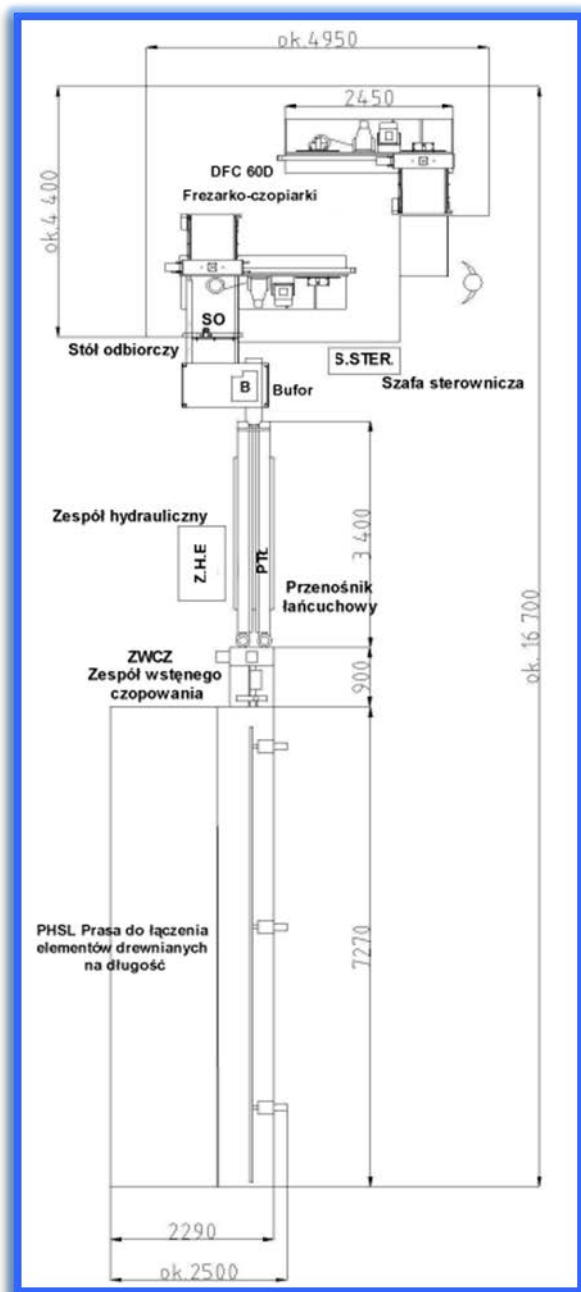


## PDFD LINE FOR FINGER JOINTING OF WOOD ELEMENTS (dual tenoner version)

v1

2013/01/23



The PDFD line consists of two primary components : DFC 60 milling tenoner sockets (where strip faces are processed) and a PHSL finger jointing press, on which elements are jointed into a strip of a length of 6.6 mb with the capability of programming up to eight intercuts separating the strip into segments of a length programmed by the operator. Between these primary machines, there are transport devices simultaneously fulfilling the function of preliminary tenoning. The presented line configuration makes it possible to achieve a maximum output of up to 7200 mb/shift.

A microprocessor control system enables flexible adjustment of operating parameters to the user's needs. The presented machine has the capability of processing "calzing" type elements as well as elements for tabletop production (comb-jointed). The application of a receiving table with automatic feeding of strips to the conveyor introducing them to the PHSL press enables line operation by one worker who supplies elements. The receiving table is equipped with a buffering screen that increases output and fluidity of work. The line operates in an automatic cycle with manual supply of material. Line components can be assembled in various (approved by the recipient) configurations making it possible to adapt the machine to the conditions at the user's establishment.

### TECHNICAL AND OPERATIONAL DATA:

Width of the input stack milling tenoner	mm	<b>600</b>
Maximum glued element width	mm	<b>30 + 155</b>
Length of glued elements	mm	<b>170 + 900</b>
Glued element thickness	mm	<b>20 + 70</b>
Working air pressure	MPa	<b>0.6</b>
Demand for compressed air	m <sup>3</sup> /h	<b>apprx. 25</b>
Operating output	cycles/min.	<b>up to 2.5 (strip 6600)</b>
Glued element length	mm	<b>4500 + 6600</b>
Working voltage	V AC	<b>3/N/PE 400 V 50 Hz</b>
Control voltage	V DC	<b>24</b>
Electrical demand	kW	<b>max 78</b>

## OPERATION DESCRIPTION:

Wood strips are supplied by the operator to the truck of the first milling tenoner. Supply of elements initiates the miller work cycle. The stack face is levelled on the first miller, after which milling of the finger joint outline is carried out. The stack is supplied to the table of the second milling tenoner, where processing of the other side of the stack and glue spreading takes place.

Elements supplied from the DFC - 60 D tenoner through the chain conveyor are introduced to the preliminary tenoning unit, where preliminary clamping of the wedge-joints of square-sawn timber is carried out by means of a set of cylinders and a pressure pad before its introduction into the press.

The preliminarily tenoned square-sawn timber is directed to the press table, on which it is cut after achieving the required length. Next, the wood is transported into the area of the pressing bed by means of a pushing strip and pressure strip, where the pressing process takes place. Glued and pressed, the ready strip is pushed onto the receiving table of the press.

After square-sawn timber is moved into the area of the pressing bed, the process of element supply onto the press table is carried out in parallel. This maintains continuous press operation and also makes it possible to improve the efficiency of glue spreading.

## TECHNICAL PARAMETERS OF THE DFC - 60D MILLER TENONER

Dimensions of the input raw material		
Length of input elements	mm	170 ÷ 900
Milling height	mm	20 ÷ 155
Width of the stack of processed elements	mm	600
Possibility of milling with tools with a tooth length of	mm	10 (5, 15, 20 optionally)

Work cycle	automatic with manual material supply		
Working air pressure	MPa	0, 6	
Demand for compressed air	m <sup>3</sup> / h	apprx. 10	
Output of the extraction installation	m <sup>3</sup> / h	apprx. 6000	
Efficiency	cycles/min.	apprx. 2.5	
Truck advance rate	m/min	operating	10-23
		return	32
Working voltage	V AC	3 x 400 + N + PE	
Sampling Freq.	Hz	50	
Control voltage	V DC	24	
Start-up system of milling cutter drives	SOFTSTART		
Spindle rotational speed control	rpm	6000 ÷ 4500	
Protection against drop in air pressure	MPa	below 0.45	

## TECHNICAL PARAMETERS OF THE PHSL PRESS

Working supply height	mm	890 ÷ 910
Maximum glued element width	mm	35 ÷ 155
Glued element thickness	mm	20 ÷ 70
Length of glued element min./max.	mm	4500 ÷ 6600
Working air pressure	MPa	0.6
Demand for compressed air	m <sup>3</sup> /h	15
Output of the extraction installation	m <sup>3</sup> /h	2000
Press output	cycles/min.	up to 3
Working voltage	V AC	3 x 400 + N + PE
Sampling Freq.	Hz	50
Control voltage	V DC	24

### Machine dimensions:

Working height	mm	900 ÷ 920
Total height	mm	1475

### Dimensions of the feeding and receiving table:

Working height	mm	900 ÷ 920
Total height	mm	1060
Length	mm	1100
width	mm	678

### Receiving table dimensions:

Working height	mm	900 ÷ 920
Total height	mm	1060
Length	mm	2100
width	mm	732

### Installed power

#### DFC-60D milling tenoner

- tenoner saw and milling cutter	kW	2 x 6
- truck belt conveyor flight	kW	2 x 0,55
- truck drive	kW	2 x 2,2
- spindle drive	kW	2 x 18,5
- roller unit drive Pusher + arm drive	kW	0.37
- arm pusher drive	kW	0.75
- undercutting saw drive	kW	2x1.1
- receiving belt drive	kW	1.1

#### PTLL Conveyor

- PTLL conveyor drive (chain)	kW	2 x 1,5
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#### PHSL Finger jointing press

- cross-cut saw motor	kW	3.5
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#### ZHE Hydraulic unit

- ZWCz drive pump	kW	4.0
- hydraulic actuator pump		3.0
• Total	kW	74

Working milling cutters with a diameter from  $\Phi 200$  to  $\Phi 250$  (optionally  $\Phi 160$  to  $\Phi 200$ ) - sold and delivered separately

Possibility for performing intercuts of a preliminarily tenoned strip:

- number of segments possible to be programmed - 8
- measuring accuracy approx. 10 mm on a single segment (dependent on the amount and length of tenoned elements)