3. Technical information, E5/E6/E8

Performance		
Ram force	200 kN / optional 300 kN (later upgrading is possible)	
Punching stroke	electrical servo motor	
Tool stations in the turret	20	
Tools	Thick Turret	
Max. punch diameter	89 mm	
Clamps, pneumatic	2 pcs / optional 3 pcs (E5)	3 pcs / optional 4 pcs (E6/E8)
Turret rotation	23.8 r/min (E5)	30 r/min (E6/E8)
Tool change time(1)	1–3 s	
Auto-index system:		
• Index tool stations	standard 2 pcs / max. 10 pcs	
• Max. punch diameter	89 mm	
• Max. tool rotation	166 r/min	
Indexable upforming system (option):		
• Upforming force	200 kN	
• Die stroke height in forming	programmable by increments of 0.001 mm (max. 12 mm; NC axis)	
• Upforming speed with 25 mm form-to-form distance(2)	80–150 1/min	
	E5	E6/E8
X-traverse	2584 mm	3144 mm
Max. X-traverse, axis speed	90 m/min	120 m/min
Y-traverse	1317 mm	1615 mm
Max. Y-traverse, axis speed	60 m/min	90 m/min
Max. positioning speed	108 m/min	150 m/min
Max. hit speed(3):	E5	E6/E8
• 1 mm between holes	800 1/min	900 1/min
• 25 mm between holes	430 1/min	-
• 250 mm between holes	160 1/min	-
Punching accuracy according to LKP-7100(4):		
• Max. hole location deviation (X/Y axis)	0.1 mm	
• Max. hole-to-hole distance deviation (X/Y axis)	+/- 0.05 mm	
• Max. angular deviation (CNC Index Tool)	+/- 0.1°	
Positioning accuracy according to VDI/DGQ 3441(5):		
• Positional deviation, Pa (X/Y axis)	0.08 mm (+/- 0.04 mm)	
• Positional scatter, Ps (X/Y axis)	0.04 mm (+/- 0.02 mm)	
Sheet dimensions		
Max. sheet size X x Y	2530 mm x 1270 mm (E5)	3074 mm x 1565 mm (E6)
		4300 mm x 1565 mm (E8)
Max. sheet weight(6)	200 kg	

Max. sheet thickness	8 mm	
Connections		
Electrical connection (E1):		
• Average power consumption(7)	5 kVA / 4 kW	
• Power requirements(8)	11 kVA	
• Min. fuse size	16 A	
Compressed air connection (P1):		
• Min. compressed air pressure	6 bar	
• Max. compressed air consumption	5 Nl/s	
• Average compressed air consumption(9)	2.5 Nl/s	
Ethernet connection 100 Mbps	yes	
Additional data		
Work chute (option), max. part size	500 mm x 500 mm	
NC control	Siemens Sinumerik 840D	
Program memory	1.5 MB	
Machine weight	12 500 kg (E5)	13 500 kg (E6/E8)
Painting	two-component acrylic polyurethane paint and epoxy/ polyester powder paint	
Colours:	blue RAL 5015	
	grey Tikkurila TVT 854H (AKZO 160 A1)	
	yellow RAL 095 90 59	
	black RAL 9011	
Gloss grade:	85% epoxy/polyester powder paint	
	90% two-component polyurethane paint	
Noise	sound pressure level may exceed 85 dB (A)	

3.1. Notes on technical information

(1) When special tools are used, the tool change time may differ from the value given.

(2) Upforming speed depends on the form height, ram speed, acceleration/deceleration rate of the X and Y axes, and axis speed.

(3) Hit speed depends on the programmed stroke length, ram speed, and acceleration/ deceleration rate and speed of the axes.

(4) Punching accuracy is tested according to the Finn-Power standard LKP-7100 by punching holes in a 1 m x 1 m sheet at 100% speed and measuring the location (X/Y) and angle (CNC Index Tool) of the holes punched in the sheet.

(5) Positioning accuracy is measured by a laser-interferometer from the X and Y slides of the machine's coordinate table according to the VDI/DGQ 3441 standard.

(6) The allowable acceleration/deceleration rate of the X and Y axes depends on sheet weight. Part accuracy depends on the acceleration/deceleration rate and on the sheet size and weight.

(7) Average power consumption is based on the production run of a typical nesting program with nominal sheet size and 1.5 mm sheet thickness. The effective value can be used in calculation of energy costs.

(8) This value must be used when the power supply is dimensioned for the machine (size of possible transformer and cable).