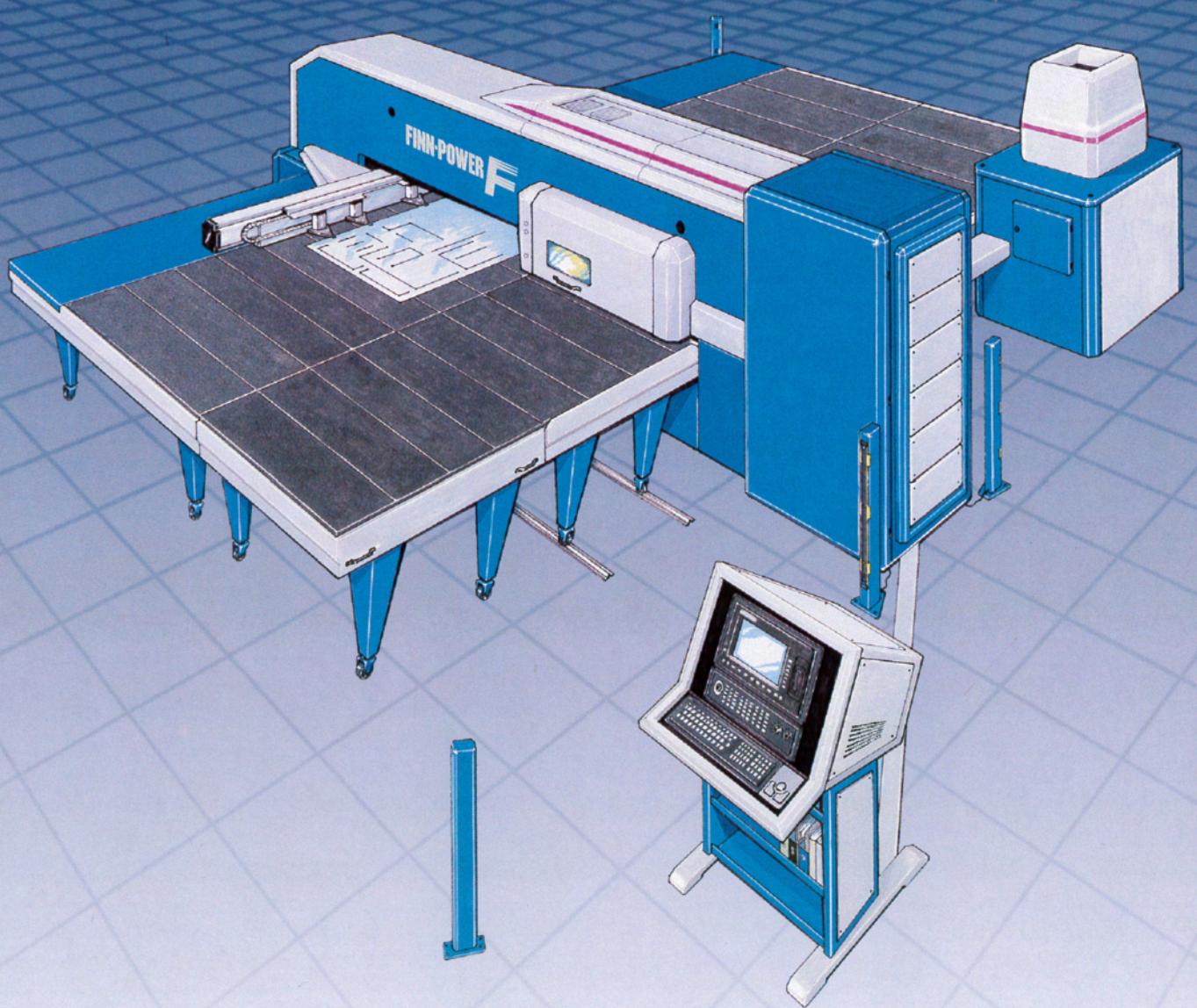


ARKIVEX

FINN-POWER

Finn-Power F5
&
Finn-Power F6

TURRET PUNCH PRESSES



FINN-POWER

F5 & F6



DESIGNED FOR YOUR MAXIMUM PRODUCTIVITY...

FINN-POWER's F5 and F6 series turret punch presses are based on our pioneering work on hydraulic punching and a wealth of experience in demanding customer deliveries. F5 and F6 offer the very latest in high-tech punching for maximum productivity. The maximum sheet size for F5 is 2500 x 1250 mm and 3000 x 1500 mm for F6.

Building on the F-series success, a new F-generation with numerous new features was introduced in 1998.

High production capacity and minimal set-up times have always been the target of FINN-POWER's design philosophy. F5 / F6 bring this development a major step further. The joint contribution of these properties is outstanding productivity in today's fast and versatile manufacturing.

FINN-POWER

F5 & F6

**... BUILT TO
GIVE YOU
YEARS AND YEARS
OF HIGH PERFORMANCE
PUNCHING, NIBBLING
& FORMING**

FINN-POWER's F models feature 300 kN of hydraulic punching power. Hit speed in nibbling reaches 900 per minute and 400 at 25 mm centres. Traversing speeds of up to 106 m/min are achieved. Mild steel up to 8 mm can be punched. The 2,5 m X-traverse makes it possible to work efficiently without repositioning.

The punching cylinder is numerically controlled. Stroke depth is independently set for individual tools, and optimum stroke length can be freely adjusted for each tool and for different material thicknesses. Tool shortening, caused by sharpening, is easy to compensate by programming, while no time-consuming mechanical adjustment or shimming is needed.

Ram speed is programmable; thus, lower speeds are available for making special forms. Programmable ram speed and stroke depth make it possible to optimize punching accuracy, efficiency and noise level for every specific job at hand.

FINN-POWER's patented programmable automatic clamp positioning (option) eliminates the need for clamp protection areas as well as manual clamp set-up. The machine is therefore ready for another job in a matter of seconds.



Ergonomics has always been a Finn-Power property.

The F series control desk is a totally new design for improved operator convenience.





NEW FORMING OPTION

The excellent controllability of the punching stroke makes the use of forming tools for louvers, extrusion etc. possible.

In conventional forming, the top of the die necessarily exceeds table level in height and thus prevents free sheet movement. FINN-POWER's new solution has a 12 mm forming stroke. As forms are made by the die moving upwards towards the punch and then retracting, sheet movement is not affected.

PRODUCTION POWER FOR THE MODERN SHOPFLOOR...

The FINN-POWER F series contains a wide range of carefully engineered models, as well as versatile options and accessories to meet individual needs. Owing to modular structure, a variety of options can be delivered practically at off-the-shelf lead times.

1) Probably the best tool programme in the market is part of FINN-POWER's overall flexibility. Your present stock of tools can be put to full use, as most popular tool types and brands can be used with the F series machines.

2) A large turret, up to ten index stations, Multi-Tools, quick tool change... flexible production power for the modern sheet metal working.

3) The new forming option adds to versatile performance.

4) Third clamp and automatic clamp move (options) eliminate dead zone.

5) Models with acoustic covers are available for lower noise level.



THOROUGHLY TESTED ACCURACY

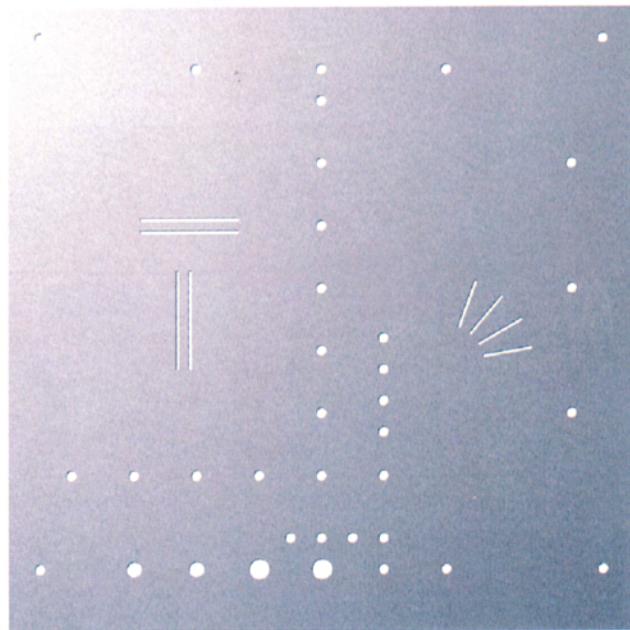
FINN-POWER uses complementary testing procedures to ascertain that every unit delivered fulfils the extremely high demands set on punching accuracy.

All turret punching presses undergo a punching accuracy testing programme specified in the FINN-POWER factory standard LKP-7100. The procedure involves punching a sheet, after which hole location and angle are examined with co-ordinate measuring equipment. Test results are documented and filed also as part of the delivery certificates. Position accuracy is given also according for VDI/DGQ 3441 standard.

All punch presses meet the following criteria:

PUNCHING ACCURACY ACCORDING TO LKP-7100

| | |
|--|-------------------|
| Hole location deviation (X/Y axes) | 0.1 mm max |
| Hole-to-hole distance deviation (X/Y axes) | ± 0.05 mm max |
| Angular deviation (CNC Index Tool) | $\pm 0.1^\circ$ |

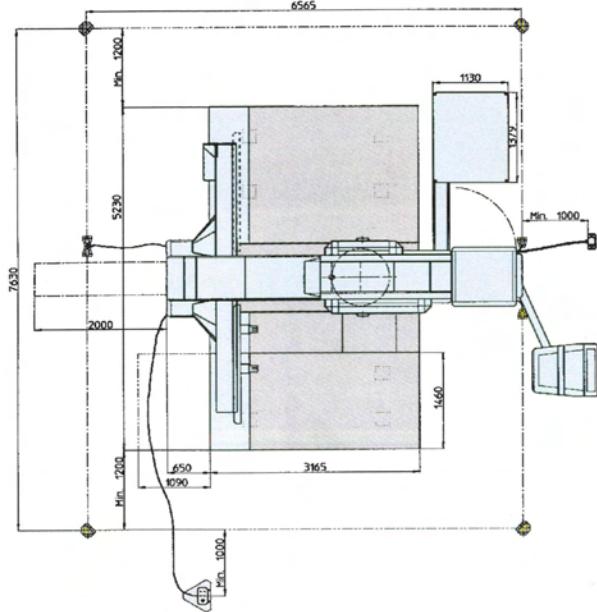
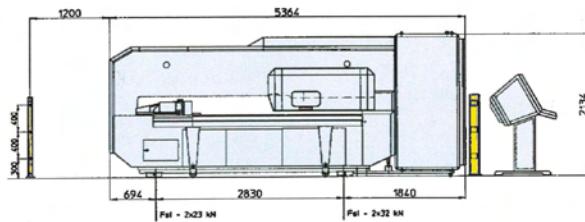


POSITION ACCURACY ACCORDING TO

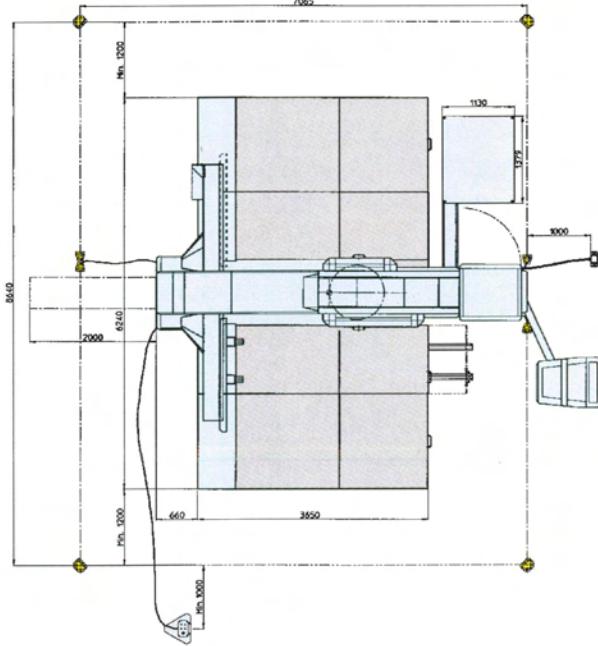
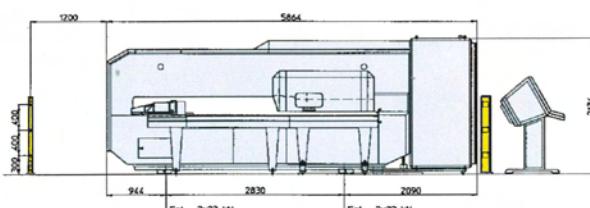
VDI/DGQ 3441

| | |
|---------------------------------------|------------------------------|
| Positional deviation P_a (X/Y axes) | 0.08 mm max (± 0.04 mm) |
| Positional scatter P_s (X/Y axes) | 0.04 mm max (± 0.02 mm) |

MAIN DIMENSIONS F5



MAIN DIMENSIONS F6



TECHNICAL DATA

| | F5-20 | F5-25 | F6-20 | F6-25 |
|---|------------------------|------------------------|------------------------|------------------------|
| Sheet size max., mm (X x Y) | 2530 x 1270 | 2530 x 1270 | 3061 x 1528 | 3061 x 1528 |
| Sheet weight max., kg⁽¹⁾ | 200 | 200 | 200 | 200 |
| X traverse, length, mm | 2084 (X-42 ... X2042) | 2584 (X-42 ... X2542) | 2084 (X-42 ... X2042) | 2584 (X-42 ... X2542) |
| X traverse axis speed, m/min | 88 | 80 | 88 | 80 |
| Y traverse, length, mm | 1317 (Y-25 ... Y1292) | 1317 (Y-25 ... Y1292) | 1560 (Y-25 ... Y1535) | 1560 (Y-25 ... Y1535) |
| Y traverse axis speed, m/min | 60 | 60 | 60 | 60 |
| Traversing speed, max, m/min | 106 | 100 | 106 | 100 |
| Hit speed, max 1/min⁽²⁾ | | | | |
| 1 mm between holes | 900 | 900 | 900 | 900 |
| 25 mm between holes | 400 | 400 | 400 | 400 |
| 250 mm between holes | 150 | 150 | 150 | 150 |
| Total weight, kg | 12000 | 12000 | 13500 | 13500 |
| Oil tank volume, l | 330 | 330 | 330 | 330 |
| Punch force, kN | 300 | 300 | 300 | 300 |
| Punch stroke | hydraulic | hydraulic | hydraulic | hydraulic |
| Stroke depth | numerically adjustable | numerically adjustable | numerically adjustable | numerically adjustable |
| Stroke length | programmable | programmable | programmable | programmable |
| Ram speed | programmable | programmable | programmable | programmable |
| Number of tool stations | 20 | 20 | 20 | 20 |
| Punch diameter, max., mm | 89 | 89 | 89 | 89 |
| Turret rotation, r/min | 30 | 30 | 30 | 30 |
| Tool change time, sec | 1 ... 3 | 1 ... 3 | 1 ... 3 | 1 ... 3 |
| Work chute, max. workpiece, mm | Ø 250 (175 x 175) |
| CNC Index Tool | | | | |
| Number of Index Tool stations | standard 2 / max 10 |
| Punch diameter, max., mm | 89 | 89 | 89 | 89 |
| Tool rotation, max., r/min | 58 | 58 | 58 | 58 |
| Material thickness, max., mm | 8 | 8 | 8 | 8 |
| Clamps | pneumatic, 2pcs | pneumatic, 2pcs | pneumatic, 2pcs | pneumatic, 2pcs |
| NC Program memory, kB | | | | |
| Siemens Sinumerik 840 D | 1000 | 1000 | 1000 | 1000 |
| Fanuc 16 P | 256 | 256 | 256 | 256 |
| Serial interface | RS 232C/V 24 | RS 232C/V 24 | RS 232C/V 24 | RS 232C/V 24 |
| Power supply, max., kVA | 47 | 47 | 47 | 47 |
| Power supply, average, kW | 24 | 24 | 24 | 24 |
| Oil cooler capacity, max., kW | 30 | 30 | 30 | 30 |
| Compressed air consumption, Nl/min (average)⁽³⁾ | 30 | 30 | 30 | 30 |
| Compressed air pressure, min., bar | 6 | 6 | 6 | 6 |

1) Acceleration/deceleration rate of X and Y axis is dependent on sheet weight.

2) Hit speed is dependent on programmed stroke length, ram speed, acceleration/deceleration rate and axis speed.

3) Average power consumption is based on production run of a typical nesting program with 1.5 mm x 1250 mm x 2500 mm sheet size. It can be used when calculating energy costs.

Options for machine and control

- Ball tables
- Acoustic covers
- Additional index stations (total 10 max)
- Automatic clamp setting
- 3rd clamp and clamp move
- Special camps +250 (pair)
- Clamp force control
- Upforming system
- Tool holders for forming tool (total 10 max)
- Part conveyor
- Lifting part conveyor
- Scrap conveyor
- Lifting scrap conveyor
- Vacuum system
- Sheet lubricator (alcohol)
- Sheet lubricator (mineral oil)
- Tool lubrication system
- Safety fences for unloading side
- Photoelectric safety beam 1 and 2

Control cabinet cooler

Remote system monitoring

MT24-8

MT10-16

MT8-24

MT6-A

Programming systems and options

- Finn-Power Jetcam TP Expert 2
- Finn-Power Jetcam TP Expert 3
- Finn-Power Jetcam TP Expert 4
- Postprocessors for other punch presses
- Parametric programming
- Automatic parametric programming

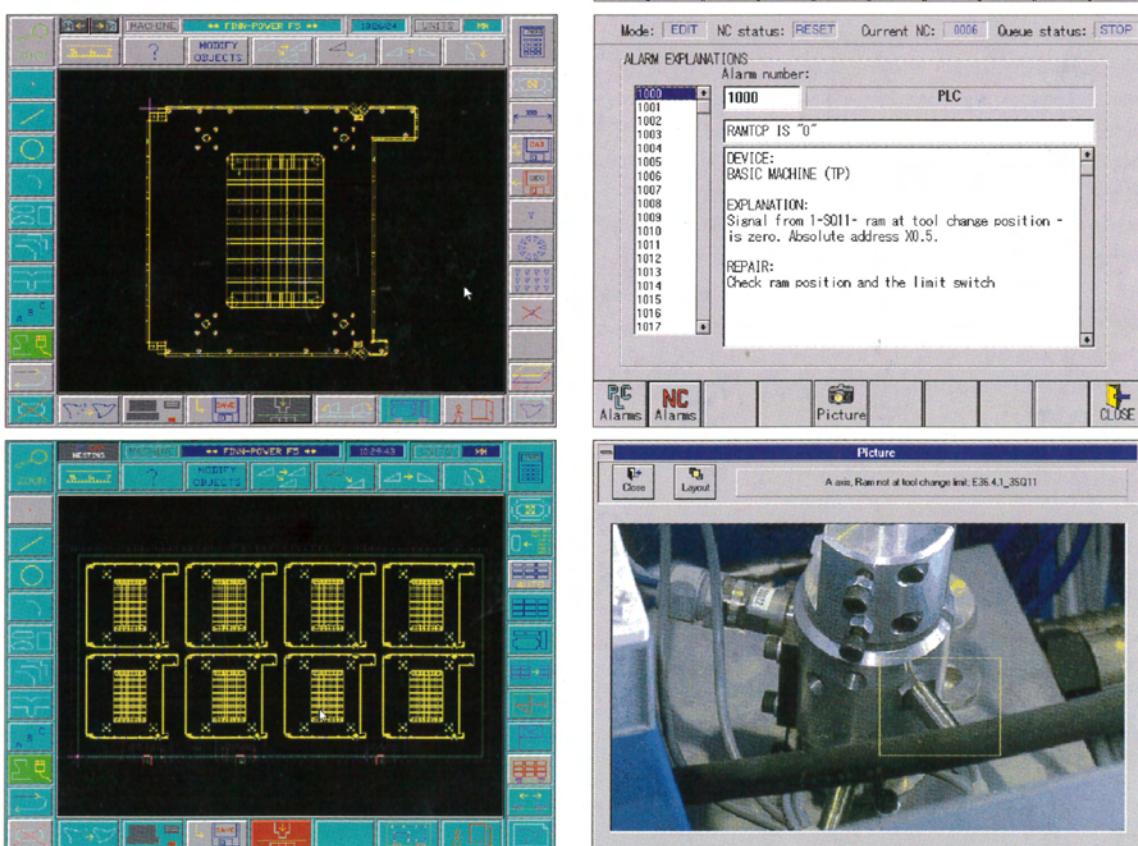
Terminal controls & options + information systems

- PowerLink SC (sw)
- PowerLink MMC (hw + sw)
- PC cabinet for PowerLink SC

INNOVATIVE SOFTWARE BY FINN-POWER

F5 and F6 are equipped either with Siemens Sinumerik 840D or Fanuc 16P numerical control. FINN-POWER's software range comprises FINN-POWER JETCAM programming system and POWERLINK cell control, both available with a large number of special options.

POWERLINK provides fast data transfer between the programming system and the numerical control. Its advanced multimedia information system supports the operator in several ways facilitating self-learning possibilities, giving recovery instructions and a simple access to electronic manuals etc.



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