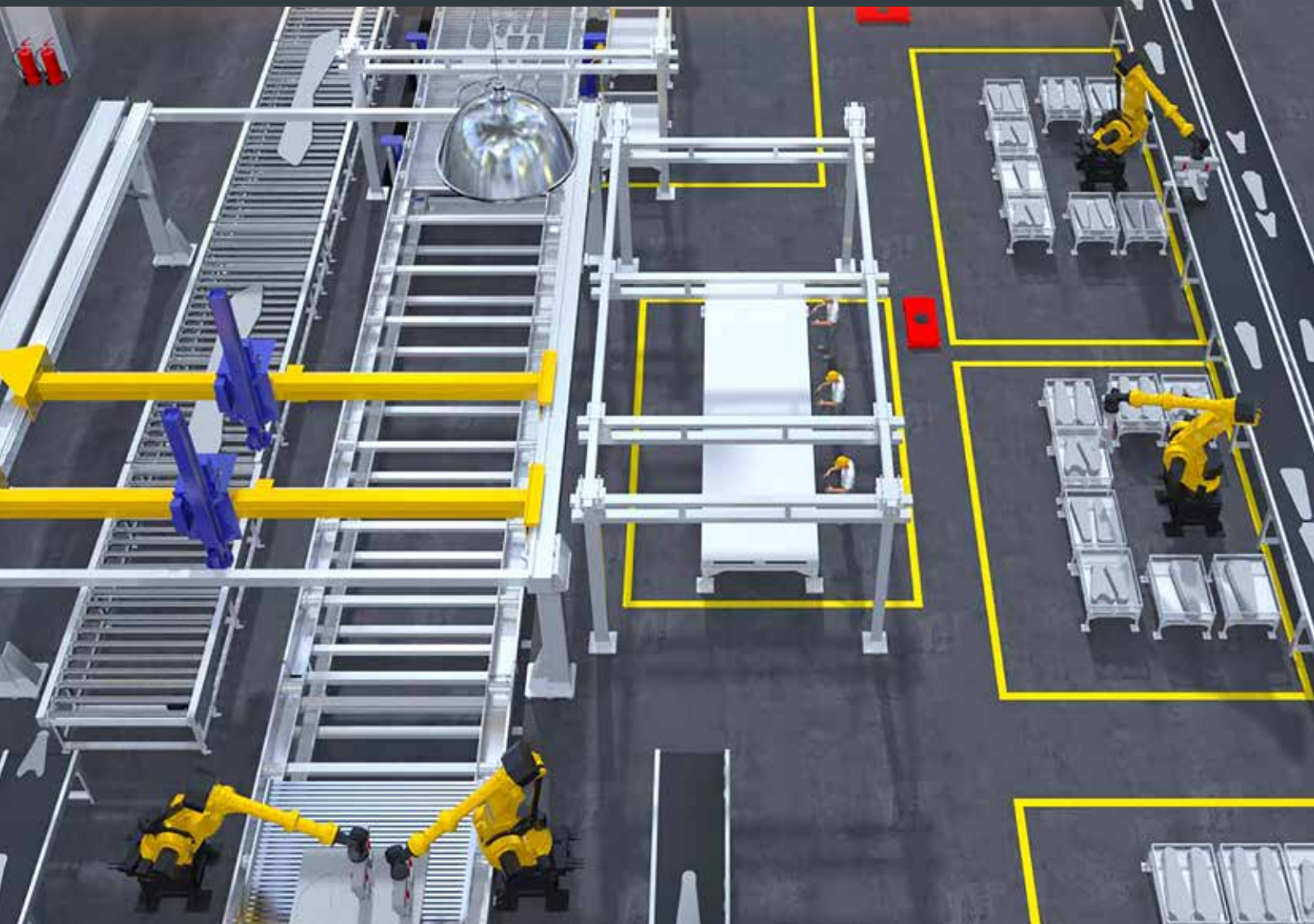
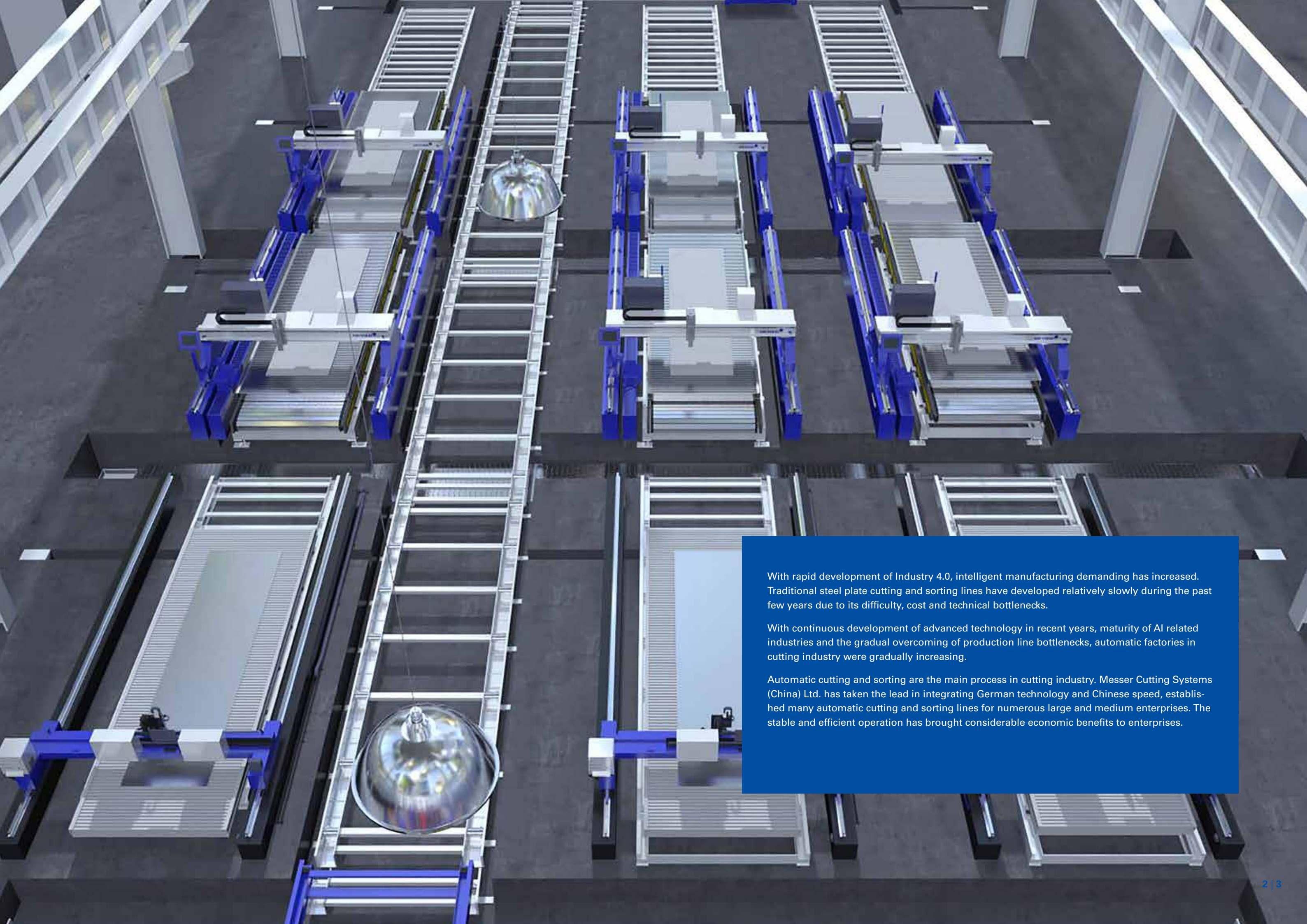


# MESSER INTELLIGENT PRODUCTION LINE



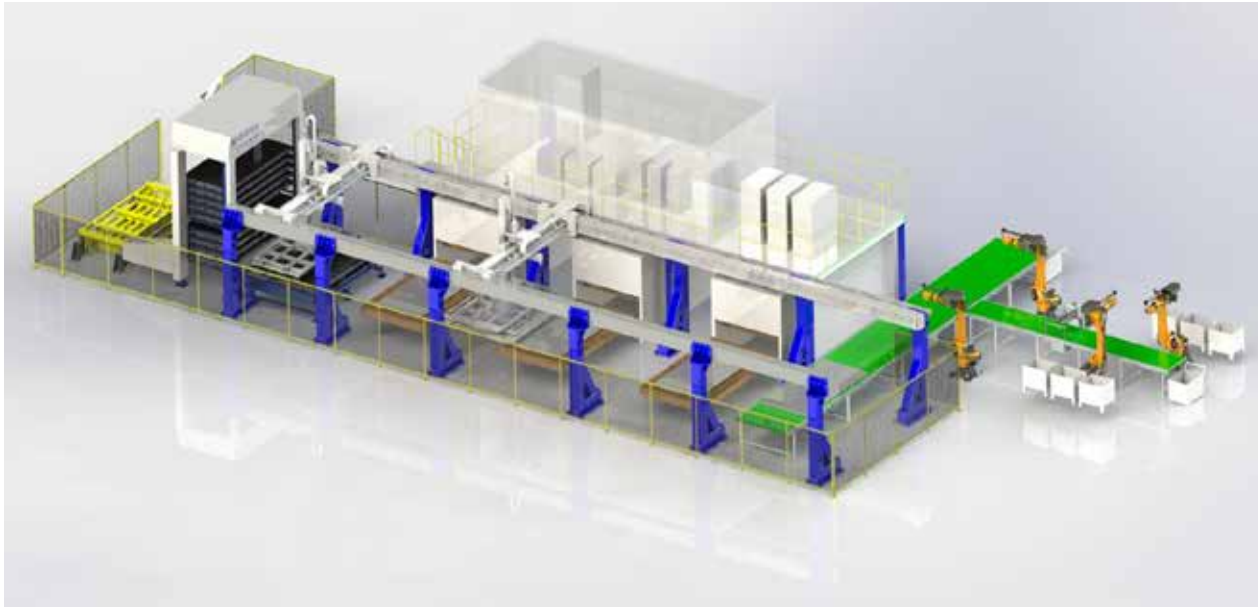


With rapid development of Industry 4.0, intelligent manufacturing demanding has increased. Traditional steel plate cutting and sorting lines have developed relatively slowly during the past few years due to its difficulty, cost and technical bottlenecks.

With continuous development of advanced technology in recent years, maturity of AI related industries and the gradual overcoming of production line bottlenecks, automatic factories in cutting industry were gradually increasing.

Automatic cutting and sorting are the main process in cutting industry. Messer Cutting Systems (China) Ltd. has taken the lead in integrating German technology and Chinese speed, established many automatic cutting and sorting lines for numerous large and medium enterprises. The stable and efficient operation has brought considerable economic benefits to enterprises.

## Automatic Laser Cutting Production Line



Multi tower type

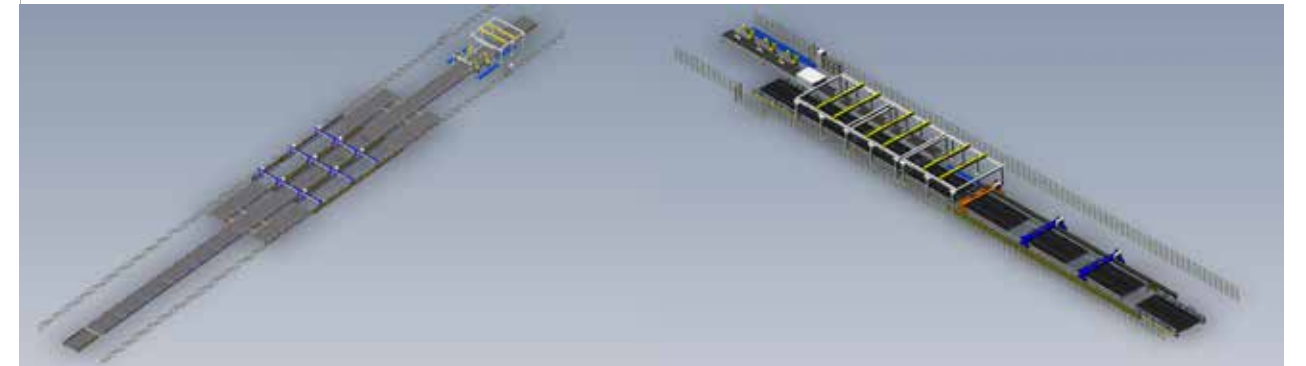


Single tower type

## Plasma Cutting Automation Production Line



Automatic plasma cutting & sorting line with heavy-duty storage tower



Automatic cutting and sorting line with multiple plasma cutting machine

### Automatic Laser Cutting & Sorting Line

#### Main components

Steel plates storage tower  
 Smart crane for loading and unloading  
 Laser cutting machine  
 Conveyor line  
 6-Axis robot  
 Visual system  
 Sorting system  
 Safety system

#### Main function

Loading and unloading of steel plates  
 Steel plate cutting  
 Parts sorting  
 Parts palletizing

### Automatic Plasma Cutting And Sorting Line

#### Main components

Steel plate storage tower/warehouse  
 Smart crane  
 Plasma cutting machine  
 Pallet conveying line  
 6-Axis robot  
 Smart crane  
 Visual system  
 Sorting system  
 Agv/rgv  
 Safety system

#### Main function

Loading and unloading of steel plate  
 Plates cutting  
 Parts sorting  
 Parts palletizing  
 Parts transportation

## Production Management System Of Automation Line



### Plate warehouse

Application

- Various type of plates
- High cost-effectiveness

Sheet metal storage management is completed under instruction of messer central control system messer-ccs, and release steel plates from storage automatically according to schedule of production tasks, as well as material loading and cutting.



### Plates storage tower

Application

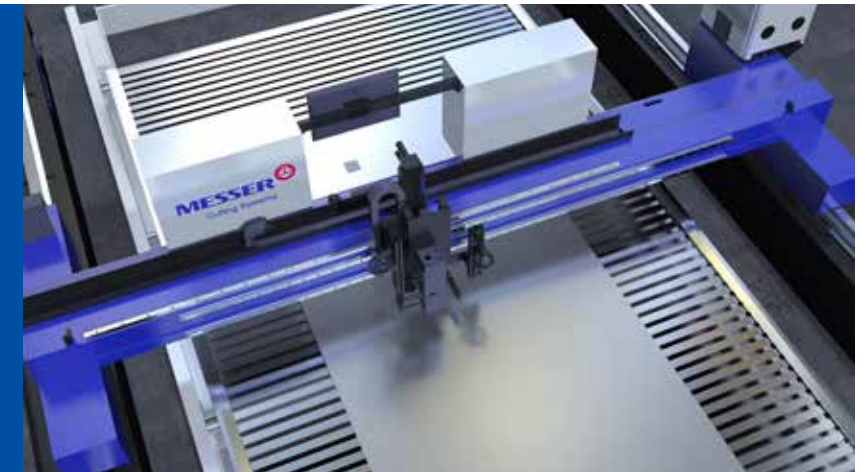
- Less type of plates
- Weight of plate  $\leq$  3 tons

- Plate size within 6000mm\*2500mm

Sheet metal storage management is completed under instruction of messer central control system messer-ccs, and release steel plates from storage automatically according to schedule of production tasks, as well as material loading and cutting.

### Steel plate printing machine (parts marking, parts painting)

Main process is that the MESSER-CCS central control system calculate position of spray code of each part by analyzing production nesting diagram, and adjust size of spray code according to parts sizes timely to complete ID identification.



### Automatic laser cutting machine

Main process is to complete automatic control of cutting machine by MESSER-CCS central control system, and to complete alignment, cutting, changing plates according to nesting diagram.



### Automatic plasma cutting machine

Main process is to complete automatic control of cutting machine by MESSER-CCS central control system, and to complete alignment, cutting, changing plates according to nesting diagram.



## Sorting & Palletizing System

After cutting, MESSER-CCS central control system sort parts automatically by using sorting system includes automatic sanding machine, automatic leveling machine and other equipment according to customers' production process,. Calculate gripping points of each part by analyzing nesting diagram, realize accurate picking, sorting and palletizing by cooperating with the visual system and picker control system.



**Sorting system**



**Palletizing system**

## Sorting System, Automatic Transportation System

MESSER-CCS central control system controls robot system, visual system, drawing analysis system, and pickup control system to complete sorting. It fit for handling of smaller and medium size parts.

Parts sorting& palletizing range

- The max. size is within 1500mm on both sides.
- Max. weight < 250kg



MESSER-CCS central control system controls robot system, visual system, drawing analysis system, and pickup control system to complete sorting. It fit for handling of bigger parts.

Parts sorting& palletizing range

- The min. size is no less than 1500mm on each side.
- Min. weight >250kg



### Automatic transportation system

The MESSER-CCS central control system integrates control of AGV system to realize automatic transfer of parts.





## Central Control System Of Automation Line

### UI System

- Data display
- Digital twin

### Production Managing System

- MES/ ERP integration
- Permission management
- Safety management



## Central Control System OmniFab

OmniFab 2018 option machine insight could provide you below cutting information in real time

- Monitoring of production process
- Machine utilization rate
- Report of production data
- Report of work shift and staff information

**MESSER**  
Cutting Systems

**Welcome to the Machine Insight Apps!**

Start exploring one of the solutions provided by us for increasing your productivity, collaborative maintenance and transparency in the production.

**Monitoring**

Providing real-time insight into the current machine status and proactively notify in case of problems.

**Machine Utilization**

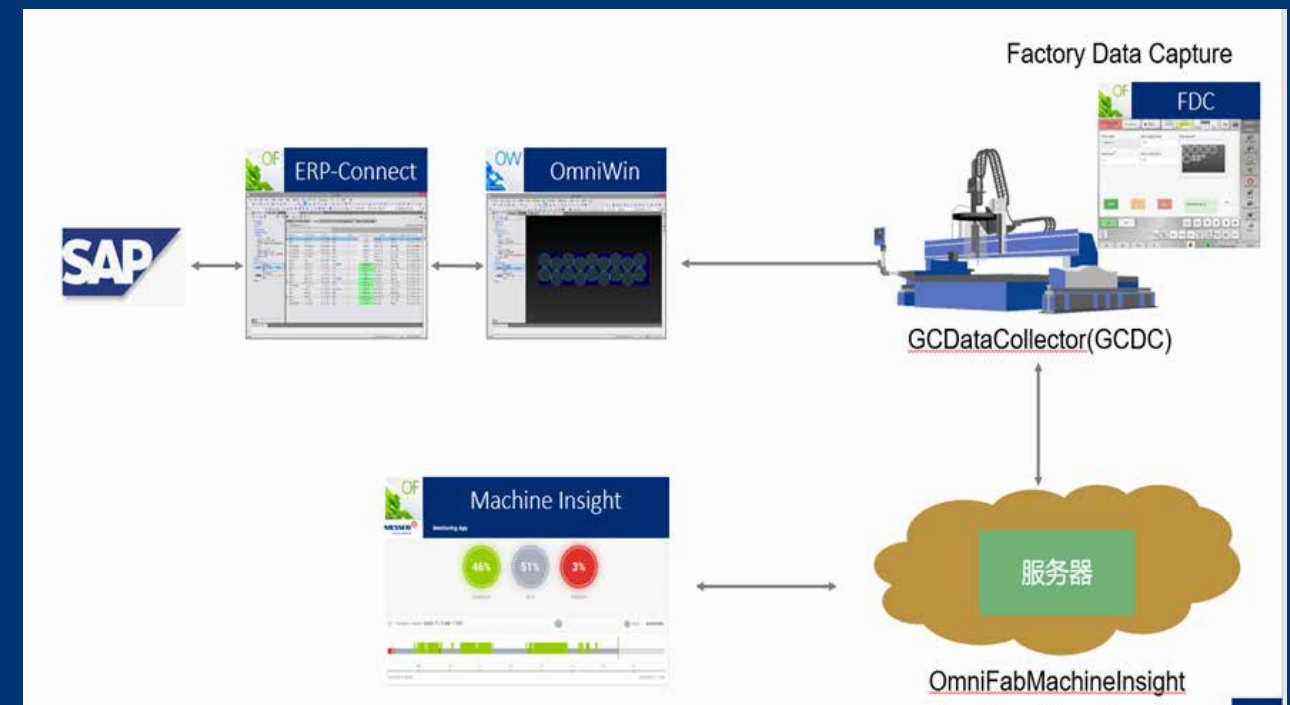
Provide insight into the overall cutting machine effectiveness by suitable reports. Accumulate all data related t...

**Cutting Jobs**

Provide information about actual vs. planned cutting times on a regular basis in order to understand deviation...

**Reporting**

This module provides you a set of reports after certain time intervals like shifts, working day and working week.





### Central Control System OmniFab

Machine real time monitoring provides you running status and data of each machine.

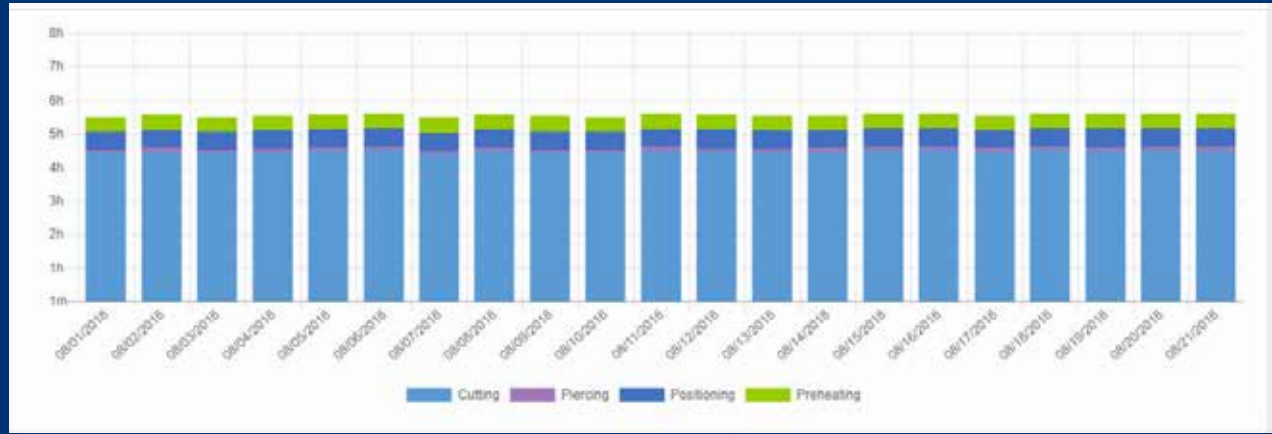
You may see the following information

- Cutting program on the machine
- Work efficiency of current shift



These data will be presented in charts and data. Production managers can download and analyze them in various form at any time.

- Machine utilization rate allows you to have a deeper understanding of machine efficiency downtime, and alarm information.
- Machine utilization rate also displays the time spent on various processes (cutting, positioning, perforation and preheating).
- All data of each shift could be displayed.





# 创造超越机器本身的 解决方案

## What we stand for

### PRODUCT

Messer Cutting Systems is a global supplier of cutting edge technology for the metalworking industry.

### AUTOMATION

With over 900 employees worldwide in over 50 countries, we maintain a constant dialogue with our customers to achieve sustainable user-oriented innovation.

### DIGITAL

### SERVICES

Our portfolio embraces the themes PRODUCT, DIGITAL, SERVICES, AUTOMATION and KNOW-HOW. We will live up to our claim "creating solutions beyond machines" not just with the most modern cutting systems and solutions for oxyfuel technology.

### KNOW-HOW

Appropriate services and training, our own software applications as well as the integration of solutions from our technology partners, e. g. in the field of automation, complete the machine to give forward-looking total solutions.

Our know-how combined with our customer-oriented attitude and actions have made us the worldwide partner of choice for innovative total solutions on all aspects of cutting systems for over 120 years.

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