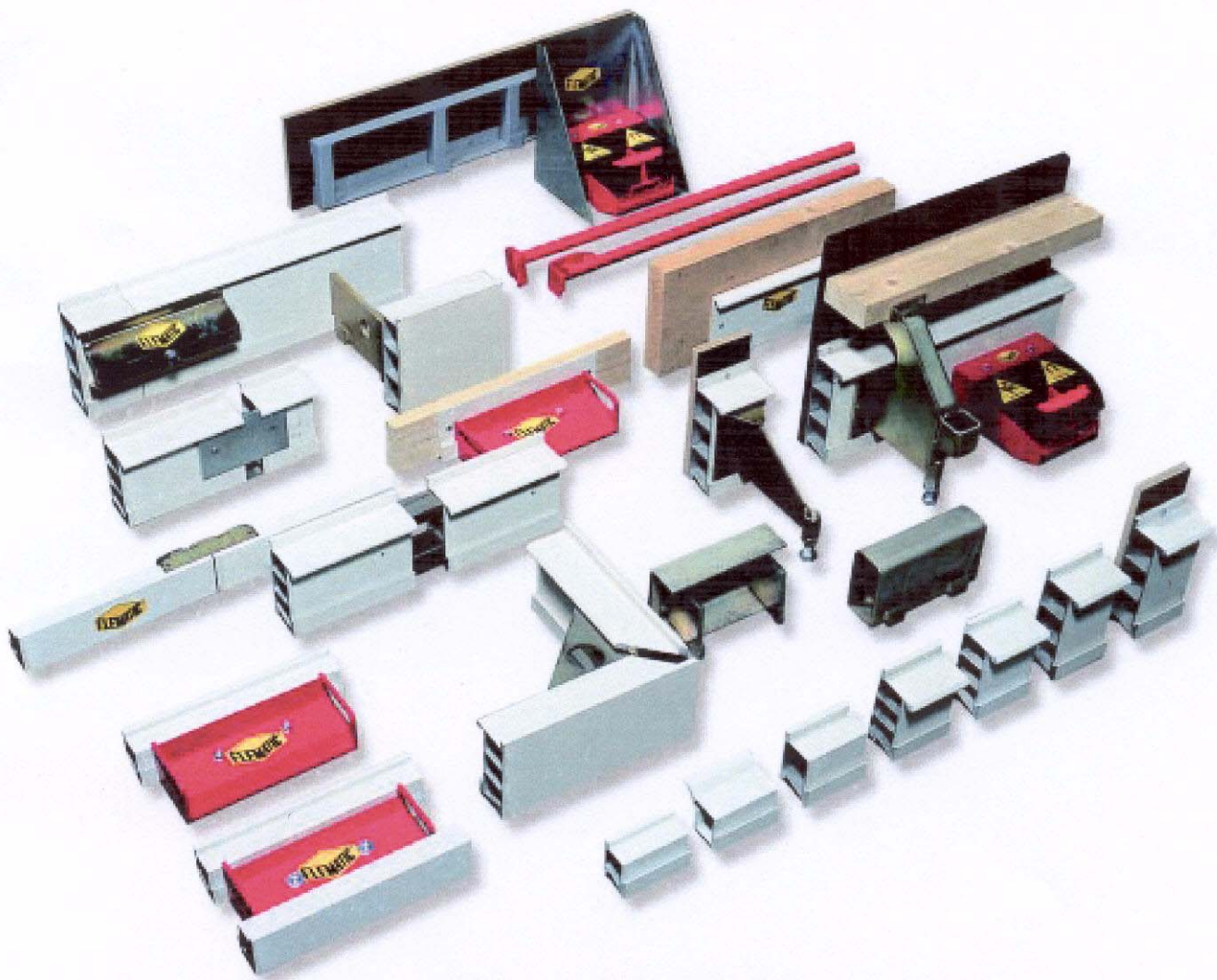




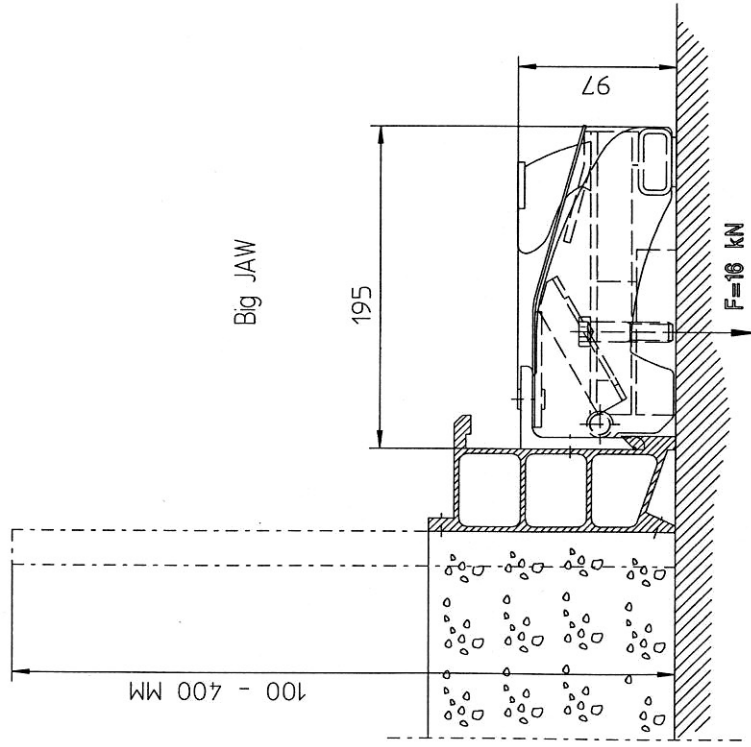
# **ELEMATIC FASTENING METHOD**

## **TECHNOLOGY**



**PCE**  
**Engineering**

P.O.BOX 33, FIN 37801 TOIJALA, FINLAND  
Tel. +358-(0)3 549 511 Fax +358-(0)3 549 5300  
**[www.elematic.com](http://www.elematic.com)**



Big JAW

EM961-16/100 (H = 100)  
EM961-12/75 (H = 75)

FOR SIDE FORM HEIGHTS 100-400 MM

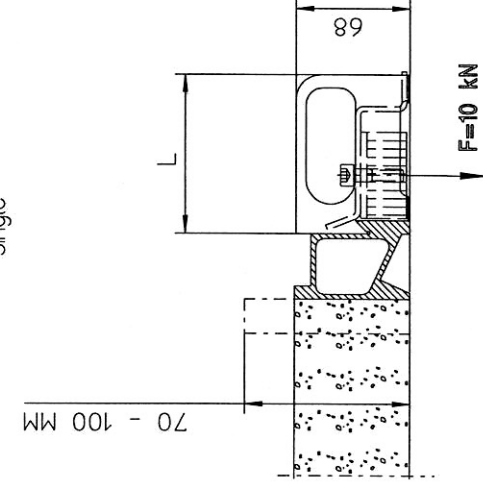
PITCH OF FASTENING POINTS, DEPENDING ON HEIGHT AND  
STIFFNESS OF SIDE FORM 1200-2000 MM

RELEASING TOOL EM 963-42

FÜR ABSTELLERHÖHEN 100-400 MM

BEFESTIGUNGSABSTAND JE NACH DER HÖHE UND STEIFE  
DES ABSTELLERS 1200-2000 MM

ABLÖSEWERKZEUG EM 961-42



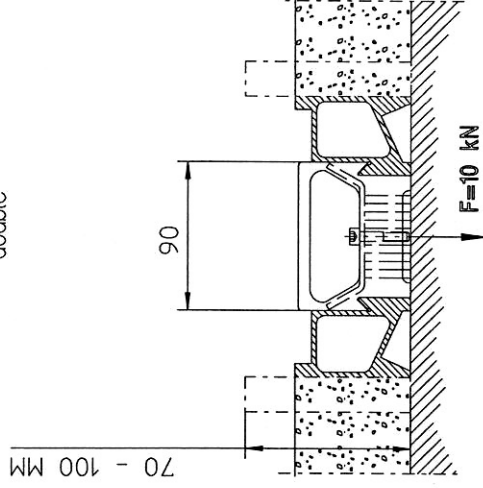
Little JAW  
single

EM961-14/70/100 (L = 100) (SINGLE)  
EM961-14/70/150 (L = 150) (SINGLE)

FOR SIDE FORM HEIGHTS 70-100 MM,

PITCH OF FASTENING POINTS,  
DEPENDING ON STIFFNESS  
OF SIDE FORM 1200-2000 MM

RELEASING TOOL EM 963-44



Little JAW  
double

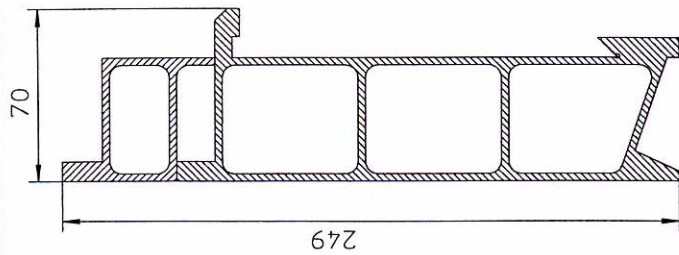
EM961-15/70/90 (DOUBLE)

FÜR ABSTELLERHÖHEN 70-100 MM

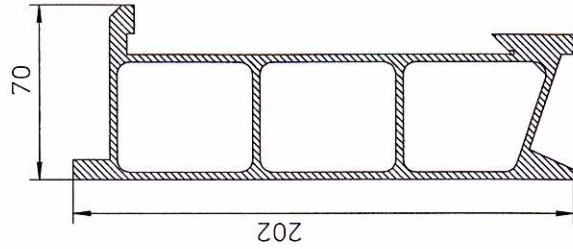
BEFESTIGUNGSABSTAND  
JE NACH DER STEIFE DES  
ABSTELLERS 1200-2000 MM

ABLÖSEWERKZEUG EM 961-44

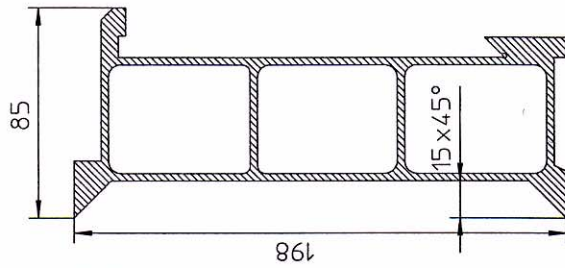
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1:4		a	1	CHANGED	30.07.2001	VHA
Measures	Customer's Dwg No	Change		Date	Name	
mm						
Drawn	MLS 16.01.2001	Dwg No		P831910		
Check	VAP 16.01.01	PCE		PCE Engineering Oy Ab		
Appr.		Box 33 SF-37801 TOIJALA				
Belongs to		Description				
		JAW MAGNET METHOD JAW MAGNETS				



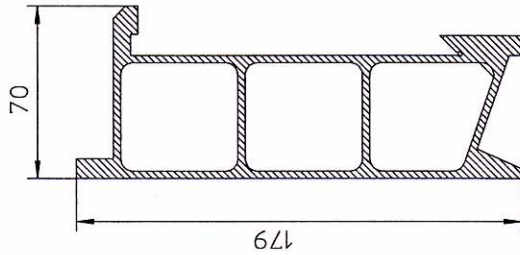
**P429535**  
**11961K+12903K**  
**EM 951-80-56/249**



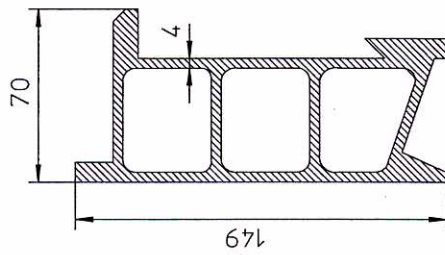
P427979-A  
11961K  
EM 951-80-53



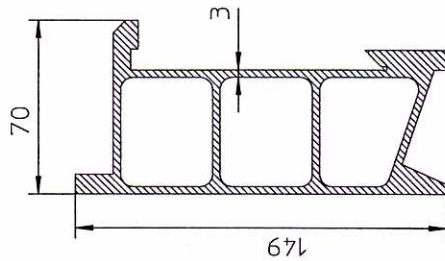
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12925K  
EM 951-80-54/198



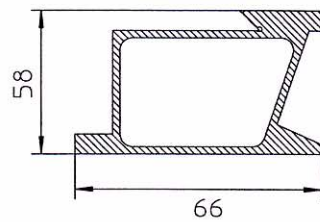
P427680  
11818K  
EM 951-80-52



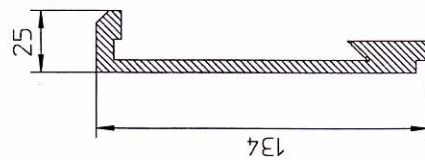
P427641



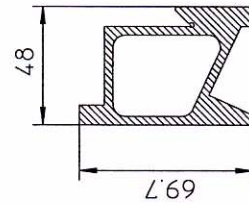
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EM 951-80-51



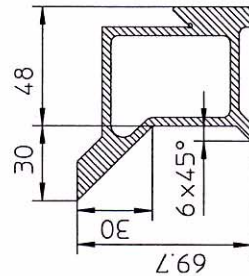
P427681  
11819K  
EM 951-80-50





**P428237**  
**12098K**  
**EM 951-80-83/A**

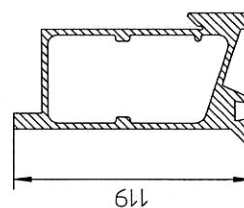
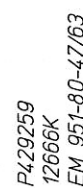
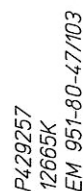
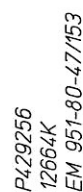
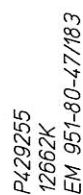
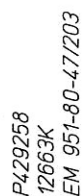


P428822  
12350K  
EM 951-80-45.




P428821  
12349K  
EM 951-80-46

Scale	Customer			Customer's Dwg No		Drawn	WLS 05.05.2000	
1:2						Check	VAP 05.05.00	
						Appr.		
Measures mm						Dwg No P831868		
				Change				
		c	1	PAVITETTY	09.07.2002	VHA		
		b	1	PAVITETTY	19.07.2001	VHA		
		a	1	MITTAJUT	13.12.2000	VHA		
		POE POE Engineering Oy Ab Box 33 SF-37801 TOIJALA						
Belongs to		Description MM-MEASURING MM-AUFMESSUNGEN ELEMTIC ALUMINIUM PROFILE ELEMTIC ALUMINIUMPROFIL						



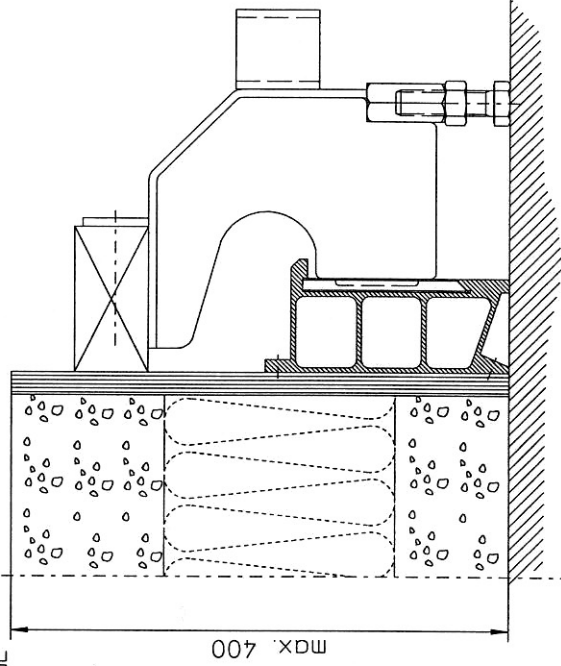
STANDARDLÄNGE 5,5 M (7,4 M)  
STANDARDFARBE RAL 9010 (WEISS)  
STANDARD LENGTH 5,5 M (7,4 M)  
STANDARD COLOR RAL 9010 (WHITE)

Scale	Customer	WITH GASKET				b	1	PAWTEITY	02.12.2002	VHA
Measures mm	Customer's Dwg No	Drawn	Check			a	1	PAWTEITY	15.07.2002	VHA
		Appr.	VHA	19.07.2002		Change			Date	Name
		<b>PCE</b> PCE Engineering Oy Ab Box 33 SF-37801 TOIJALA			Dwg No		P831929			
Belongs to		Description ELEMATIC ALUMINIUM PROFILE ALUMINIUMPROFIL / ELEMATIC ALUMINIUMPROFIL								



ALUMINIUM SIDE FORM + PLYWOOD WITH  
ELEVATION SUPPORT  
ALU-ABSTELLER + SPERRHOLZ MIT STÜTZKONSOLE FÜR  
ABSTELLERERHÖHUNG

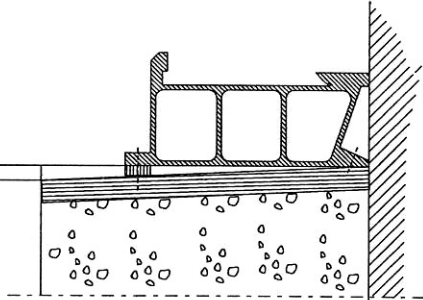
SIDE FORM WITH CANT  
ABSTELLER MIT SEITENSCHRÄGE



PITCH OF ELEVATION SUPPORTS 1200-1500 MM  
DEPENDING ON SIDE FORM HEIGHT

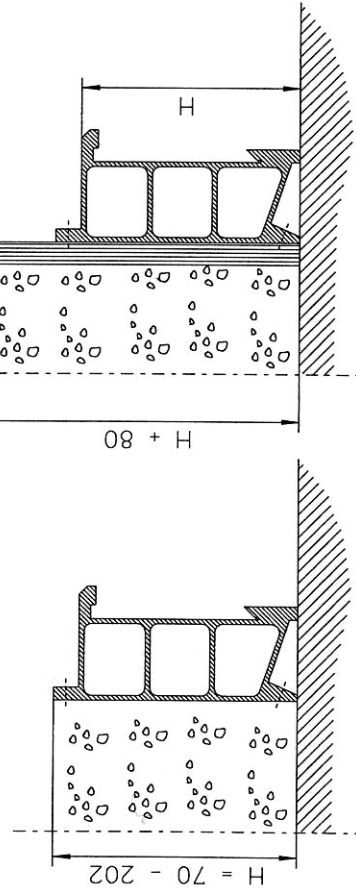
TEILUNG DER STÜTZKONSOLEN FÜR ABSTELLERERHÖHUNG  
1200-1500 MM JE NACH DER ABSTELLERHÖHE

ALUMINIUM SIDE FORM + PLYWOOD  
ALU-ABSTELLER + SPERRHOLZ



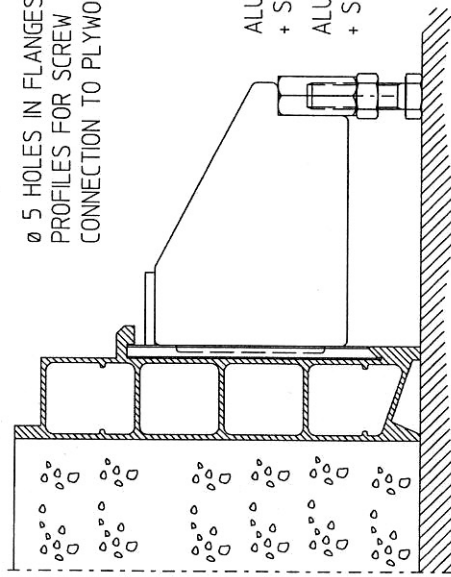
A RUBBER STRIP OF 5 MM  
IN BETWEEN

ALUMINIUM SIDE FORM  
ALU-ABSTELLER




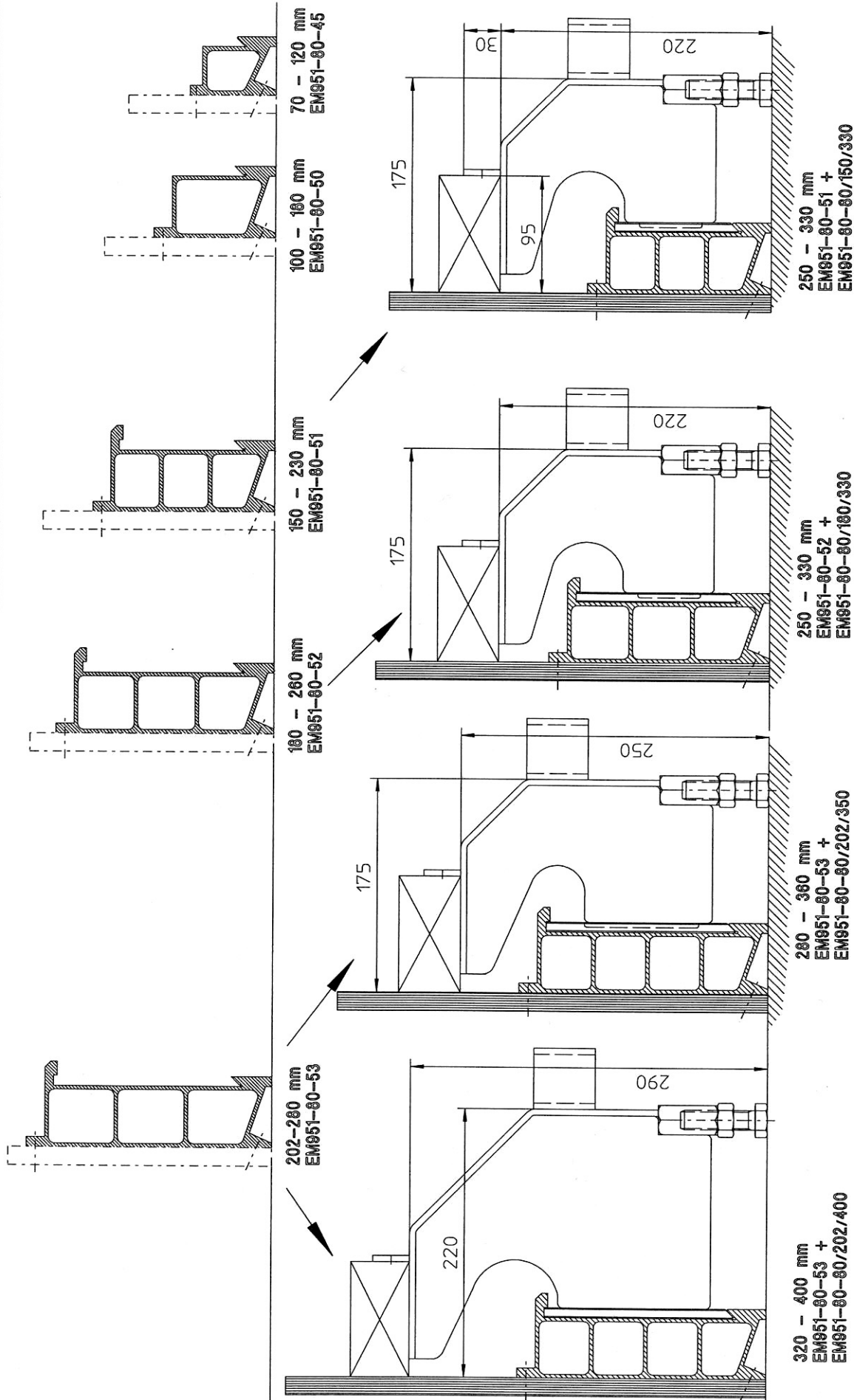
Ø 5 HOLES IN FLANGES OF ALUMINIUM  
PROFILES FOR SCREW  
CONNECTION TO PLYWOOD

ALUMINIUM SIDEFORM  
+ STANDING SUPPORT  
ALU-ABSTELLER  
+ STANDSTÜTZER



FOR REINFORCING AND STRENGTHENING OF ALUMINIUM  
SIDE FORM AND FOR REDUCING THE DEMAND FOR MAGNETS  
ZUR FORMHALTUNG UND VERSTÄRKUNG DES  
ALUMINIUMABSTELLERS  
UND ZUR REDUZIERUNG DES BEDARFS AN MAGNETEN

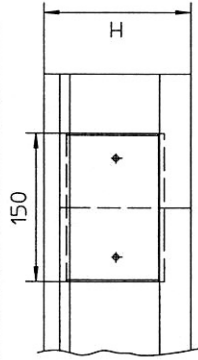
Scale 1:3	Customer		a	1	PRIORITY	Change		15.07.2002	VHA
Measures mm	Customer's Dwg No	Drawn M.S. 08.05.2000 Check VAP 09.05.00 Appr.	<p><b>POE</b> POE Engineering Oy Ab Box 35 SF-37801 TOIJALA</p>		Dwg No <b>P831871</b>				
									
Belongs to		Description      JAW-TYPE ALUMINIUM SIDE FORMS LEUKA-ALUMINILAITA							



Scale	Customer	Date	
1:3		15.07.2002	VHA
Measures	Customer's Dwg No	Date Name	
mm			
Check	Check	Dwg No	
Appr.	Appr.	P831906	
PCE		Box 33 SF-37801 TOJALA	
PCE Engineering Oy Ab			
Belongs to		Description	
		JAW MAGNET METHOD	
		SIDE FORM ALTERNATIVES	

Belongs to	Description
	JAW MAGNET METHOD
	JAW-MAGNETMETHODE
	PLASTURKUNDA ALTERNATIVES
	BEFESTIGUNGSAUTERNA

**FESTE KURZE VERLÄNGERUNG  
PERMANENT SHORT SPICE**

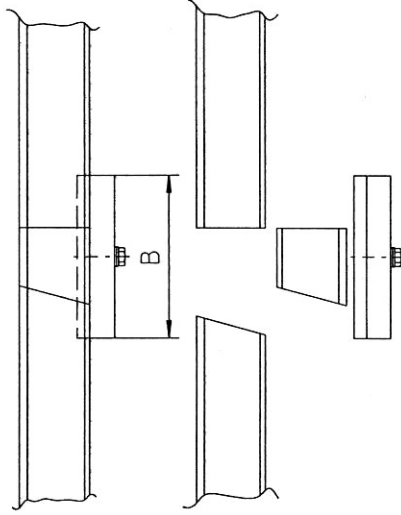
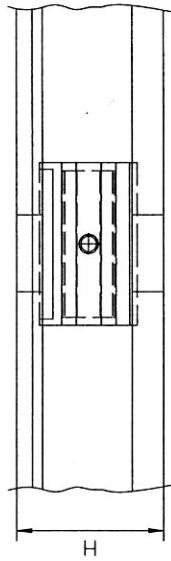


**EM951-80-82/H**

ø 6.5 DRILLING IN THE SIDE FORM  
ACC.TO PLATE + RIVET JOINT

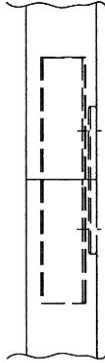
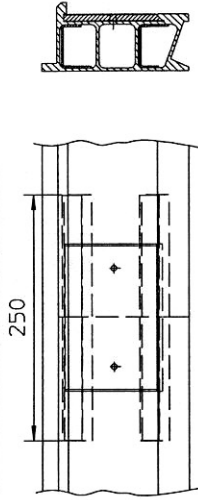
ø 6.5 BOHRUNG GEM. PLATTE IN DEN  
ABSTELLER + NIETVERBINDUNG

**SCHNELLVERBINDUNG  
QUICK CONNECTION BOX**



**EM951-80-86/H/B**

**FESTE LANGE VERLÄNGERUNG  
PERMANENT LONG SPICE**



**EM951-80-82/H**

+ **EM951-80-87/70 or 100-202**

ø 6.5 DRILLING IN THE SIDE FORM ACC.TO PLATE +  
RIVET JOINT

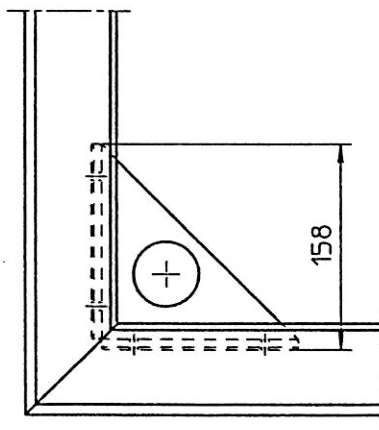
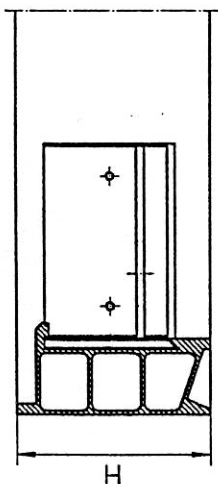
DRIVE ONE HALF OF THE LOCK PIN INTO ONE AND THE  
OTHER HALF INTO THE OTHER PART

ø 6.5 BOHRUNG GEM. PLATTE IN DEN ABSTELLER +  
NIETVERBINDUNG

EINE HALFTE DER BOLZE IN EINEN UND DIE ANDERE  
HALFTE IN DEN ANDEREN TEIL EINTREIBEN

Scale	Customer	0	1	PAWETTY	Change	5.07.2002	VHA
Measures	Customer's Dwg No	Drawn	Check	Appr.	MST 10.01.2001	Dwg No	P831907
mm							
Belongs to	Description JAW MAGNET METHOD CONNECTION ALTERNATIVES						

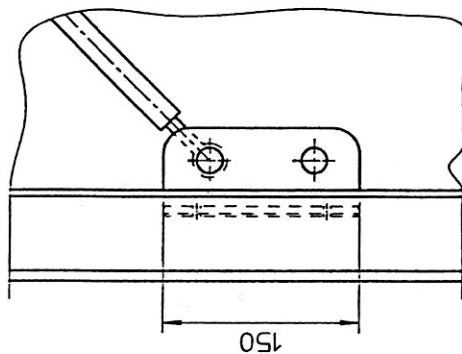
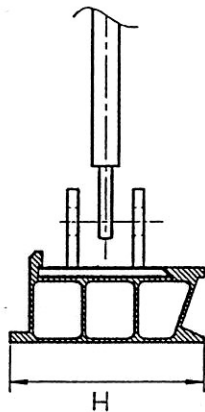
# 90 DEGR. CORNER JOINT



## EM951-80-81/H

ø 6 DRILLINGS IN SIDE FORMS  
ACC. TO CORNER PART + RIVETED JOINT

# ARTICULATION PART

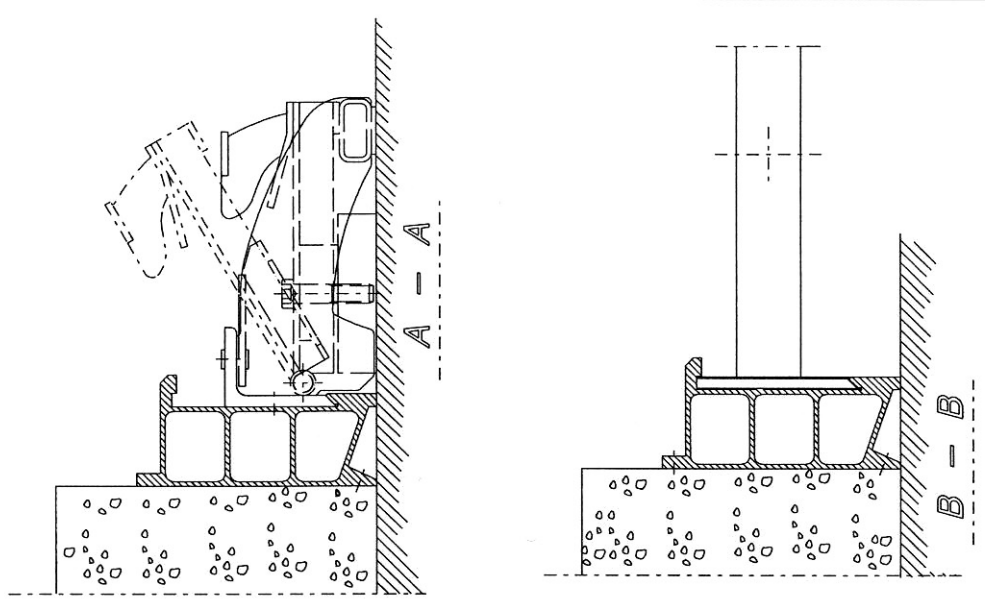
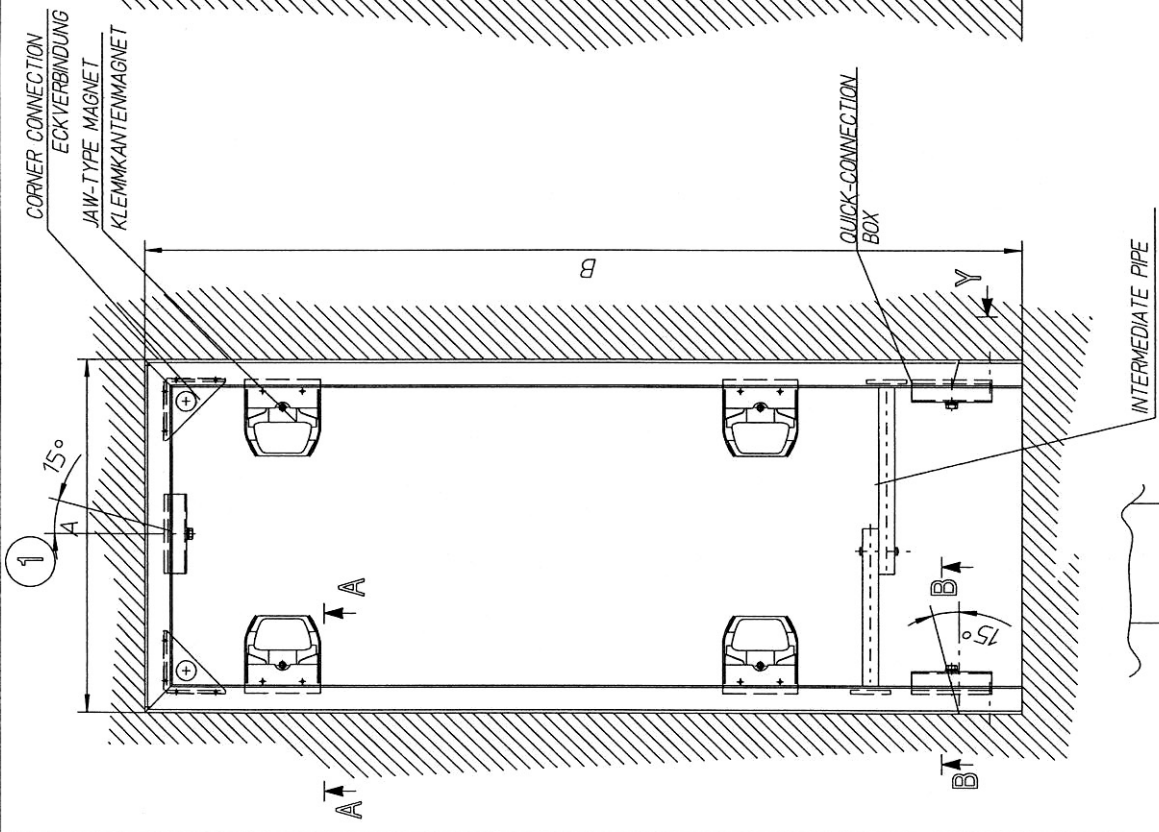


## EM951-80-85/H

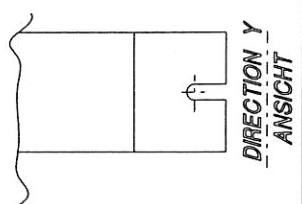
ø 6 DRILLINGS IN SIDE FORM  
ACC. TO ARTICULATION PART + RIVETED JOINT

Scale	Customer	Change		Date	Name
1:4					
Measures mm	Customer's Dwg No	Drawn	MS 11012001	Dwg No	P831908
		Check	VAP 110101	Box 33 SF-37801 TOJALA	
		Appr.			
Belongs to		Description			
		JAW ALUMINIUM SIDE FORMS CORNERS AND ARTICULATIONS			



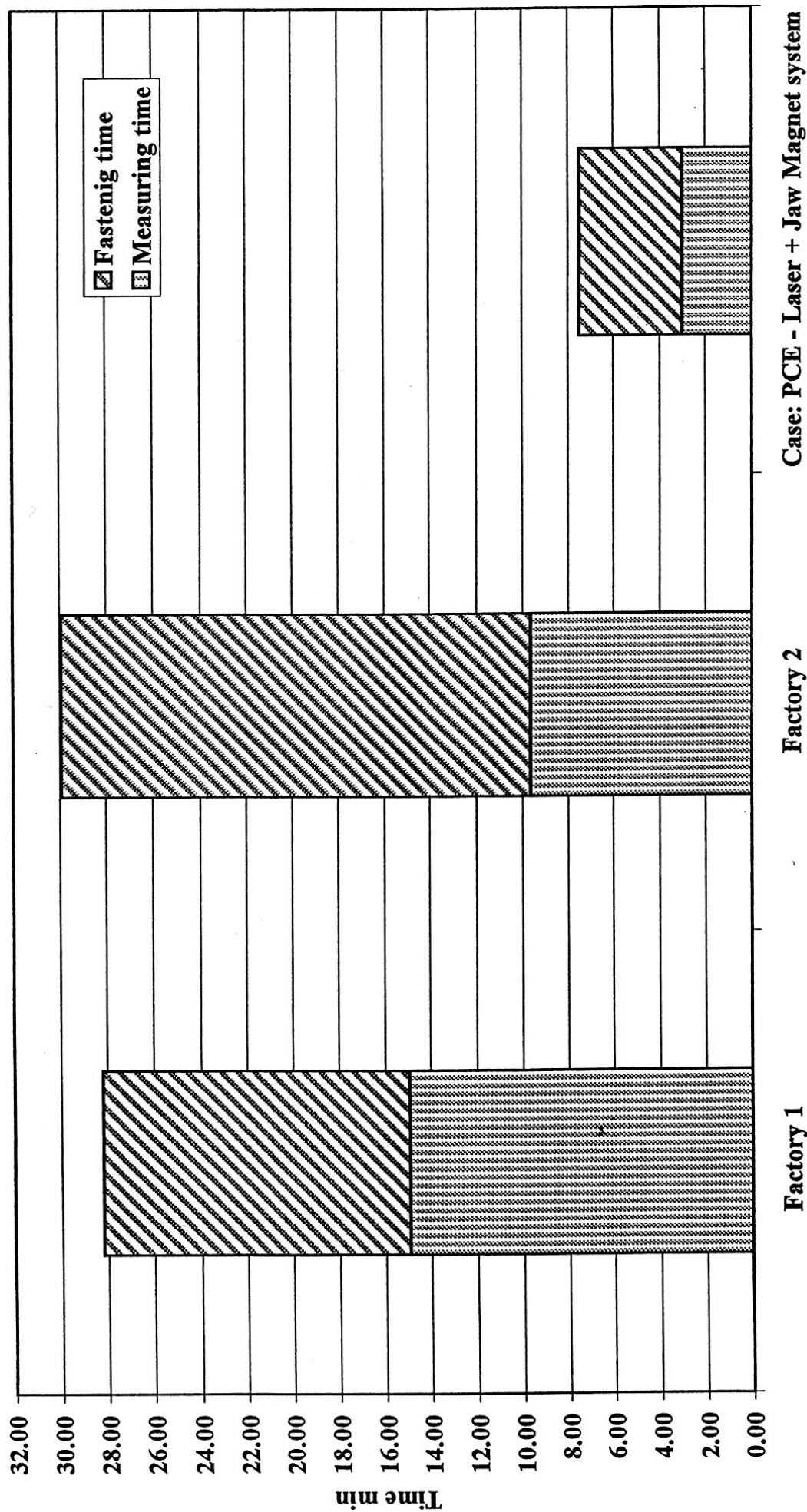


Scale	Customer	Change		Date	Name
1:12.5					
Measures	Customer's Dwg No	Drawn	YHA 12.07.2002	Dwg No	P831974
mm		Check	VAP 12.07.02		
		Appr.			
Belongs to		Description			
		JAW MAGNET METHOD			
		JAW-MAGNETMETHODE			
		DOOR OPENING MOULD			



## WORK METHOD COMPARISON

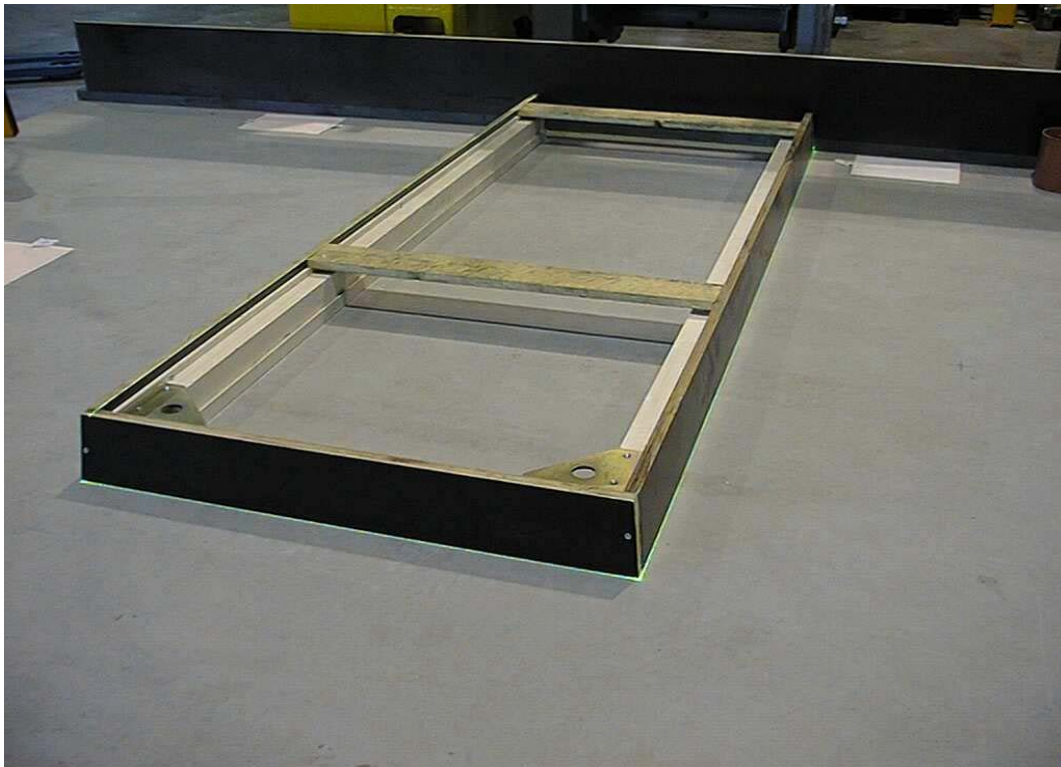
### Throughput-times



Case: PCE - Laser + Jaw Magnet system

**EL/LASER**

The ELEMATIC EL/LASER system consists of one or two laser projectors and the software controlling them. The idea is to project the CAD drawing details on the mould surface and install the formwork according to the projection, most efficiently with the ELEMATIC fixing system. EL/LASER eliminates errors and increases the accuracy of the form building. At the same time, the work phase time can also be reduced drastically by applying both EL/LASER laser projection system and the ELEMATIC fixing system. If the laser projector is used over several stationary moulds, the ELEMATIC EL/TRACK system can be installed for moving the laser projector or pair of projectors.



## EI/LASER



### Technical Details laser unit:

Dimensions:	600 x 300 x 180 mm
Weight:	20 kg
System of protection:	IP54
Input Voltage:	80-250 VDC
Power Input:	70 VA
Range of Temperature:	0-40°C
Laser wave length:	532 nm(green)
Laser class:	3B
Aperture angle:	87° x 67°
Interface:	RS232 / RS485

### Mounting distance from material upper edge and projection max.size :

Distance h/mm	Projection size with 87° angle	with 67° angle
2000	3796	2648
3000	5694	3971
4000	7592	5295
5000	9490	6619
7000	13286	9266
9000	17081	11914

**EI/LASER**

**PC requirements for control software:**

The PC for controlling the laser projector via the control software has to fulfill the following conditions:

- Pentium 133Mhz processor
- 16 MB RAM
- 20 MB free hard disk storage
- Mouse
- CD-ROM drive,
- Serial interface(COM)
- Graphic board and monitor with a resolution of 800x600 points with 256 colours,
- Working under windows 95/98/NT 4.0/2000/ME/XP.

**Software powers:**

- Setting of the configuration parameters and 4-point quick calibration. Additionally drift compensation through an automatic search of the drift sensors.
- Standard import module for DXF- and HPGL-file formats.
- Definition of different projection levels and origins, selection of one or more drawing layers for the projection, shifting, rotation, alignment of drawings.
- It may be useful to use a remote control for working with the software, if the control PC is not standing directly next to the working place.
- 3- or 7-button radio remote control.

