

# FINN-POWER

► **PUNCHING**

■ **LASER CUTTING**

■ **BENDING**

■ **INTEGRATED PUNCHING & SHEARING**

■ **INTEGRATED PUNCHING & LASER CUTTING**

■ **FLEXIBLE MANUFACTURING SYSTEMS**



## **TECHNICAL DATA FINN-POWER E6 AND E8**

## Technical information E6 and E8

Ram force	200 kN (23 US Tons)
Optional or later upgrade	300 kN (33 US Tons)
Punching stroke	servoelectric
Number of stations / max. tools in turret	20 pcs / 200 pcs
Tools	Thick Turret
Punch diameter, max.	89 mm (3.5")
CNC Index Tool:	
Number of stations max. / Tools in turret max.	10 pcs / 80
Punch diameter, max.	89 mm (3.5")
Tool rotation, max.	166 r/min
Material thickness, max.	8 mm (0.31")
Upforming cylinder (indexable, option)	servo electric
Force	200 kN (23 US Tons)
Stroke length	12 mm (0.472")
Sheet weight, max. *1	200 kg (440 lbs)
Clamps	pneumatic, 3 pcs (optional 4 pcs)
E6 Max. sheet size X x Y without reposition	3,074 mm x 1,565 mm (121" x 61.2")
E8 Max. sheet size X x Y without reposition	4,300 mm x 1,565 mm (169.3" x 61.2")
X-traverse	3,144 mm (123.78")
X-traverse, axis speed max.	120 m/min (4724"/min)
Y-traverse	1,615 mm (63.5")
Y-traverse, axis speed max.	60 m/min (2,362")
Positioning speed, max.	150 m/min (5905"/min)
Hit speed / 1 mm (0.039") between holes, max. *2	900 1/min
Punching accuracy according to LKP-7100 *3	
Hole location deviation (X/Y axes), max.	0.1 mm (0.004")
Hole-to-hole distance deviation (X/Y axes), max	± 0.05 mm (0.002")
Angular deviation (CNC Index Tool) max.	± 0.1°
Positioning accuracy according to VDI/DGQ 3441 *4	
Positional deviation P <sub>a</sub> (X/Y axes)	0.08 mm / ± 0.04 mm (0.003" / ± 0.0015")
Positional scatter P <sub>s</sub> (X/Y axes)	0.04 mm / ± 0.02 mm (0.0015" / ± 0.001")
Turret rotation speed	30 r/min
Tool change time *5	1 ... 3 s
Work chute (option), max. part size	500 mm x 500 mm (19.7" x 19.7")
CNC control	Siemens Sinumerik 840D
Work memory	Siemens: 1.5 MB
Ethernet connection 100 MBs	Yes
Machine weight	13,000 kg (28,660 lbs)
Electrical connection (E1)	
Average power consumption *6	5 kVA / 4 kW
Requirements for connection power *7	15 kVA
Fuse	3 x 20 A (with 3 x 400 V)
Compressed air connection (P1):	
Min. air pressure	6 bar (90 psi)
Max. air consumption	5 NI/s (11 cfm)
Average air consumption *8	2.5 NI/s (5.5 cfm)

\*1 Acceleration/deceleration rate of X- and Y-axes is dependent on sheet weight. Part accuracy depends on acceleration/deceleration rate and sheet size and weight.

\*2 Hit speed is dependent on the programmed stroke length, ram speed and acceleration/deceleration rate and speed of the axes.

\*3 Punching accuracy is tested according to the FINN-POWER standard LKP-7100 by punching holes in a 1 m x 1 m (39.37" x 39.37") sheet with 100 % speed and by measuring the location (X/Y) and angle (CNC Index Tool) of the punched holes from the sheet.

\*4 Positioning accuracy is measured according to the VDI/DGQ 3441 standard, using a laser interferometer measurement system, from the X- and Y-slides of the coordinate table of the machine.

\*5 When using special tools the tool change time may differ from the given value.

\*6 Average power consumption is based on production run of a typical nesting program with nominal sheet size and 1.5 mm (0.06") sheet thickness. Effective value can be used when calculating energy costs.

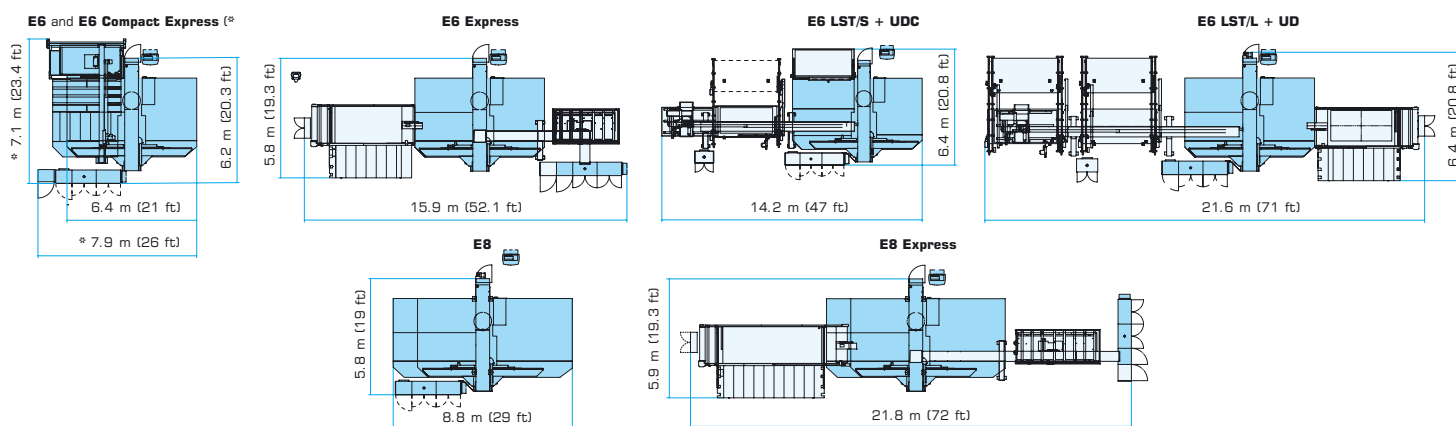
\*7 This value must be used when dimensioning the power supply to machine (transformer and cable sizes).

\*8 Average air consumption is based on production run of a typical nesting program with nominal sheet size and 1.5 mm (0.06") sheet thickness. Value can be used when calculating energy costs.

We reserve the right to change technical specifications without prior notice.

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### Appr. Dimensions



*Flexibly yours®*



**Finn-Power Oy**  
P.O. Box 38  
FI-62201 Kauhava  
FINLAND

Tel. + 358 6 428 2111  
Fax + 358 6 428 2244  
www.finn-power.com