

# 3D Fabri Gear

## 3D Fabri Gear 400 III

### 4.0 kW Laser 8M LOAD, 8M UNLOAD

#### STANDARD SPECIFICATION

##### **Maximum machining dimensions**

Round pipe	Φ20 to Φ 406.4
Square pipe	20 x 20 to 300 x 300
Channel type L-steel	20 x 20 to 254 x 254
H-steel / L-steel	20 x 20 to 300 x 300

##### **Min. length of remaining material**

Reclamping	0 mm
Chopping off	355 mm
Height of chuck center (mm)	1,100 mm

##### **Axis Travel**

X-axis	8790
U-axis	9300
V-axis	2,515 mm
Y-axis	1,270 mm
Z-axis	370 mm
A-axis	+/- 99999.999
B-axis	+/- 135
C-axis	+/- 99999.999

##### **Rapid traverse**

X/U/V-axis	30 m/min
Y-axis	24 m/min
Z-axis	24 m/min
A-axis	9,600 °/min
B-axis	9,600 °/min
C-axis	6,000 °/min

##### **Machine Specification**

Axis Drive System	AC servomotor, digital servomechanism X/U/V-axis: Rack & pinion Y/Z-axis: Ball screw
Cutting head	With lens of focal distance 7.5"
Profiling unit	Non-contact type
Lighting Unit	LED lamp
Assist gas pressure NC function control	Assist gas pressure can be programmed directly. Max. setting: 2.5 MPa.
Mass (kg)	35,000 kg
Laser output adaptive control	Laser output can be adapted to the actual feed
Noise Level (dBA)	Less than 80
Workpiece loading length (m)	8m

Workpiece unloading length (m) 8m

#### **Laser Resonator Specifications**

Laser type	CO2 gas laser
Wave length	10.6 $\mu$ m
Oscillation mode, configuration and power	High-speed axial flow type of the DC discharge excitation scheme - Integrated oscillator
Continuous rated output	4 kW
Output range	200 to 4000 W
Pulse mode	Normal pulse (NP)
Pulse frequency	1 Hz to less than 1 kHz - 0 to 100%
Pulse duty	1 kHz to 2 kHz - 20 to 100%
Beam mode	Main component - TEM00
Output stability	$\pm 2.0\%/8$ h
Laser gas	Mixed gas of He, N2, and CO2
Gas consumption amount	10 L/h (during continuous operation)
Beam shutter	Built-in mechanical shutter

#### **Chiller System**

Reservoir	270 L
Circuit cooled	Mirrors, Laser

#### **Control Specifications**

Name	MAZAK FX (30i-L5)
CPU	64 bit
Input method	MDI key input or USB
Monitor	15" color LCD
Control method	Semi-closed loop
Memory Capacity	2MB
Program Storage Capacity	1000 programs
Programming method	EIA/ISO method
Program number	4 digit number for program identification
Servo System	Digital servo system
Position detector	Encoder
Input Interface	USB

## STANDARD EQUIPMENT

These items are supplied as standard.

### **GENERAL MACHINE OPTIONS**

BF390	Parts catcher
CV222	Scrap bucket
EL110	Power transformer for European Market
LN016	3D head (A/B axis)
RB105	Automatic loading system
RB109	Material support function
RB122	Automatic unloading system
RB128	Flat workpiece support
SD107	Intelligent set-up function
SD130	Foundation kit (plates)
SD200	Auxiliary gas selector
SD282	Oscillation indicator lamp
TL321	3rd assist gas piping (supply 3.0Mpa)

### **LOADING CAPABILITY**

MO261	V support type loading conveyor (8M)
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### **UNLOADING CAPABILITY**

MO265	V support type unloading conveyor (8M)
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### **MANUALS**

SD073	One set of manuals (CD)
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### **CHILLER**

SD290	Chiller unit
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### **FACTORY AUTOMATION SYSTEMS**

NO304	Scheduler function
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### **MACHINE COLOUR**

SD717	Mazak standard colour (flat white (fine)/silky black)
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### **NOZZLES**

SD306	Nozzle pointer
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### **HEALTH & SAFETY**

SD748	Machine is with CE mark
MO131	Safety fence and area sensor
SD765	New Safety Measures 2021
AS050	Automatic power off by breaker trip
	Electric power is automatically turned off at the end of the machining program

### **LENS**

LN716	7.5" non contact profile torch (M5) with lens
SD260	Lens cleaning kit

**NC CONTROLLER**

MZ200	Relocation detector
NC292	Mazak FX Control (30i-L5)
NO802	Programme quick restart function

**MISCELLANEOUS**

FT591	USB port for personal computer
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**ADDITIONAL EQUIPMENT****MODEL**

4000W	3D Fabri Gear 400 III
	4.0 kW Laser
UKSP340	Starter kit

**GENERAL MACHINE OPTIONS**

MB080	Touch sensor
MO276	Support for small diameter work (C2 chuck)
MO376	Tapping unit for M3-M12

**EXHAUSTERS**

UKEX020	Laser extraction - DFPRO 4 reverse jet cartridge dust collector
	- ultra web flame retardant filter media
	- ART452 fan set
	- 4kW motor
	- 75dba free outlet
	- spark trap
	- EZ bin
	- 70dba pulse noise attenuation
	- compressed air regulator
	- total control board
	- air volume 3,000m³/hr @ 260 dpa total resistance

**FACTORY AUTOMATION SYSTEMS**

NO063	QR code reader
MO288	Flat bar handling

**HEALTH & SAFETY**

ES230	Preparation for dust collector
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**MEASURING SYSTEMS**

MB107	Workpiece measurement on loader (8M)
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**CAD/CAM SOFTWARE**

FM211	MT connect adaptor
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**MISCELLANEOUS**

FT860	Programme transfer software
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