# BYSTRONIC | BySprint Fiber 3015

## Fiber-Laser-Cutting-Machine
## 2 kW Laser Power incl. ByTrans

# Machine info:

| | | |
|---|---|---|
| **Brand:** | | BYSTRONIC |
| **Model:** | | BySprint Fiber 3015 |
| **Control:** | | ByVision Touchscreen inkl. Hand-bediengerät |
| **Year:** | | 12/2011 |
| **Operation hours ca.** | | |
| | Laser on | 23.000 h |
| | Beam on | 16.500 h |
| **Sheet size:** | | 3.000 x 1.500 mm |
| **Serialno.:** | | 43 |
| **Space requirement, ca.:** | | 16.500 x 7.570 mm; Höhe: 3.105 mm |

# Equipment:

| | |
|---|---|
| **ByTrans 3015 Extended – automation system** | |
| | large part removal |
| | Insert intermediate plates |
| | Additional raw sheet cassette |
| | Additional finished part cassette |
| | large part removal |
| | Serrated special gratings |
| | Sheet separation with double sheet detection |
| **Fiber 2000 laser source (2kW)** | |
| **Automatic shuttle table system with two tables** | |
| **tank heater** | |
| **Windows on the right side instead of cladding sheets** | |
| **Programmable automatic switch-off** | |
| **Automatic technology selection ATS** | |
| **handheld terminal** | |
| **Cutting head with integrated collision monitoring** | |
| **autofocus** | |
| **Sheet metal position detection, automatic and contactless** | |
| **Interface to handling and automation** | |
| **Safety devices for CE-compliant operation** | |
| **Nozzle cleaning, freely programmable** | |
| **Collecting trays for small parts** | |

| **Remote diagnostics module (license must be purchased from the manufacturer)** |
| --- |
| **dust extraction unit** |
| **cooling appliance** |
| **photoelectric beams** |
| **network connectivity** |
| **CAM Programming Software BySoft Version 6.6** |

# Technical Data:

## Machine

| | | |
| --- | --- | --- |
| **Cutting range** | | 3.048 x 1.524 mm/Z: 70 mm |
| **Max. positioning speed*** | | |
| | axially parallel x,y | 100 m/min |
| | simultaneously | 140 m/min |
| **Positioning deviation Pa*** | | 12 m/s2 |
| **Position scattering width Ps*** | | +- 0,1 mm |
| **Table change time*** | | +- 0,05 mm |
| **Max. workpiece's weight** | | ca. 35 s |
| **Positioning deviation Pa*** | | 750 kg |

\* Manufacturer Information on delivery of the machine; no guarantee is given for this.

## Laser

| | | |
| --- | --- | --- |
| **Power** | | 2.000 Watt |
| **Control Range** | | 0 bis 2.000 Watt |
| **Wavelength** | | Fiber, 1.060 … 1.080 mm |
| **Maximale sheet tickness*** | | |
| | steel | 12 mm |
| | stainless steel | 6 mm |
| | aluminium | 8 mm |
| | brass | 4 mm |
| | copper | 3 mm |

\* Manufacturer Information on delivery of the machine; no guarantee is given for this. To achieve these values, all parameters must be set correctly.

# ByTrans Line Extended

| sheet size | 3.000 x 1.500 mm |
|---|---|
| Sheet thickness loading and un-loading | 0,8 – 25 mm |
| Max. Weight sheet | 890 kg |
| cassette seats | 2 |
| large parts removal | ja |
| Insert intermediate plates | Ja |

# Description of the manufacturer Bystronic

**Unique advantages BySprint Fiber**
- Unprecedented part output in thin sheet metal thanks to innovative fiber laser technology
- Sophisticated high-tech fiber laser combined with mature laser technology

**Machine technology**
- Economical and ecological thanks to unrivalled energy efficiency, unparalleled parts output and worry-free operation
- Unparalleled efficiency of over 30%.

**The machine concept**
- Simple, compact and clear design
- Optimum accessibility
- Simple, fast installation of residual panels, access without risk of collision
- Ideal for express orders in between
- Less effort for the operator and therefore higher productivity
- High dynamics due to small mass movement of the cutting bridge
- Machine cladding with safety panes in the front door to meet the high laser safety class of fiber lasers. Side windows optionally available.

**The drive system**
- Direct motors drive the axes precisely and with high acceleration values
- Long service life due to low bearing load
- Closed and protected drives

**The cutting head**
- Specially developed fiber laser cutting head
- Integrated capacitive scanning

**The operation**
- Manual operating unit for time-saving set-up and adjustment work
- Functionally simple and multiple re-start system, e.g. contour trapping by moving to the starting point with the handheld terminal
- The ByVision control system

- Parameter adjustments directly on the MMC operator panel during cutting operation without interruption are possible
- Remote diagnosis module for fast analysis of actual states
- Automatic setting, activation and deactivation of micro-bars without Bysoft programming software.
- Nesting of individual parts from existing nesting plans with Tool box without Bysoft programming system
- Less effort for the process, therefore less non-productive time
- Automatic adaptation of the parameters to the contour profile by ATS

**The Laser Fiber 2000**
- 2kW fiber laser
- Maximum energy efficiency thanks to very low electrical energy consumption
- Very low operating costs due to high-tech fiber laser technology
- (e.g. no laser gas necessary, minimum wear costs)
- Extended material spectrum (non-ferrous metals)

**ByTrans Extended - Automation**

- Intelligent solutions for loading and unloading laser cutting systems

- Fast order processing, because automatic loading and unloading reduces setup times
- Considerably higher machine utilization with only a slightly larger investment sum
- The ByTrans Extended version has not only one, but two cassettes, making the machine system even more autonomous.
- Flexible application. Used not only for storage/return storage, but also for the removal of large parts and for the provision of plastic protective plates, which are placed between the sheets by the system.
- Entry into low-manning component production

# Advantages Fiber Laser

Fiber lasers are the latest development in laser cutting. The laser beam is generated in an active fiber and guided via a transport fiber to the cutting head of the machine. Fiber lasers are significantly smaller than CO2 lasers and produce twice as much power from the same power supply. A fiber laser cutting system is particularly suitable for processing thin to medium-thick sheets. It also cuts non-ferrous metals.

lower power consumption with higher performance
- no laser gas
- Consequently: lower operating costs
- Processing of non-ferrous metals (copper, brass)
- Less space required