

# FINN-POWER

- PUNCHING
- LASER CUTTING
- BENDING
- ▶ **INTEGRATED PUNCHING & SHEARING**
- INTEGRATED PUNCHING & LASER CUTTING
- FLEXIBLE MANUFACTURING SYSTEMS



## **TECHNICAL DATA FINN-POWER SHEAR GENIUS®**

## Technical information Shear Genius® SG6 / SG8

Ram force	300 kN ( 33 US Tons)
Punching stroke	servo hydraulic
Number of stations / max. tools in turret	20 pcs / 200 pcs
Tools	Thick Turret
Punch diameter, max.	89 mm (3.5")
Material thickness, max.	8 mm (0.31")
CNC Index Tool	
Number of stations / max. tools in turret	standard 2 pcs (max. 10 pcs) / 80 pcs
Punch diameter, max.	89 mm (3.5")
Tool rotation, max.	166 r/min
Upforming cylinder (indexable, option)	
Force	250 kN (27.5 US Tons)
Stroke length	12 mm (0.472")

### Integrated Right angle shear

Material thickness, max. (shearing)	
aluminium	5 mm (0.2")
steel Fe52 / Fe37	4 mm (0.16")
stainless steel	3 mm (0.12")
Material thickness, min.	0.5 mm (0.02")
Full stroke, shear, X x Y	1,000 mm x 1,528 mm (39.37" x 60.15")
Blade clearance setting	automatic, ACS
Sheet weight, max. *1	200 kg (441 lbs)
Clamps	pneumatic, 3 pcs (optional 4 pcs)
Sheet size X x Y, max. SG6	3,074 mm x 1,524 mm (121" x 60")
Sheet size X x Y, max. SG8	4,300 mm x 1,524 mm (169.29" x 60")
X-traverse	3,144 mm (123.77")
X-traverse, axis speed max.	120 m/min (4,724.40"/min)
Y-traverse	1,615 mm (63.58")
Y-traverse, axis speed max.	90 m/min (3,543.3"/min)
Positioning speed, max.	150 m/min (5,905.51"/min)
Hit speed, max. *2	
1 mm between holes (0.039")	1,100 1/min
25 mm between holes (0.984)	500 1/min
250 mm between holes (9.84")	200 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 Pa (X/Y axes)	0.08 mm / ± 0.04 mm (0.003" / ± 0.0015")
Positional scatter Ps (X/Y axes)	0.04 mm / ± 0.02 mm (0.0015" / ± 0.001")
Turret rotation	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
Program memory	1.5 MB
Ethernet connection 100 Mbs.	Yes
Machine weight	26,000 kg (57,320 lbs)
Hydraulic unit drained weight	600 kg (1,322 lbs)
Oil tank volume	400 l (106 gal.)
Oil cooler, cooling capacity max.	0.64 kW/°C (0.36 kW/°F)
Electrical connection (E1)	
Average power consumption *6	35 kVA / 30 kW
Requirements for connection power *7	80 kVA
Fuse	3 x 100 A (with voltage 3 x 400 V)
Compressed air connection (P1):	
Min. air pressure	6 bar (90 psi)
Average air consumption *8	4 NI/s (8.8 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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**FINN-POWER**

FinPower Oy  
P.O. Box 38  
FI-62201 Kauhava  
FINLAND

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