SUPERA-F

DeraTech

DERATECH

Company Introduction

PROBABLY THE BEST PRICE/QUALITY RATIO IN THE WORLD!

DERATECH GROUP

Deratech is specialized in designing and manufacturing sheet metal working machines. The Deratech headquarters for research, design and assembly are based in Belgium. Subsidiaries all over the world (Australia, China, Germany, Netherlands, Thailand, India,...) and carefully selected partners provide a world class advice, sales installation and service.
Shanghai Deratech CNC Machine Tool Co. Ltd, is the new production & technology center of Deratech - Belgium in China. The advanced European design, quality and technology of our R&D center in Belgium together the experienced engineering team of Shanghai Deratech will result in high quality production of sheet metal working machinery. All processing is designed in 3D by our technical department to obtain a high precision on all the manufactured machine parts.

Deratech is your partner in sheet metal working machinery.

The Supera is an double-drive gantry type flying optics laser cutting machine.

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It is designed to offer high dynamics during high-speed cutting of thin materials while having all the technology and know-how on board to produce stable and consistent parts in thicker material, where the maximum thickness is only limited by the output power of the laser. The machine can cut the sheets on two different height levels inside the machine, this allows the automatic shuttle table system to change very fast between tables since the tables do not need to make any vertical movement. The fully covered machine assures a perfectly eye-safe operation.

PRODUCT FEATURES

SUCTION UNIT

The working area under the cutting table of the Supera 3015 is divided into separate sections from where dust and smoke can be extracted effi ciently. The air from the dust collector is guided through two channels inside the machine frame where a pneumatic system will make sure that only that area where the cutting head is processing will be extracted by the air fl ow from the external air fi lter unit. Scrap pieces and heavy dust will fall through the cutting tables into separate boxes that can easily be taken away from the side of the machine.

2 BRIDGE STRUCTURE

Central in the design of the machine is the light-weight bridge which has been optimized to have an extreme high stiffness and allows the machine to reach very high dynamics without compromising the accuracy of the parts over the entire 1.5m span of the width of the working range. The compact design of the Z-axis offers an optimum weight distribution while keeping the access for the operator to the cutting head easy and straightforward. All critical parts are covered and well protected against dusts and smokes from the laser cutting process.

3 TRANSMISSION SYSTEM

Powerful low-inertia servo motors with gear-box provide the necessary torque to the high-precision rack and pinion drive system. This robust system offers the highest accelerations at maximum accuracy, no matter the length of the stroke of the axis in question. There is virtually no back-lash and the integrity and long life-time of the rack and pinion is guaranteed by an automatic central lubrication system providing a continuous lubricant to both the pinions of the X- and Y-axis transmission system and the carriages of the linear guides of the machine.

PRODUCT FEATURES

4 CUTTING HEAD

The Supera 3015 is equipped with a light-weight and robust cutting head from RAYCUS for fiber-delivered laser sources (fiber laser, disk laser or direct diode laser) of maximum 16kW output power. The focus adjustment is motorized while the distance to the work-piece is maintained automatically and with extreme high dynamics by

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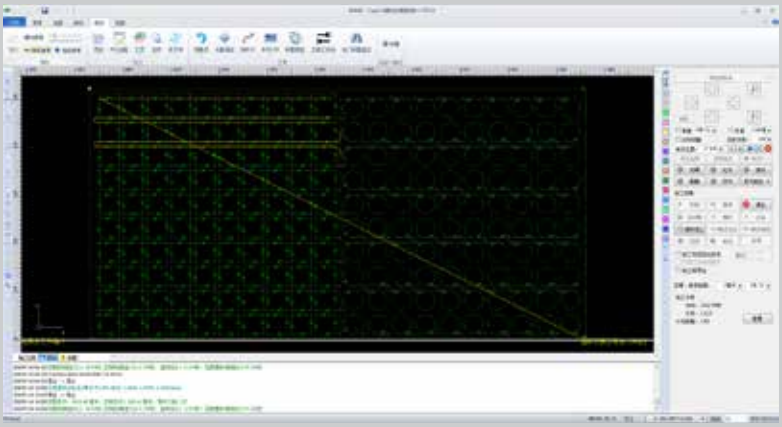
an integrated capacitive distance sensor. Even with irregular sheets, the laser cutting process parameters will be kept constant during the entire production. The auto-focus function allows minimum set-up time for the machine when changing the material and/or thickness to cut. The cutting lens is protected from the process spatters by a low-cost and easy to replace protective window.

5 FIBER LAZER SOURCE

The Supera can be equipped with MAX or IPG source, from 1 - 20kW

PRODUCT FEATURES



6 MOTION

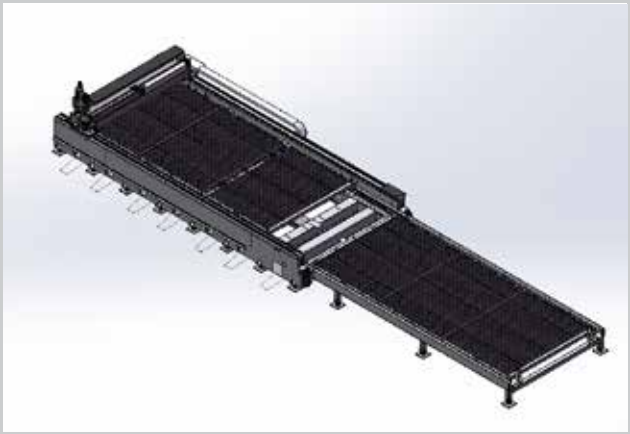
Servo motors and drives by Inovance.

7 CONTROL SYSTEM

A powerful CNC lies at the heart of the Supera laser cutting performance. This allows extreme fast processing of all tasks and introduces virtually no dead-times in the production. All important laser components (servo drives, laser cutting head, capacitive distance sensor, laser source, laser pulse generator, cutting gas servo valve, etc.) are integrated in one single closed-loop control system mastering every single aspect of the laser cutting process at a microsecond-level cycle-time.

8 SHUTTLE TABLE

The operation of the shuttle table is full-automatic and completely integrated with the safety light curtain system around it to protect the operator. The table change cycle time is extremely fast because the tables are not moving vertically at any time. The cutting tables come into the machine at different heights, well within reach of the long Z-axis stroke.



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FEATURES

The high-end machine interface screen shows all operation conditions of the machine together with the feedback values from the integrated process sensors. There is a fully graphical pre-view of the part programs.

The machine has a robust and rigid design that guarantees repeatable high precision cutting results. Both the working tables move in and out of the machine simultaneously, decreasing dramatically the time of the table change cycle and increasing the productivity of the machine. New sheets get faster in and cut sheets get faster out of the machine. The machine features a completely closed cabin for laser radiation protection and offers safe and ergonomic operation. The large eye-safe windows allow an optimal overview of the entire working area of the machine. The machine lay-out is symmetric when it comes to the maintenance access from the sides: either side can be put close to a wall while having all the necessary reach to maintenance points on the opposite side. The light-weight bridge assures accurate cutting results even under high-dynamic axis movements. A long vertical stroke of the cutting head gives additional freedom in the cutting application: pre-formed sheets, tubes, profiles, etc. can easily be put on the cutting table and are in reach of the cutting head.

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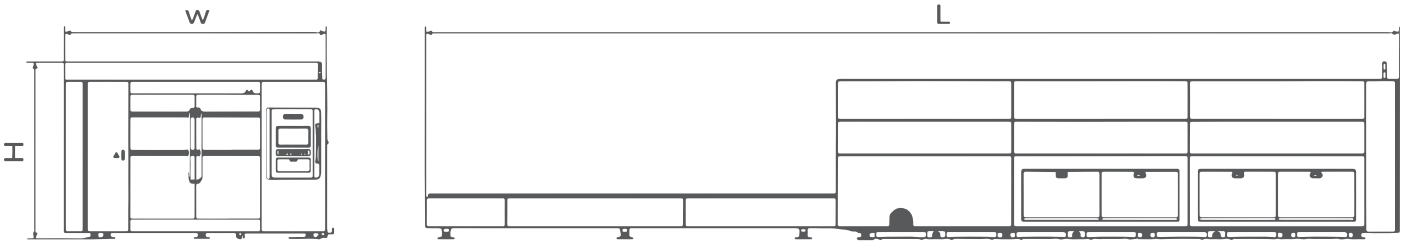

	Supra 3015	Supra 4020	Supra 6025
Cutting plate size	3000 x 1500 mm	4000 x 2000 mm	6000 x 2500 mm
X axis stroke	3050 mm	4050 mm	6050 mm
Y axis stroke	1550 mm	2050 mm	2550 mm
Z axis stroke	300 mm	300 mm	300 mm
X / Y axis positioning accuracy	± 0.03 mm/m	± 0.03 mm/m	± 0.03 mm/m
X / Y axis repeat positioning accuracy	0.02 mm/m	0.02 mm/m	0.02 mm/m
X / Y max. speed	100 m/min	100 m/min	130 m/min
X / Y max. acceleration	1.2G	1.2G	1.2G
Max. weight of workpiece	2000 kg	2000 kg	2000 kg
Machine Size	8680 x 3025 x 2100 mm	10120 x 3025 x 2165 mm	14720 x 4000 x 2685 mm
Weight	6000 kg	8000 kg	17000 kg

Also available in: 1500 x 3000mm - 2000 x 4000mm - 2000 x 6000mm - 2500 x 6000mm - 2500 x 8000mm - 2500 x 12000mm

If you need more product specification please contact with us.

Deratech Industries
Molenweg 101
2830 Willebroek
Belgium
T: +32 (0)3 279 81 62
E: bjorn@deratechindustries.com
W: www.deratechgroup.com

Deratech China
N° 178, Sheng Jing Road, Technology
Industrial Park, Chengxiang town,
Taicang City, Jiangsu Province, P.R.C
T: +86 0512 80600988
E: info@deratech.cn
W: www.deratech.cn

Deratech Australia
5/35-41 Westpool Drive
Hallam - Victoria 3803
Australia
T: +613 9796 5260
E: sales@deratechgroup.com.au
W: www.deratech.com.au

Presstechnik s.r.o.
Žižkova 1089
39501 Pacov
Czech republic
T: +420 565 555 600
E: info@presstechnik.cz
W: www.deratechgroup.com

Deratech Machines India Private Limited
No.264/75, 36th Cross, 2nd Main,
8th Block, Jayanagar - Bengaluru -
560070 - Karnataka - India
T: +91 973 9499 499
E: sales@deratechindia.com
W: www.deratechindia.com

Finnmak Machinery
10156/17B Farnham Street
Parnell, Auckland 1052
New Zealand
M: 021309030
T: 09 889 8872
E: sales@finnmak.com
W: www.finnmak.com

Deratech México
Montecito 38, Piso 28, Ofic 12 y 13.
Colonia Nápoles.
Delegación Benito Juárez.
México, D.F. 03810.
T: +(55)5547 4963
E: ventas@deratech.mx
W: www.deratechgroup.com

Elgisa - PT Elemen Gemilang Suryamasinka
Blok G No. 08, JL. Peta Selatan,
Kalideres
Jakarta Barat 11840 - Indonesia
T: (021)22052042
F: (021)22052031
E: info@suryamasinka.com
W: www.suryamasinka.com

Punch Tooling NZ LTD
2 Donald Street
Kaikorai Valley
Dunedin 9011
New Zealand
T: 027 471 7003
E: punchtoolingnz@gmail.com
W: www.punchtooling.co.nz

PMC Globaltech Corporation
#5 Countryside Subdivision
Brgy. Barangka Ibaba - Mandaluyong City
Philippines 1550
T: +632-8-532-0330.
E: pmc.globaltech.corp@gmail.com
W: www.deratechgroup.com

Autmex
AL. Krakowska 110/114
02-256 Warszawa
Poland
T: +48 22 290 61 01
E: biuro@autmex.eu
W: www.autmex.eu

Deratech Thailand
8/8 Moo 9 Bangchang Sampran
73110 Nakhonpathom
Thailand
T: +66 (0)34-30-0743
E: thailand@deratechgroup.com
W: www.deratechgroup.com

Deratech UAE
Easy Metal Forming LLC
Dubai
United Arab Emirates
T: +971.50.687.9282
E: fady@easymetal.ae
W: www.deratechgroup.com

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