



Machine Capacity

 **FREDRIKSONS**  
From One End to the Other



## Okuma MULTUS U3000 Multitasking Lathe Machin

*Okuma Multus U3000 is a multitasking lathe machine with a milling function which offers 5-axis simultaneous machining. This first-class machine has a broad scope of machining functions and is the embodiment of power, speed, and process flexibility. With this machine, you can complete the work in one setup and with tools to spare in the ATC.*

Max diameter	Ø650mm
Max length	1500 mm
Speed	4200 rpm
Spindle motor	VAC 22/15 kw
Tool magazine	80
C-Axis control	360° inc. 0,001°

### **Spindle left**

Speed range	50-4200 rpm
Torque	427 Nm

### **Spindle right**

Speed range	50-4200 rpm
Torque	427 Nm

### **Milling spindle**

Spindle speed	12000 rpm
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## DMU 60 eVo linear Universal Milling Machine

*DMU 60 eVo Linear models are simultaneous 5-axis machines equipped with an NC automatic swivel table. The models employ a bridge-type structure, ensuring high rigidity and stable machining for a long term. The machine is equipped with a 600x500mm working table and loading capacity up to 300kg. The model is suitable for machining medium size workpieces for carious fields. The machine is also integrated with a PH- cell for automation of loading and unloading pallets with up to 40 pallets.*

X-, Y- and Z-axes	600 x 500 x 500mm
Weight	300kg
Tool magazine	210 slots
Positioning accuracy:	0,005mm

### **Speeds X/Y/Z axis**

Rapid traverse	80m/min
Max feed	80m/min
Acceleration	10m/s <sup>2</sup>
Chip to chip time	5,5 s

### **Main drive**

Integrated motor spindle SK50, spindle speed	20- 20 000 rpm
Power (40% duty cycle)	35 kW
Torque (40% duty cycle)	130 Nm
Wheel magazine	SK 40
Integrated in milling head, spindle taper	SK 40

### **PH-cell – Pallet loading and handling system**

Number of pallets	40
Pallet sizes	400x400
Pallet weight	300kg



## Okuma LT2000 EX Multioperation lathe

*This Okuma LT2000 EX is a 4-axis 2-spindle multioperation lath. With the ability to combine the upper and lower turrets with either spindle, this machine enables process flexibility, very high feature utilization, and the ability to complete the greatest amount of primary and secondary machining possible in one compact platform.*

Max diameter	Ø210mm
Number of axes	9
Speed	5000 rpm
C-Axis control	360° inc. 0,001°
Spindle motor	VAC 22/15kw
Double revolvers	16+16 stations

### **Spindle left**

Speed range	50-5000 rpm
Torque	183 Nm

### **Spindle right**

Speed range	50-6000 rpm
Torque	183 Nm

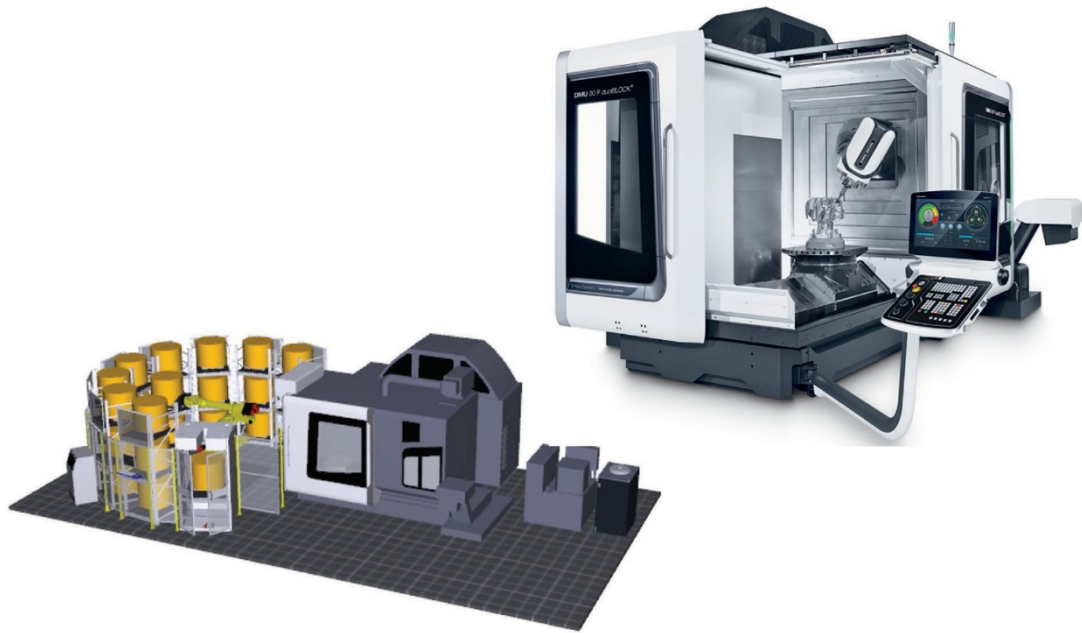
### **Rotating tools (milling)**

Spindle speed	45-6000 rpm
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### **Bar feeder**

Spindle feedthrough	Ø 80mm
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## DMU 80 P duoBLOCK Universal Milling Machine

*DMU 80 P duoBLOCK is a universal milling machine which offers 5-axis machining at the highest level and unique performance features. It will increase the work piece accuracy with up to 30 %. The innovative wheel magazine provides the highest flexibility and productivity due to the fact that it can be retooled during machining. The machine is robotised from System 3R with a magazine of 24 palette locations.*

X-, Y- and Z-axes	800x1050x850 mm
NC rotary table	40 rpm
NC rotary table size	Ø950 mm
NC rotary table load	max. 1500 kg
Tool magazine	HSK-A 100 with 243 slots

### **Distance from spindle centre to table**

Horizontal milling head	50 to 900 mm
Vertical milling head	-300 to 750 mm

### **Distance from spindle nose to table**

Horizontal milling head	-200 to 850 mm
Vertical milling head	150 to 1000 mm

### **Main drive**

Integrated motor spindle SK50, spindle speed	up to 12000 rpm
Power (40% duty cycle)	52 kW
Torque (40% duty cycle)	430 Nm
Wheel magazine	SK 50
Integrated in milling head, spindle taper	SK 50
Options	Spindle taper for HSK-A100



## Okuma MA600H Horizontal Milling Machine

*Okuma MA600H delivers high productivity without compromising on accuracy. Our horizontal 4-axis milling machine is perfect for harder materials such as stainless steel alloys. A high-speed axis feed of 60m/min makes it both fast and stable. Okuma's double sleeve spindle cooling system balances the spindle head temperature to prevent deformation and ensure continuous, consistent accuracy.*

Working area: X-, Y- and Z-axes	1000x900x1000mm
Pallet size	630x630
Max part dimension	Ø1000x1000mm
Tool magazine	40 slots
Weight	1200kg
Locking force	80000N
Positioning accuracy:	0,003mm

### **Distance from spindle centre to table**

Horizontal milling head	50 to 950 mm
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### **Distance from spindle nose to table**

Horizontal milling head	70-1070 mm
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### **Main drive**

Spindle speed	50-6000 rpm
Magazine	ISO50



## Semi-automated Two-belt portal grinder - Kuhlmeier

*Our Semi-automated Two-belt grinder has a unique possibility to automate grinding and polishing of stainless-steel parts with both high and repeatable quality. It can handle high surface demands and with specific grinding directions of smaller and bigger surfaces.*

### **Technical specifications**

Working area	3000mm
Abrasive belt size	120x9000mm
Max height part	1640mm
Max weight table	150kg

### Positioner:

Axle A	0-135°
Axle B	0-188°
Axle C	0-360°



## TruMatic 7000 FMC High-End Combination Machine

*TruMatic 7000 FMC is a high-end combination machine that meets the most stringent demands for part quality, productivity and flexibility.*

(XxY) working area in combination with punching and laser operation	3050 x 1550 mm
Max. sheet thickness	8 mm (not at brushing table)
Max. punching force	220 kN
Max. weight on workpiece	280 kg
X axis	100 m/min
Y axis	60 m/min
Simultaneous positioning speed (X+Y)	116 m/min
Stroke rate, punching	1000/min
Stroke rate, marking	ca 2800/min
Speed C axis, punching	330 rpm
Speed C axis, thread tapping	330 rpm
Linear store and ToolMaster	61 tool stations and 4 cant
Number of places when using MultiTool	up to 610 tools
Rotation of all tools	360°
Tools changing time	ca 0.3-2.8 sec
Max. punching diameter	
Max. diameter for shaping	120 mm
Conversion height	25 mm
Max. size on workpieces in flap door	500x500mm
Position accuracy	±0.1 mm
Repeater accuracy	±0.03 mm





## TruBend 5050 Bending Machine

*Our new bending machine combines innovative technology with precision. It has an outstanding productivity - at every stage of the process, from programming and tool setup to the actual bending operation.*

Press force	500 kN
Bending length	1275 mm
Usable installation height	385 mm
Tilt of the press beam	±10 mm
Width between gables	1040 mm
Depth of throat	420 mm
Table width	100 mm
Working height at a tool height of 100 mm	1050 mm

### **Speed Y axis**

Rapid speed	220 mm/sec
Working speed	10 mm/sec
Return	220 mm/sec

Number of axis in allocation	5
Speed X axis	1000 mm/sec
Speed R axis	330 mm/sec

### **Position accuracy of the axis**

Y axis	±0.005 mm
X axis	±0.04 mm
R axis	±0.08 mm

Stroke length, Y axis	215 mm
X axis	600 mm
Weight	4900 kg



## TruBend Cell 5000 Bending Cell

*The automated bending cell offers high output and flexible solution for the widest possible range of parts. Depending on the application, the productivity increases 15-25 %.*

Press force	2300 kN	<b>Speed Y axis</b>	
Bending length	4250 mm	Rapid speed	220 mm/sec
Usable installation height, max.	615 mm	Working speed	10 mm/sec
Tilt of the press beam	±10 mm	Return	220 mm/sec
Width between gables	3680 mm	Number of axis in allocation	6
Depth of throat	420 mm	Speed X axis	1000 mm/sec
Table width	120 mm	Speed R axis	330 mm/sec

### **Position accuracy of the axis**


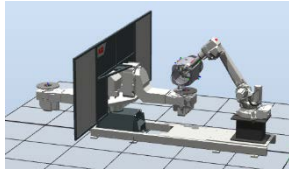







Y axis	±0.005 mm
X axis	±0.04 mm
R axis	±0.08 mm

Stroke length, Y axis	445 mm
X axis	600 mm
Max. X length	860 mm
R axis	250 mm
Max. weight of plate, BendMaster	40 kg
Transfer BendMaster	10 m
Numbers of changing places	2





Weight	19500 kg
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Machine	X (mm)	Y (mm)	Z (mm)	Others
<b>PLATE DIVISION</b>				
Combination machine: Trumpf TruMatic 7000 FMC 	3050	1550	6	Max thickness: 6 mm For further information, see page 3
Bending machine: Trumpf TruBend 5050 	1275			Max pressure: 50 tons For further information, see page 4
Bending cell: Trumpf TruBend 5000 	4250			Max pressure: 230 tons For further information, see page 5
Laser machine: Trumpf Laser L3050 	3080	1500		6000W Mild steel: 30 mm Stainless: 25 mm Aluminum: 15 mm Robot handle
Bystronic Byspeed 3015 	3000	1500		4400W Stainless steel: 15 mm Black-sheet: 20 mm Aluminium: 8 mm Brass: 6 mm
Edging press: Ursviken Optima 400 	5100	1000		Max pressure: 400 tons
2x Burring machine: Fladder Aut-1000VAC 	900	1000		
Swebend PB4-6-3, CNC rolling machine 	1050			Max thickness: 6mm Roll Ø140

Machine	X (mm)	Y (mm)	Z (mm)	Others
Round press: Roundo Pass 150 	1500			Max thickness: 4 mm Min R: 100 mm
Length welding: HN Automatic 				Welds pipes up to 1400 mm
Nut and bolt press: Haeger 824WT-3H 				
<b>SURFACE FINISHING</b>				
Shot blast machine: Schlick HB 12/16 	1200	1600	1250	Max weight: 800 kg
Trowal: Walther Trowal CD 300 	3080	1500		Volume: 350 litres
Semi-automated Two-belt portal grinder 	3000			Max weight: 150kg See specification above
Shot blast machine for inside blasting 	2500	2000	3500	Max weight: 300kg Media: Glass shoot

Machine	X (mm)	Y (mm)	Z (mm)	Others
<b>WELDING</b>				
Robot Station: ABB IRB 4600 				Max reach: 2510 mm Max payload: 20 kg CMT – welding equipment
Robot Welder: ABB IRB 2600-12/1,85 	1450	1450	1000	Axes: 6 Max reach: 1650 mm 2x positioner IRB 750B Max weight: 750kg
Spot Welder: ARO 72500 				Stationary spot welder - 8+8 mm stainless, B-class.
Robot Weld: ABB IRB 4600-20/2,5 + IRBP A2000  	2900	2900		Max reach: 2510 + Laser tracking system CMT – welding equipment Max Payload positioner: 2000kg Radius 1450 mm
Robot Weld: ABB IRB 2600-12/1,85 				Max reach: 1650 2x IRBP 1000L stand (Rotation table) FORCETIG – welding equipment
Robot weld: ABB IRB 1600-6/1,45 				Max reach: 1450 IRBP 1000L stand (Rotation table) CMT – welding equipment
Robot weld: ABB IRB 2600-12/1,85  	1450	1450	1000	Max reach: 1650 IRBP 750A TIG hotwire – welding equipment









Machine	X (mm)	Y (mm)	Z (mm)	Others
<b>CNC</b>				
DMG Mori Seiki DMU 80 P duoBLOCK Universal Milling Machine 	800	1050	850	Axis:5 Speed range: max. 12000rpm For further information, see above.
Mori Seiki NMV 3000 DCG with System 3R Workmaster 	500	350	510	Axis:5 320 tools Robot handle 20000 rpm Turning: 2000 rpm Measuring system: Laser, probe
DMU 60 eVo linear + PH cell 	600	500	500	Axis: 5 Tools: 120 20000 rpm For further information see above.
Okuma MULTUS U3000 	650	650	1500	Axis: 5 80 tools, milling Spindle speed Turning: 4200 Mill: 12000





Machine	X (mm)	Y (mm)	Z (mm)	Others
Okuma LT2000 EX 	210	210		Speed: 5000RPM 2x revolver
Multitasking machine: Mazak VTC-300 MK-II 	1660	760	660	CNC-controlled, 48 tools, 12000 rpm Mazatrol system 640 M
Multitasking machine: Mazak SQT-250MS 	300		500	Max. 1 and 2 spindle speed: 4000 rpm 12+12 tools, milling, drilling. CNC controlled Mazatrol system 640 T
Multitasking machine: Mazak FH 6800 	1500	880	800	35 kW Mazatrol system 2 pallets 80 tools 10000 rpm
Cutting machine: Mazak Nexus 250 MSY 	300	yes	500	4500 rpm spindle speed Max 1 and 2 spindle speed: 4000 rpm 12+12 tools, milling, drilling. CNC controlled Mazatrol system 640 T
Okuma MA600H 	1000	900	1000	Horizontal Speed: 6000rpm 40 tools  For further info, see above

Machine	X (mm)	Y (mm)	Z (mm)	Others
Kern CD 650 	300	300		Speed: 4500RPM CNC controlled
Feeler QM 40SA 	1000	500	500	10000 rpm 24 tools 3 axles NC-controlled
Milling machine: Nicolas Corea A 25 	300	1000	1500	30 rotating tools 3 axles Turnable head
Cutter: Kasto win A3.3 				Extremely powerful cutter: 400 x 400

Machine	X (mm)	Y (mm)	Z (mm)	Others
<b>Spinning Machine</b>				
Spinning machine: LEIFELDC212AR 	1300	1000		Aluminium: 15 mm Mild steel: 12 mm Stainless: 8 mm
CNC Spinner Lathes: Zenn 160 	1750	1750		Aluminium: 10 mm Mild steel: 8 mm Stainless: 6 mm
<b>Quality</b>				
Corrdinate Mesuring Machine: CRYSTA-APEX 121210 	1250	3005	1100	Mesuring accuracy: 2.3 µm Max speed: 520 mm/sec Ability to scan objects to make drawings
Coordinate Mesuring Projector: PJ-A3000 	200	100		
2x Faro Platinum measuring arm 				Measuring accuracy: 0.025 mm/m Measuring volume: 2.4 m 6 axle digitalization arm for coordinate measuring in 3 dimensions Mobile for use in production
Renishaw Equator gauging system 	300	300	150	Gauging measuring system Comparison accuracy: 0,002mm

Machine	X (mm)	Y (mm)	Z (mm)	Others
<b>Others</b>				
Aluminum cutter: Elsele VMS 300 				
Burring machine: Grindingmaster MCSB-600 	1000			
Automatic cutting machine: Emmegi 550 Automatica 				Max diameter: 200 mm
Press: Stenhöjd 100 				Max pressure: 100 tons
Press: Nymek BWP 30H 				Max pressure: 30 tons C press
Cutting machine: Kasto Twin A3 	3000	1000	320	Programmable in 99 programs Max diameter: 320 mm











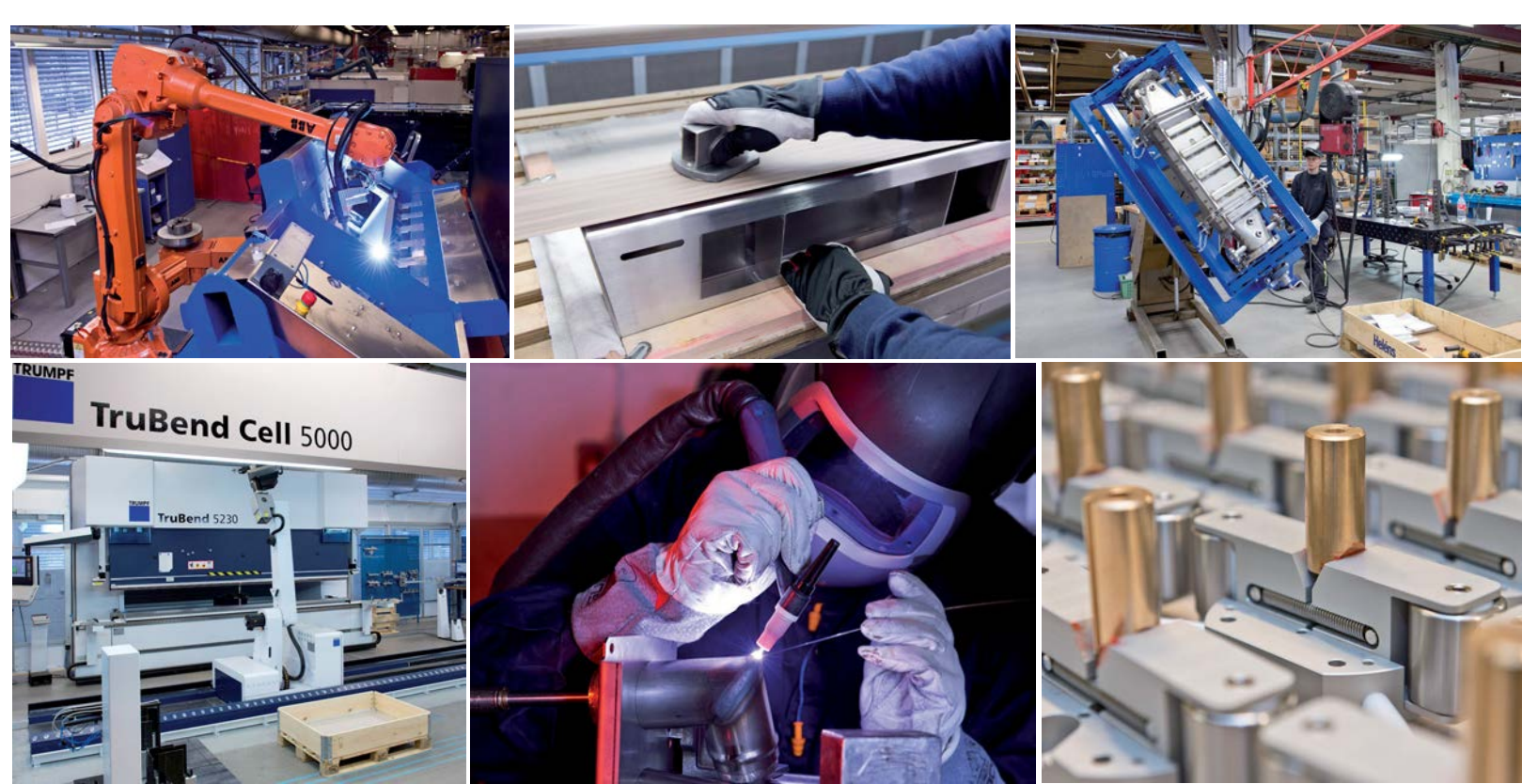
Machine	X (mm)	Y (mm)	Z (mm)	Others
Tube bending machine: BLM NC 842 				CNC 8-42x2.5 pipes
Tube bending machine: Tauring D 				
Tube bending machine: Herber HBN-50 				8-52 mm
Inficon – Sentrac Strix (Hydrogen leak detection) 				Minimum detectable leak: $5 \times 10^{-7}$ mbarl/s Mobile

Machine	X (mm)	Y (mm)	Z (mm)	Others
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## Fredriksons Industry (Suzhou) Co., Ltd - China

<p>Mazak Variaxis 730-5x II CNC</p> 	730	850	790	<p>Mazatrol system Two pallets 40 tools 10.000 rpm</p>
<p>Laser: Trulaser 3030</p> 	3080	1500		<p>4000W Mild steel: 20 mm Stainless: 15 mm Aluminium: 10 mm Robot handle</p>
<p>Laser: Trumatic L3050</p> 	3080	1500		<p>6000W Mild steel: 30 mm Stainless: 25 mm Aluminium: 15 mm Robot handle</p>
<p>2 x Press brake Yawei</p> 	265	315		<p>Work force: 300 tons Table length: 3100 mm Table height: 980 mm Block travel: 315 mm</p>
<p>Burring machine: Fladder</p> 	5000	1000		
<p>Drawbench machine: JH310</p> 				<p>28 kW 850 rpm</p>
<p>Drawbench machine</p> 				<p>600 rpm</p>

Machine	X (mm)	Y (mm)	Z (mm)	Others
Punching machine 				63 kN
Tube bending: Tauring D 				
Tube bending machine 				
Vertical driller 				Max drilling diameter: 50 mm
Table driller 				Max drilling diameter: 13 mm
Round cutting machine 				Low speed: 52 rpm High speed: 100 rpm
Cutting machine 				Max degree: 90 BAR: 110 mm Square: 100 x 150 mm Speed: 20/30/50 m/min
Oil press machine 				Work force: 50 tons Max stroke: 350 mm Table size: 600 x 700 mm Down speed: 0.9 - 8.8 m/min Up speed: 4.9 m/min



Fredriksons Verkstads AB, established in Vadstena 1917, is a modern engineering industry. The main part of the turnover is contract manufacturing of small to middle-sized series, for the food, medical technical and engineering industry.

Fredriksons is working with construction, prototype manufacturing and technical documentation. We also manufacture and construct our own products, namely conveyor systems to the food and pharmaceutical industry.

In 2006 Fredriksons established a subsidiary in Suzhou, close to Shanghai in China. Fredriksons Industry (Suzhou) Co., Ltd. started production in April 2008. In Suzhou we support our customers in their business opportunities in Asia.

Fredriksons has about 300 employees. We are third party certified in ISO 9001, 14001, 13485 and 3834-2.

Fredriksons has been a member of XANO Industri since 2006.

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