

ภาคผนวก ก

คำตามที่ใช้สัมภาษณ์ผู้ประกอบการ

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

### รายละเอียดคำถามคำตอบที่ใช้สัมภาษณ์ผู้ประกอบการกระจกแผ่นในพื้นที่

ในการศึกษาด้านความต้องการใช้กระจกตกแต่งในพื้นที่เป้าหมาย ได้ประมวลผลจากข้อมูลที่มีอยู่ของบริษัท ประกอบกับการสัมภาษณ์ผู้ประกอบการกระจกในพื้นที่เป้าหมาย โดยได้สัมภาษณ์ร้านค้ารูปแบบต่าง ๆ ทั้งรูปแบบที่เน้นการขายเป็นหลัก และเน้นการบริการติดตั้งเป็นหลัก โดยมีขอบเขตคำถามที่ใช้ในการสัมภาษณ์ ดังนี้

1. กลุ่มลูกค้าหลักของแต่ละร้านค้า
2. ยอดขายกระจกตกแต่งเมื่อเทียบกับยอดขายกระจกแผ่น
3. แหล่งที่มาหลักของกระจกตกแต่งที่สั่งซื้อ
4. ปัญหาที่พบในการสั่งซื้อกระจกตกแต่ง
5. ข้อคิดเห็นต่อความเป็นไปได้ในการลงทุนผลิตกระจกตกแต่งของบริษัทฯ
6. ข้อเสนอแนะ

โดยข้อมูลที่ได้รับจากการสัมภาษณ์ จากผู้ประกอบการแต่ละราย จากการสัมภาษณ์จำนวน 10 ราย สรุปรายละเอียดได้ดังนี้

#### ร้านค้าที่ 1

- กลุ่มลูกค้า : > 80% เป็นลูกค้าที่เป็นช่างติดตั้ง  
 อัตราส่วนการขาย : ประมาณ 5-10%  
 การสั่งซื้อ : ซื้อจากตัวแทนค้าส่งกระจกแผ่น  
 ปัญหาการสั่งซื้อ : ระยะเวลาในการรอสินค้าค่อนข้างนาน  
 ข้อคิดเห็น : ถ้ามีการลงทุนก็น่าจะทำให้สินค้าถูกลง มีคนใช้มากขึ้น  
 ข้อเสนอแนะ : เป็นการลงทุนค่อนข้างสูง ควรพิจารณาให้ดี

#### ร้านค้าที่ 2

- กลุ่มลูกค้า : ส่วนใหญ่เป็นผู้ใช้โดยตรง  
 อัตราส่วนการขาย : ประมาณ 15%  
 การสั่งซื้อ : ซื้อจากผู้ผลิตในกรุงเทพฯ  
 ปัญหาการสั่งซื้อ : ระยะเวลาในการรอสินค้าค่อนข้างนาน ค่าขนส่งแพง  
 ข้อคิดเห็น : เป็นประโยชน์ต่อผู้ใช้ในพื้นที่  
 ข้อเสนอแนะ : ไม่มี

**ร้านค้าที่ 3**

- กลุ่มลูกค้า : หน่วยงานราชการและลูกค้าทั่วไป  
 อัตราส่วนการขาย : ประมาณ 10%  
 การสั่งซื้อ : ซื้อจากผู้ผลิตในกรุงเทพฯ และตัวแทนขายในพื้นที่  
 ปัญหาการสั่งซื้อ : ต้องรอสินค้านาน บางครั้งได้สินค้าไม่ตรงกับที่ต้องการ  
 ข้อคิดเห็น : น่าจะช่วยแก้ปัญหาที่พบในการสั่งซื้อได้  
 ข้อเสนอแนะ : ควรศึกษารายละเอียดเรื่องเครื่องจักรให้ดีก่อนตัดสินใจลงทุน

**ร้านค้าที่ 4**

- กลุ่มลูกค้า : ช่างติดตั้งทั่วไป  
 อัตราส่วนการขาย : ประมาณ 5%  
 การสั่งซื้อ : ซื้อจากตัวแทนขายในพื้นที่  
 ปัญหาการสั่งซื้อ : สั่งซื้อยากรอสินค้านาน  
 ข้อคิดเห็น : ทำให้ได้สินค้าเร็วขึ้น  
 ข้อเสนอแนะ : ไม่มี

**ร้านค้าที่ 5**

- กลุ่มลูกค้า : รับงานติดตั้งเป็นหลัก  
 อัตราส่วนการขาย : ประมาณ 10-20%  
 การสั่งซื้อ : สั่งซื้อจากผู้ผลิตในกรุงเทพฯ  
 ปัญหาการสั่งซื้อ : ค่าใช้จ่ายในการขนส่งสูง รอสินค้านาน  
 ข้อคิดเห็น : จะทำให้ราคาสินค้าถูกลง เพราะไม่ต้องเสียค่าใช้จ่ายในการขนส่ง  
 ข้อเสนอแนะ : ควรจะลงทุนให้ครบวงจร

**ร้านค้าที่ 6**

- กลุ่มลูกค้า : ช่างติดตั้งทั่วไป  
 อัตราส่วนการขาย : ประมาณ 10%  
 การสั่งซื้อ : ซื้อจากตัวแทนขายในพื้นที่ และสั่งซื้อจากผู้ผลิตในกรุงเทพฯ  
 ปัญหาการสั่งซื้อ : บางครั้งต้องเสียเวลาในการรอสินค้า  
 ข้อคิดเห็น : น่าจะช่วยให้ผู้ลงทุนมียอดขายกระจกแผ่นเพิ่มขึ้นได้  
 ข้อเสนอแนะ : การกำหนดราคาควรขายให้ต่ำกว่าผู้ผลิตอื่น

**ร้านค้าที่ 7**

- กลุ่มลูกค้า : รับงานติดตั้งเป็นหลัก  
 อัตราส่วนการขาย : ประมาณ 10%  
 การสั่งซื้อ : สั่งซื้อจากผู้ผลิตในกรุงเทพฯ  
 ปัญหาการสั่งซื้อ : ค่าใช้จ่ายในการขนส่งสูง และบางครั้งสินค้ามีการเสียหาย  
 ข้อคิดเห็น : สามารถตรวจสอบสินค้าก่อนรับสินค้าว่าถูกต้อง และเสียหายหรือไม่  
 ข้อเสนอแนะ : ควรจะทำเอกสารแนะนำสินค้าที่ดูแล้วน่าสนใจ

**ร้านค้าที่ 8**

- กลุ่มลูกค้า : เป็นผู้ใช้โดยตรงเกือบทั้งหมด  
 อัตราส่วนการขาย : ประมาณ 20%  
 การสั่งซื้อ : ซื้อจากผู้ผลิตในกรุงเทพฯ  
 ปัญหาการสั่งซื้อ : รอสินค้านาน ค่าขนส่งแพง  
 ข้อคิดเห็น : สามารถช่วยลดค่าใช้จ่ายในการขนส่ง และระยะเวลาในการรอสินค้า  
 ข้อเสนอแนะ : ศึกษาให้ดีกว่าคุ้มค่าการลงทุนหรือไม่

**ร้านค้าที่ 9**

- กลุ่มลูกค้า : ช่างติดตั้งทั่วไป  
 อัตราส่วนการขาย : ประมาณ 5%  
 การสั่งซื้อ : ซื้อจากตัวแทนขายในพื้นที่  
 ปัญหาการสั่งซื้อ : รอสินค้านาน  
 ข้อคิดเห็น : อาจทำให้ยอดการใช้กระจกตกแต่งเพิ่มขึ้น  
 ข้อเสนอแนะ : ไม่ควรกำหนดราคาขายสูงเกินไป

**ร้านค้าที่ 10**

- กลุ่มลูกค้า : ส่วนใหญ่เป็นลูกค้าที่เป็นช่างติดตั้ง  
 อัตราส่วนการขาย : ประมาณ 10%  
 การสั่งซื้อ : ซื้อจากตัวแทนขายในพื้นที่  
 ปัญหาการสั่งซื้อ : รอสินค้าก่อนช่างนาน  
 ข้อคิดเห็น : ทำให้ได้รับสินค้าเร็วขึ้น ราคาน่าจะถูกกลง ทำให้มีการใช้เพิ่มขึ้น  
 ข้อเสนอแนะ : ควรพิจารณาให้ดีก่อนการลงทุน มีความเสี่ยงสูงเพราะลงทุนสูง

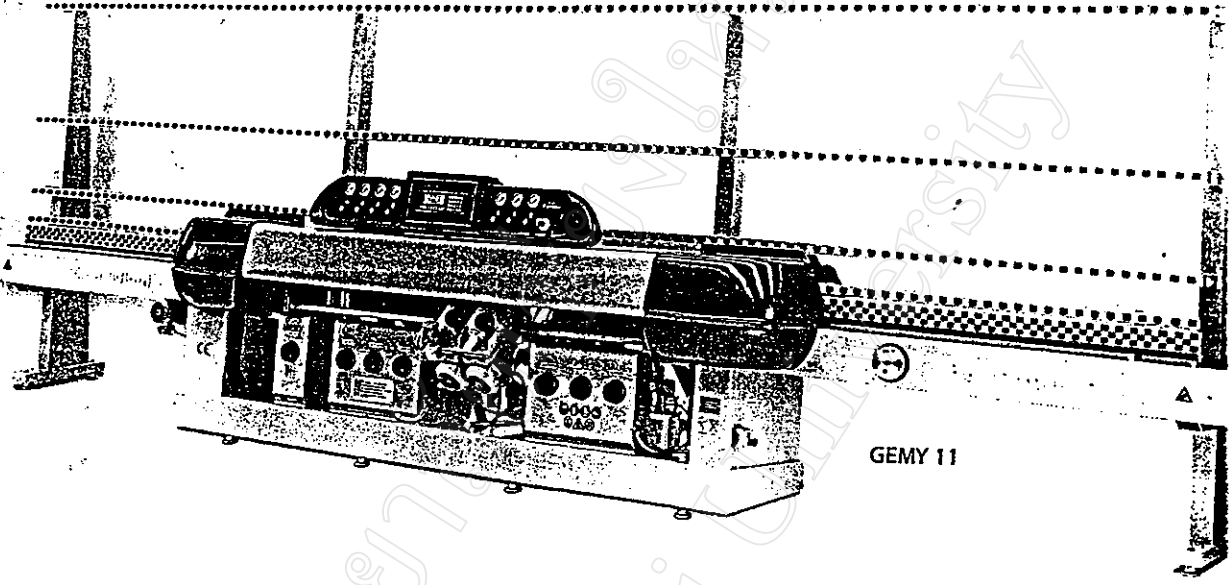
ภาคผนวก ข

เครื่องเจียรขอบกระจก : ข้อมูลและใบเสนอราคา

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

**Profilatrici rettilinee a filo piatto**  
**Straight-line machine flat edge**  
**Geradlinige Kantenschleifmaschine flache Kante**  
**Machine rectiligne joint plat**  
**Máquina rectilínea filo plano**

**GEMY 6 - 8 - 9C - 11**



GEMY 11

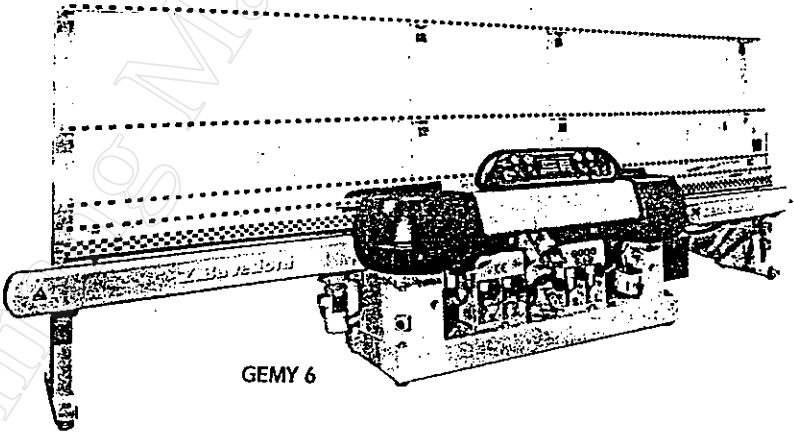
**GEMY - Profilatrici rettilinee verticali per la lavorazione del filo prodotto con filetti**  
**GEMY 9C - Profilatrice rettilinea con spigolatore**

**GEMY - Vertical straight-line machines for working flat edge and arrises**  
**GEMY 9C - Straight-line edging machine with corner spindle**

**GEMY - Vertikalen geradlinige Maschinen zum Schleifgen von flache kaute**  
**GEMY 9C - Geradlinige Kantenschleifmaschine mit Eckenstoßschleifscheibe**

**GEMY - Machines rectilignes verticales pour le travail du joint plat avec arêtes**  
**GEMY 9C - Profileuse rectiligne avec broche pour chanfreiner l'arête**

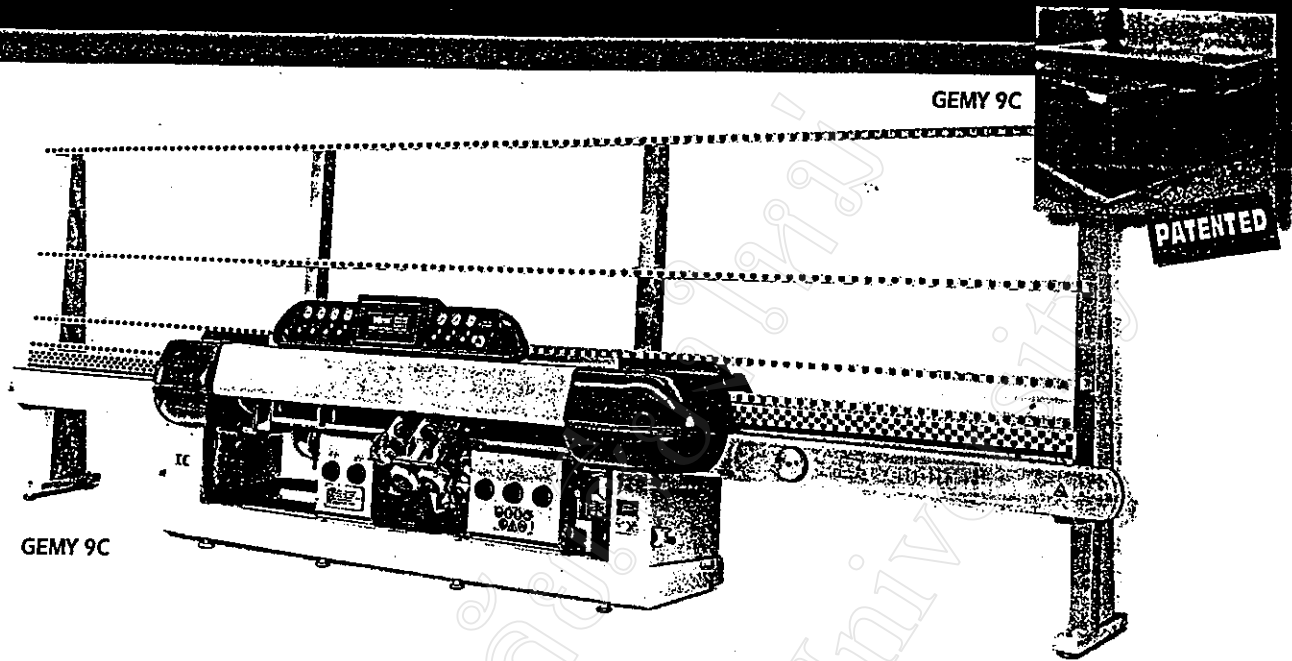
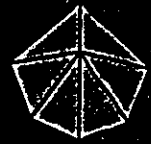
**GEMY - Cauteadoras rectilíneas verticales para el trabajo del canto plano con aristas**  
**GEMY 9C - Amoladora rectilínea vertical con mandriles acha flanadores**



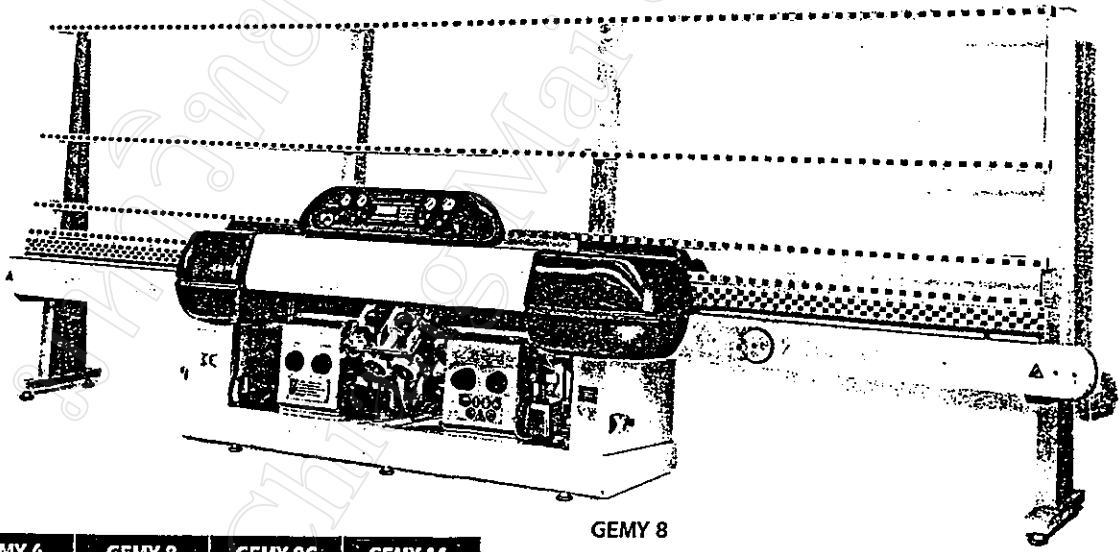
GEMY 6









**GRINDING DIVISION**



GEMY 9C



GEMY 8

	GEMY 6	GEMY 8	GEMY 9C	GEMY 11
	40 (50) mm 1 <sup>37</sup> / <sub>64</sub> " (1 <sup>31</sup> / <sub>32</sub> "	40 (50) mm 1 <sup>37</sup> / <sub>64</sub> " (1 <sup>31</sup> / <sub>32</sub> "	60 mm 2 <sup>23</sup> / <sub>64</sub> "	40 (50) mm 1 <sup>37</sup> / <sub>64</sub> " (1 <sup>31</sup> / <sub>32</sub> "
	0,5 ÷ 5 m/min. 19" ÷ 197"/min.	0,5 ÷ 5 m/min. 19" ÷ 197"/min.	0,5 ÷ 5 m/min. 19" ÷ 197"/min.	0,5 ÷ 5 m/min. 19" ÷ 197"/min.
	3 ÷ 35 mm 1/8" ÷ 1 3/8"	3 ÷ 40 mm 1/8" ÷ 1 37/64"	3 ÷ 40 mm 1/8" ÷ 1 37/64"	3 ÷ 40 mm 1/8" ÷ 1 37/64"
	6,7x1,3x2,3 m 264"x51"x91"	7x1,7x2,3 m 277"x67"x91"	7,8x1,7x2,3 m 307"x67"x91"	7,8x2,2x2,3 m 307"x87"x91"
	16,5 Kw	19,5 Kw	21 Kw	22 Kw
	2.380 Kg. 5.254 lbs	2.710 Kg. 5.982 lbs	3.330 Kg. 7.350 lbs	3.330 Kg. 7.350 lbs

**GRINDING DIVISION**



**Z.Bavelloni**  
SINGAPORE PTE LTD

Customer code : 0039061  
Company : Maekorn Aluminium  
Attn. : Mr. Nopporn Archamas  
Quotation : GEMY/6  
Quotation no. : 200200222  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

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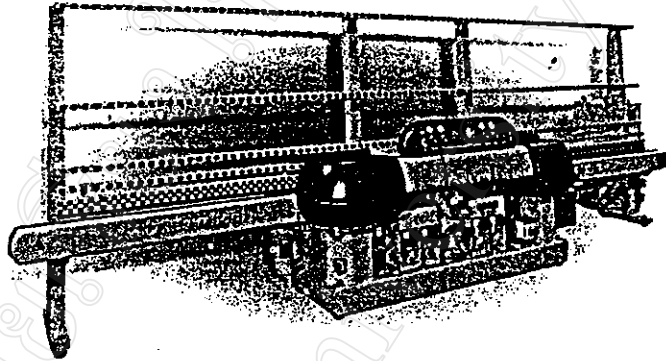
## MACHINES

### GEMY/ 6 - CODE 1200

#### GENERAL DESCRIPTION

##### General

Automatic vertical straight line machine with 6 cup wheels to perform flat edge with arrises on glass sheets and/or on mirrors, with a thickness of between 3 and 35 mm.



GEMY 6 has been manufactured to the highest technological standards and is unique in its field both in its appearance and its performance.

##### Structure

The machine is fabricated with a strong electro-welded chassis supporting the spindles and the glass sheets conveyor.

The front fascia including the control panel covers and the inlet and outlet arms covers are all made in ABS material, an innovation ensuring a totally new aesthetic look, with total resistance to corrosion. It also has electric and acoustic insulation benefits.

##### Inlet and outlet arms

The inlet and outlet arms for the loading/unloading of the glass sheets have conveying chains in anti-friction material. The inlet arm is equipped with a device to change the glass removal without the necessity to operate on the position of the diamond wheels. The material removal adjustment is identified by a mechanical indicator.



The standard equipment includes some spacers which allows for different positioning of the arms height to perform, by choice:  
Rough chamfer up to 15 mm. (in this case the minimum workable height is of 50 mm.)

Minimum workable height of 40 mm ( in this case the max. size of the arris of 2 mm.).

##### Conveyor

To ensure that the conveyor will take different thicknesses of glass, it is composed in two parts; a fixed and a mobile one.

The opening of the conveyor (according to the glass thickness ) is operated by a motorized mechanical device, which is controlled by NC.





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The conveyor is over-dimensioned to allow the working of glasses that normally can only be processed on larger machines. We suggest that the max. workable thickness is 35 mm.

The conveyor glides on ground steel guides without the assistance of ball bearings. The machine is equipped with a central lubrication installation.

All the above mentioned characteristics make the conveyor a fundamental - virtually indestructible - component of the machine. The speed variation is performed by an inverter, which is controlled by the NC.

### Spindles

The machine is equipped with the following spindles:

Diamond metal bonded cup wheel for edge grinding - Ø 150 mm.

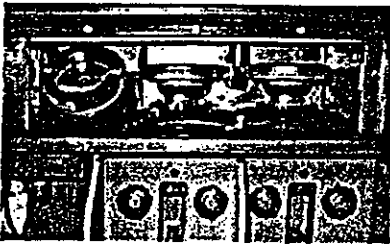
Diamond metal bonded cup wheel for fine edge grinding - Ø 150 mm.

Polishing cup wheel for front arris - Ø 150 mm.

Polishing cup wheel for rear arris - Ø 150 mm.

Rubber polishing cup wheel for edge polishing - Ø 150 mm.

Cerium oxide polishing cup wheel for bright polishing - Ø 150 mm.



The spindles are in iron casting and slide on high-precision adjustable guides. The spindles shafts are in tempered and ground steel and lubricated by "for life" special grease and free from periodic maintenance.

The wheel compartments are all manufactured in stainless steel to avoid any possible corrosion caused by the grinding water.

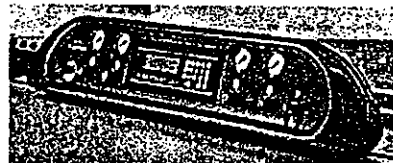
The polishing spindles are equipped with a pneumatic automatic adjustment system to compensate the wheel wear. This device lifts the wheel position, while it is dulling, in this way, always ensuring a perfect edge polishing. The polishing pressure intensity is adjustable by means of a pressure regulator according to the glass thickness and the required finish.

The manual adjustments for the wheels are all carried out from the front of the machine.

### Control equipment

The control board is manufactured in ABS material, and is located inboard the machine. This holds the control equipment.

The state-of-the-art electronic equipment is the most up-to-date you will find on the market at the moment and controls all the operations of the machine.



The Numerical Control is equipped with a graphic -- LCD - display, LED back lighted, (endless life) and with a keyboard at 24 keys.

### The Numerical Control allows:

- To switch on and off the forward run of the conveyor
- To switch on and off the backward run of the conveyor
- To switch on and off the chosen wheels
- To open and to close the conveyor
- To change the conveyor speed
- To graphically visualize the spindles absorption



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- To display the partial and total worked hours
- To display the partial and total worked metres
- To display the worked metres by each wheel
- To start a programme that automatically adjusts the machine speed to the selected thickness

The control board also includes pressure regulators and manometers for the polishing spindles.

**Electrical plant**

Electric installation is carried out in accordance with CE rules with the machine separated power panel and waterproof connectors. The control panel inboard the machine is of insulated ABS material including the manometers and the electronic control equipment.  
Standard voltage 400/50 Hz, other available upon request.

**Coolant plant**

Closed circuit coolant plant for wheel cooling, consists of a stainless steel tank with a total capacity of 350 litres of water, a distributing/return circuit and a recycle pump.

**TECHNICAL SPECIFICATIONS**

Workable glassthickness	3+35 mm.
Min. workable height (no possibility to machine large chamfer)	40 mm.
Min. workable glassheight (max. chamfer of 15 mm)	50 mm.
Installed power	16.5 kW
Min. pressure of compressed air	6 bar
Max. consumption of compressed air	25 Nit/min.
Length	6700 mm
Width	1300 mm.
Height	2300 mm.
Weight	2380 kg.
Working speed	0,5 +5 m/min.
Water tank capacity	360 litres



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**STANDARD SUPPLY**

1,00	0203200000	MANUAL FOR USE AND MAINTENANCE GEMY/6 WITH SPARE-PARTS TABLE
2,00	SS0013000200	OIL FOR GUIDES/CHAINS PER KGR AGIP EXIDIA 220
1,00	0013010000	GREASE FOR BEARINGS PER KGR
5,00	0051244400	RUBBER PAD FOR OUTLET ARM
1,00	0013303010	PAINT BAV-GREY
1,00	0120025000	SET OF TOOLS FOR MACHINE MAINTENANCE
1,00	0120062000	SET OF SPACERS TO MACHINE CHAMFERS WITH A MAX. WIDTH OF 15 mm (GEMY M/C)
2,00	SS00120	WATERTANK
1,00	SS00125	WATERPUMP
1,00	SS00001	SET OF DIAMOND- AND POLISHINGWHEELS ASSEMBLED ON THE MACHINE
5,00	0051208600	RUBBER PAD FOR INLET ARM

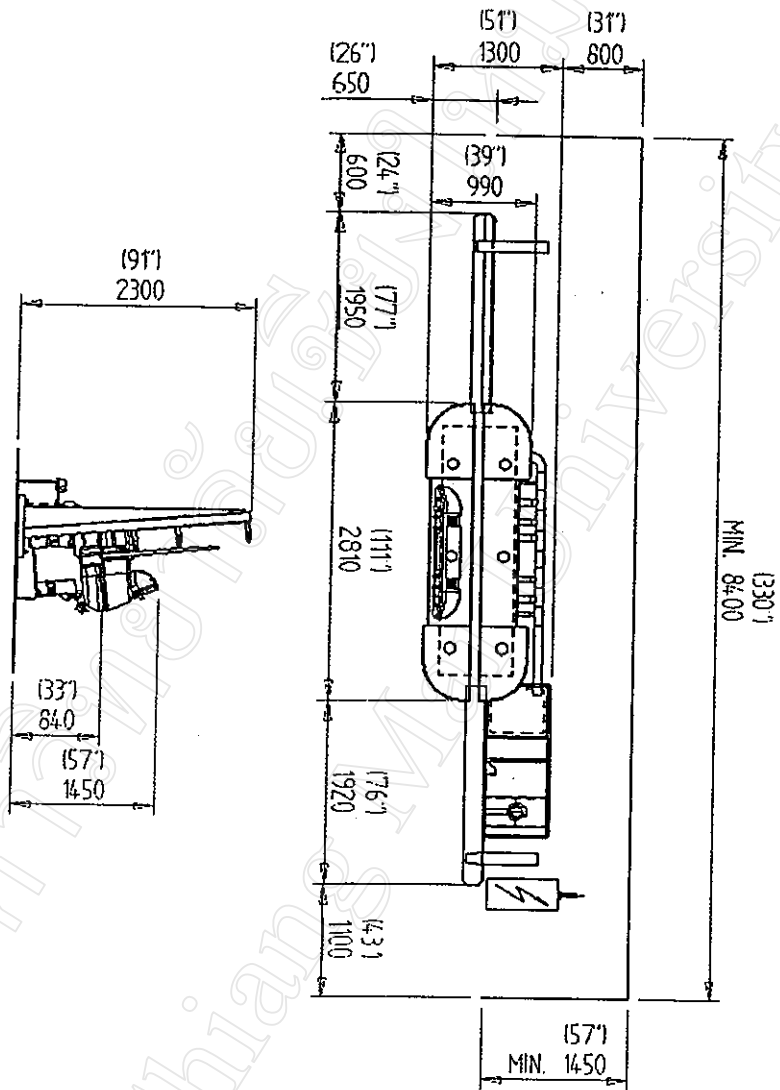


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Company : Maekorn Aluminium  
Attn. : Mr. Noppom Archamas  
Quotation : GEMY/6  
Quotation no. : 200200222  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

**LAYOUT**





**Z. Bavelloni**  
SINGAPORE PTE LTD

Customer code : 0039061  
Company : Maekom Aluminium  
Attn. : Mr. Noppom Archamas  
Quotation : GEMY/6  
Quotation no. : 200200222  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

## PRICES FOR MACHINES AND SELECTED ITEMS

CODE	DESCRIPTION	QTY	UNIT-PRICE USD	TOTAL PRICE USD
MACHINES 1200	BAVELLONI GEMY/6 VERTICAL STRAIGHT-LINE EDGER	1,00	45.000,00	45.000,00
TOTAL AMOUNT				<u>45.000,00</u>

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Chiang Mai University



Your Bavelloni contact : Mr. Johnson Teo

## TERMS OF DELIVERY

- Price** : CNF Destination Seaport  
Exclude unloading and internal transport.  
Including installation and commissioning.  
Technician's airticket/hotel and local expenses at buyers' account
- Insurance** : Excluded. To be arranged by buyer.
- Delivery time** : To be agreed upon order.  
Currently approx. 90 days after receipt of deposit.
- Installation** : The indicated price of the machine includes installation and commissioning. The conditions for installation and commissioning of the machine are described in the enclosed 'Terms of Installation and Commissioning'.
- Warranty** : The warranty conditions for delivery of machines are described in the enclosed 'General Trading Conditions' and are applicable for a daily machine operation of 8 hours.  
The warranty period for the individual components are specified as follows:  
Mechanical parts : 6 Months  
Electrical parts : 6 Months  
Electronic parts : 3 Months  
Parts subject to normal wear are excluded from the warranty.
- Payment** :  
30 % deposit upon order  
70 % payment by L/C at sight upon presentation of shipping documents
- Bavelloni binds itself to put right eventual imperfections within the applicable warranty conditions. They never can affect the payment conditions.  
All amounts are net without any deductions.
- Alterations** : In case of alterations after confirmation of the order and such alteration would involve additional parts and / or labour costs, these additional costs will be charged to the buyer.
- Validity** : This quotation is valid until 30 days from the date of issue.
- Applicability** : To all our quotations, agreements, deliveries and services our general sales conditions are applicable.

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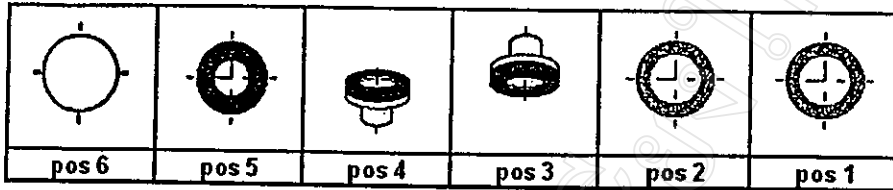
**Z. Bavelloni**  
SINGAPORE PTE LTD

Customer code : 0039061  
Company : Maekorn Aluminium  
Attn. : Mr. Noppom Archamas  
Quotation : GEMY/6  
Quotation no. : 200200222  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

## STANDARD TOOLS

GEMY/ 6



MACHINE:		GEMY/ 6		PROCESS:		F+A (FLAT WITH ARRISES)	
MATERIAL:		CLEAR GLASS & MIRROR		THICKNESS:		3 - 20 mm	
REMARKS:		TOOLS "STANDARD" FOR GENERAL APPLICATION		SET:		STANDARD TOOLS	
POS		CODE	DESCRIPTION	QTY	UNIT-PRICE USD	TOTAL PRICE USD	
1	S	19415000162	DIAMONDWHEEL CUP CC 150x41x11 J40 E15 W8 V30 X8 140 M1131	1,00	228,70	228,70	
2	S	19415000163	DIAMONDWHEEL CUP CC 150x41x11 J40 E15 W8 X8 200 M1131	1,00	228,70	228,70	
3	S	50415000004	POLISHINGWHEEL RING CC 150x30 W15 B5284	1,00	24,05	24,05	
4	S	50415000004	POLISHINGWHEEL RING CC 150x30 W15 B5284	1,00	24,05	24,05	
5	S	51615000025	POLISHINGWHEEL CUP+PP CC 150x40x70 W20 E10 BAO40Q6	1,00	99,45	99,45	
6	S	50815000001	POLISHINGWHEEL CUP UNIC CC 150x30x70 E8 W26,5 RCERIO	1,00	62,25	62,25	
						TOTAL AMOUNT USD	667,20





Your Bavelloni contact : Mr. Johnson Teo

## INSTALLATION AND TRAINING

### STANDARD-MACHINES

#### General

- The installation and training will have to be performed by qualified staff of Z. Bavelloni without interruptions and during normal working hours in a frostfree environment.
- It is requested that the future operator will help during installation and training.
- The buyer will have to supply electrical-, water- and compressed air sources at the place of installation as indicated by Z. Bavelloni. (see floorplan).
- The staff of Z. Bavelloni will arrange for the connection to the water- and compressed air sources. The buyer will have to arrange for the connection to the electrical source by a registered electrician.
- The buyer will have to provide free of charge crane- and lifting facilities including their operators.
- The machine does not require any particular foundations; An industrial-type floor with 6 inch concrete layer will be sufficient.
- In case training is requested in addition to the foreseen time, an additional session is to be mutually agreed and will be charged upon the applicable rates for technical interventions.

#### Performance

- The total required time for installation, training for programming and training of the operator is 18 hours, excluding traveling-time.
- Following activities will be performed during these hours:
  - Positioning and aligning of the machine-body, electrical box, water tanks, etc.
  - Connection to the electrical-, water- and compressed air sources.
  - Explanation and training of general machine operations.
  - Explanation and training of general machine set-up.
  - Explanation and training of general machine maintenance.

#### Options

The above indicated conditions are applicable for the standard machine and standard profiles. For certain options and profiles, the relevant installation, explanation and training is not included in the above mentioned standard required working-time. For this it mutually has to be agreed an additional session which will be charged upon the standard rates for conventional machines.



Your Bavelloni contact : Mr. Johnson Teo

## GENERAL CONDITIONS FOR TECHNICAL INTERVENTIONS

- **Working days:**  
The normal working days are from Monday until Friday included.  
Working time during weekends and public holidays is considered as overtime.
- **Normal working time:**  
Normal working time is considered to be the working time on normal working days between 08.00 am and 17.00 pm with a maximum of 8 hours.
- **Overtime:**  
Overtime is considered to be the working time on normal working days, being more than 8 hours between 08.00 am and 17.00 pm.  
Overtime is considered to be the working time on normal working days, commencing before 08.00 am and / or continuing after 17.00 pm.  
Overtime is considered to be the working time during weekends and public holidays.
- **Travelling time:**  
Travelling time is to be considered as working time and may therefore be normal working time or overtime. Travelling time starts upon departure of the technician from the applicable home office and ends upon arrival at the destination and/or starts upon departure from the destination and ends upon arrival at the home office.
- **Waiting time:**  
Waiting time at the customer's premises because of lack of preparations agreed upon, is to be considered as working time and may therefore be normal working time or overtime.
- **Workshop time:**  
The time spent by our technician in our workshop for repair or overhaul of defective goods is to be considered as working time and may therefore be normal working time or overtime.
- **Lodging:**  
For interventions requiring several connected working days, the technician will be accommodated in a mid class hotel, in case the distance to the applicable home-office is more than 100 miles. The following day breakfast, lunch and eventually dinner will be granted to the technician. On the day of return from the destination after the intervention, a dinner will be granted to the technician, in case the arrival to the applicable home-office will be later than 20.00 pm. These meals will be granted in a mid class restaurant.
- **Combined visits:**  
In case the technician executes operations at different machines of the same customer during the same visit, an invoice will be issued per machine. In this case the traveling and lodging expenses will be charged pro rata of the working time at each machine.  
In case the technician executes operations at machines of different customers without returning to the home office in between, the travelling and lodging expenses will be charged pro rata of the working time at each machine.



**Z. Bavelloni**  
**SINGAPORE PTE LTD**

Customer code : 0039061  
Company : Maekom Aluminium  
Attn. : Mr. Nopporn Archamas  
Quotation : GEMY/6  
Quotation no. : 200200222  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

## GENERAL TRADING CONDITIONS

The following conditions are part of the Proforma / Sales Contract and any orders accepted by us are subject to these conditions. Acceptance of our Proforma / Sales Contract implies acceptance of these conditions and their applications to any other order given to us and based thereon.

### 1. General

Any circumstances of any kind whatsoever beyond the control of the Sellers interfering with the production delivery or transit of the goods and or any part thereof shall release the Sellers from the responsibility for the whole or any part of this Contract and the Buyers shall have no claim for damages in respect thereof. Any such delay as aforesaid shall not invalidate the Contract or any part thereof still to be fulfilled. No claim shall lie against the Sellers in respect of any loss suffered by the Buyers, except as to the return of any deposit paid.

### 2. Deliveries

Dates given for delivery are approximate only. The delivery of one instalment delivered under this Contract shall be considered as a separate Contract. Default in delivery of any instalment shall not enable the Buyers to treat the Contract as repudiated. Any goods not taken by the Buyers during the continuance of this Contract as herein specified may be sold by the Sellers for the account of the Buyers. Delivery must be taken within (7) days of the issue of a delivery order or written advice of arrival, otherwise the Buyer will become liable for storage charges. All payments for goods to be delivered in instalments to be made on due date otherwise the Sellers may at their discretion refuse to deliver further instalment until such payments be made. Buyers must inspect the goods before signing the delivery order. After acceptance of a delivery order by the Buyers, they will be deemed to have accepted the goods

### 3. Deposits

Any deposit pay by the Buyers to Sellers under this Contract is to be counted as a portion of the payment when the Buyers have fulfilled their part of this Contract, but should the Buyers fail to fulfil same, then the deposit money is to be forfeited to the Sellers as compensation for losses or damages arising there from. If the deposit is not sufficient to cover the damages, the Sellers may claim further compensation.

### 4. Prices

The prices in this Contract are the latest available in Sellers' possession and are subject to manufacturers or contractors final confirmation. Should the cost of goods be increased by any other circumstances of any kind whatsoever beyond the control of the Sellers including (but not by way of limitation) variations in rates of exchange devaluation, import taxes or any relevant rates of freight or insurance, such increase shall be borne by the Buyers

### 5. Guarantees

No guarantee is given by the Sellers in respect of the goods or services specified in this Contract unless such guarantee is added as a special condition hereto, and any guarantee so given is limited to repair of such parts as Sellers consider necessary. Any part subject to wear and tear is generally excluded from any guarantee.

### 6. Goods lost

Should the goods or any part thereof be lost or destroyed in transit or before delivery this Contract will be voided as regards such goods lost or destroyed

### 7. Filing Claims

No claims will be recognised by the Sellers unless made within 10 days after delivery.

### 8. Refusal

If there shall be more than one contract existing between the Buyers and the Sellers and the Buyer shall fail to carry out any of the terms of this Contract, the Sellers shall be at liberty to refuse to carry out any such other contract(s) until the Buyers have complied with the terms of this Contract and the Sellers are also at liberty to utilise the margins on remaining contract(s) for the fulfilment of this particular Contract.

### 9. Certifications

The Seller advises herewith the Buyer to check whether local regulations makes it necessary to provide some certificates, license, permits etc to import and install the ordered goods. Seller is not responsible for arranging this unless specifically mentioned on our Proforma

### 10. Performance claims and disputes

The Seller guarantees that its equipment or material will comply with the contracted specifications and satisfy the purpose which is/was intended, provided said specifications and purpose are specifically described on our Proforma Invoice / Sales Contract but not to accomplish additional functions or possess additional capacity or characteristics from that specifically described on our Proforma Invoice / Sales Contract, or operate under conditions different from those which existed when the equipment was installed or the material sold. The Seller will, under no circumstances be liable to the Buyer for any direct, indirect, incidental, special or consequential damages arising out of the use or operation of the equipment or material notwithstanding the fact that the equipment or material, may, for any reason, fail to satisfy the purpose for which it was intended. In case of disputes, the Sellers and Buyers shall accept as final and binding for both parties decision of two arbitrators appointed by a Chamber of Commerce in Singapore.

### 11. Late payment

For overdue payments, the Sellers shall have the right to invoice the Buyers for interest on the outstanding balance at the rate of 1% per month and the Buyers agree to pay such interest charges.

### 12. Installation charges

Unless otherwise agreed on our Proforma Invoice/Sales Contract, the quoted prices do not include installation or commissioning charges.

### 13. Installation conditions

If installation is included in the Contract, the following will apply:-



**Z. Bavelloni**  
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- a. All labour, skilled or otherwise, tools, materials, permits, licenses, services and facilities required for unloading, uncrating, installation, erection, starting, testing, adjusting, maintenance and operation of the Equipment must be provided by the Buyer at the site at its own expense as and when requested by the Seller.
- b. The Buyer shall provide and pay direct for good hotel accommodation for the Seller's personnel from the time they leave the Seller's Singapore Works until they return. In addition, the Buyer, shall pay all expenses incurred by such personnel on meals, and incidentals.
- c. The Seller will charge to the Buyer and the Buyer shall pay for any materials supplied by the Seller in connection with the installation and/or commissioning service.
- d. The Buyer is responsible for any and all preparations required for installation of the Equipment in its Works including but not limited to alterations to building, the provision of proper sound and substantial foundations on the site for the Equipment and the provision of and connection to the Equipment of all the necessary services, all of which shall be carried out at the Buyer's expense.
- e. Any estimate of time for completion of an Installation Contract is approximate only and is given on the basis that all necessary preliminary work, services, labour and facilities (including but not limited to labour, foundations, scaffolding, lifting tackle, water and power) are ready and free for the Seller's use when required.

**14. Drawings**

Drawings, dimensions, designs or layout plans of the equipment will only be provided if indicated on our Proforma Invoice/ Sales Contract, or as otherwise deemed necessary by the Seller (whose decision in this respect shall be final and binding on the Buyer.)

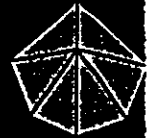
มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

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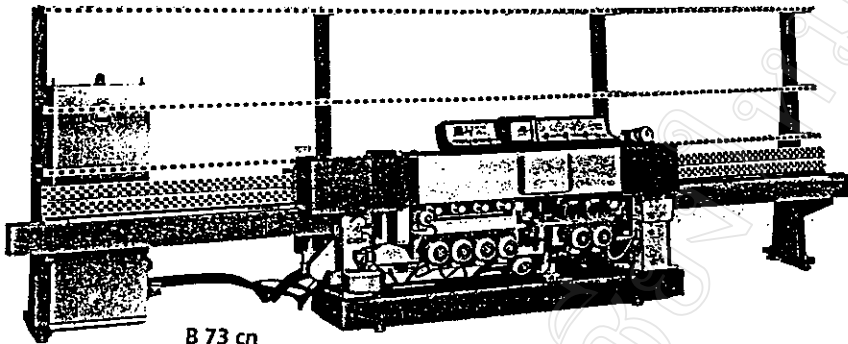
เครื่องเจียรปติกระจก : ข้อมูลและใบเสนอราคา

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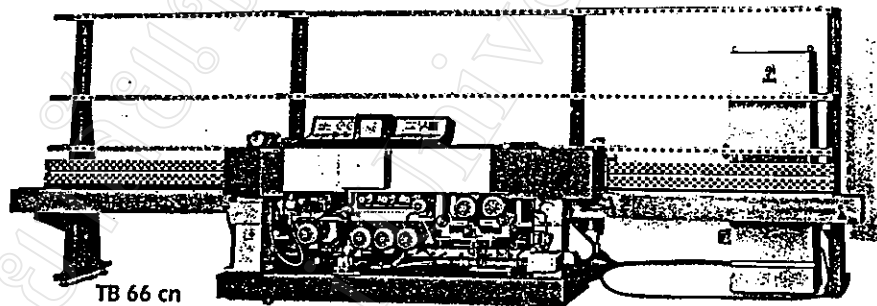
Bisellatrici rettilinee  
 Beveling straight-line machines  
 Biseauteuses rectilignes  
 Facettenschleifmaschinen  
 Biseladoras rectilneas



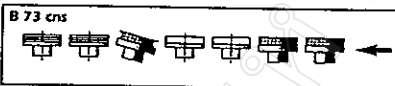
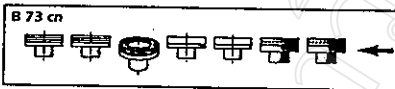
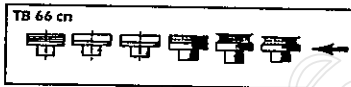
## TB 66 cn - B 73 cn-cns












B 73 cn



TB 66 cn



	TB 66 cn	B 73 cn-cns
 MIN	40x40 mm 1 5/8" x 1 5/8"	40x40 mm 1 5/8" x 1 5/8"
 MIN	35 mm 1 3/8"	35 mm 1 3/8"
	0 ÷ 4 m/min. 0 ÷ 157"/min.	0 ÷ 4 m/min. 0 ÷ 157"/min.
	3 ÷ 20 mm 1/8" ÷ 3/4"	3 ÷ 20 mm 1/8" ÷ 3/4"
	3° ÷ 45°	3° ÷ 45°
	50 mm 2"	50 mm 2"
	7,2x1,2x2,3 m 283"x47"x90"	7,2x1,7x2,3 m 283"x67"x90"
	14,2 Kw	17,1 Kw
	4.200 Kg. 9.271 lbs	4.200 Kg. 9.271 lbs

**TB 66** - Bisellatrice rettilinea TB/66 cn esegue contemporaneamente il bisello e il filo tondo lucido. **B 73** - La bisellatrice B/73 cn esegue contemporaneamente il bisello e il filetto anteriore lucido, la bisellatrice B/73 cns esegue il bisello e il filo tondo sullo spessore del vetro con una mola diamantata

**TB 66** - Straight-line beveling machine TB/66 cn for the execution of bevel and polished pencil edge. **B 73** - Beveling machine B/73 cn can execute simultaneously bevel and polished front aris, beveling machine B/73 cns can execute bevel and pencil edge on the glass thickness with one diamond wheel

**TB 66** - Die geradlinige Facettenschleifmaschine TB/66 cn bearbeitet Facette und polierte Kante gleichzeitig. **B 73** - Die Facettenschleifmaschine B/73 cn bearbeitet Facette und polierten vorderen Saum gleichzeitig, die Facettenschleifmaschine B/73 cns bearbeitet Facette und Kante auf der Glasstärke mit einer Diamantscheibe

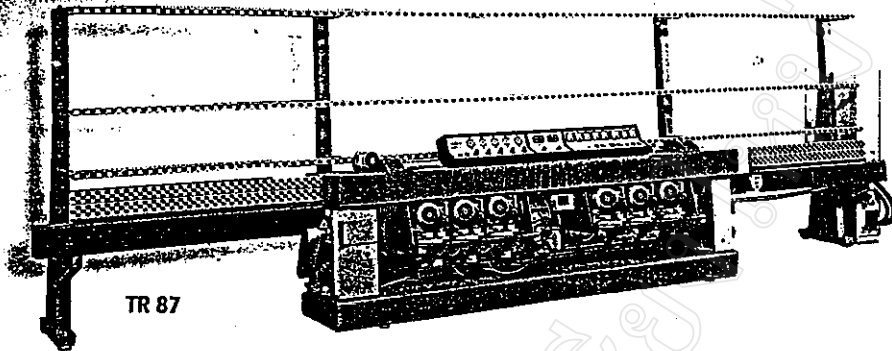
**TB 66** - La biseauteuse rectiligne TB/66 cn realise en même temps le biseau et le joint poli. **B 73** - La biseauteuse B/73 cn exécute en même temps le biseau et l'arête antérieure polie, tandis que la biseauteuse b/73 cns exécute le biseau et le joint rond sur l'épaisseur du verre avec une meule diamantée

**TB 66** - La biseladora rectilnea TB/66 cn ejecuta al mismo tiempo el bisel y el canto redondo abrillantado. **B 73** - La biseladora B/73 cn ejecuta al mismo tiempo el bisel y la arista anterior abrillantada; la biseladora B/73 cns ejecuta el bisel y el canto redondo sobre el espesor del vidrio con una muela diamantada

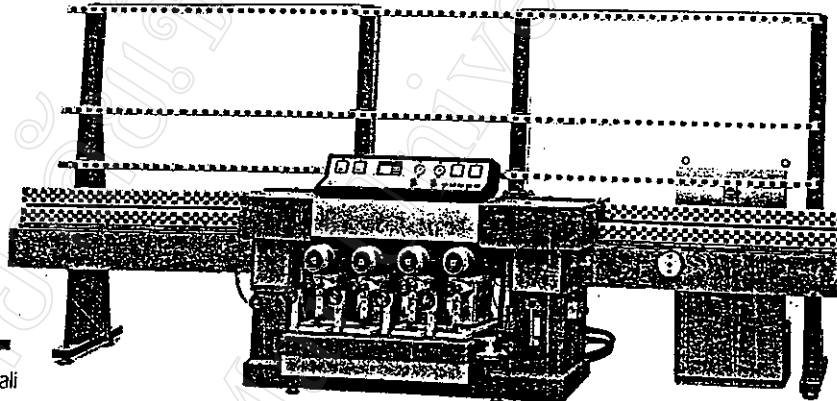
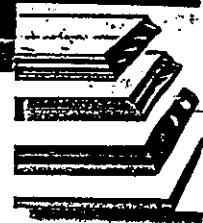
**GRINDING DIVISION**

Profilatrici rettilinee a filo tondo  
 Straight-line machine pencil edge  
 Geradlinige Schleifmaschine für runde  
 Machines rectilignes pour joint rond  
 Maquinas rectilineas para canto redondo

**TM 4 - TR 87**



TR 87



TM 4

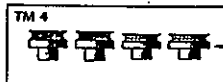
**TM 4** - Macchina rettilinea con 4 mole tangenziali per filo tondo, piatto, OG, bull nose, ecc...  
**TR 87** - Macchina rettilinea con 6 mole tangenziali e 2 mole a tazza per i filetti laterali







**TM 4** - Straight-line machine with 4 peripheral wheels for pencil and flat edge, OG, bull nose, etc.  
**TR 87** - Straight-line machine with 6 peripheral wheels and 2 cupwheels for side arris

**TM 4** - Geradlinige Schleifmaschine mit 4 Umfangschleifscheiben für runde, flache Kante, OG, Stiernase u.s.w.  
**TR 87** - Geradlinige Schleifmaschine mit 6 Umfangschleifscheiben und 2 Topfschleifscheiben für Säume

**TM 4** - Machine rectiligne avec 4 meules périphériques pour joint rond, plat, OG, bull nose, etc.  
**TR 87** - Machine rectiligne avec 6 meules périphériques et 2 meules-boisseau pour les arêtes latérales

**TM 4** - Máquina rectilinea con 4 muelas tangenciales para canto redondo, plano, pecho paloma, bull nose, ...etc.  
**TR 87** - Máquina rectilinea con 6 muelas tangenciales y 2 muelas a copa para aristas laterales.



	TM 4	TR 87
	80 mm 3"	130 mm 5"
	0÷5 m/min. 0÷197"/min.	0÷5 m/min. 0÷197"/min.
	3÷25 mm 1/8"÷1"	3÷25 mm 1/8"÷1"
	5,5x1x2,3 m 216"x39"x90"	8,1x1,2x2,3 r 318"x47"x90"
	10,7 Kw 14,3 HP	19,3 Kw 26,3 HP
	2.360 Kg. 5.209 lbs	4.500 Kg. 9.933 lbs

**GRINDING DIVISION**



**Z. Bavelloni**  
SINGAPORE PTE LTD

Customer code : 0039061  
Company : Maekorn Aluminium  
Attn. : Mr. Noppom Archamas  
Quotation : B/73-CN  
Quotation no. : 200200226  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

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Chiang Mai University





Your Bavelloni contact : Mr. Johnson Teo

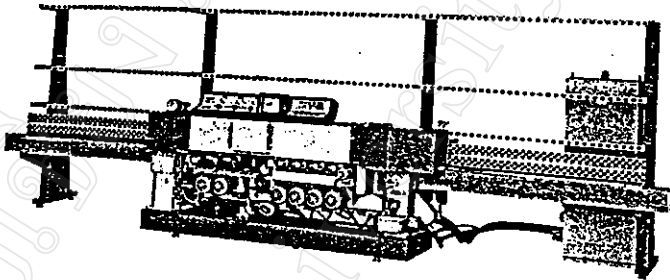
## MACHINES

### B/73-CN - CODE 11501

#### GENERAL DESCRIPTION

##### General

B 73 CN is an automatic, numerical controlled, straight-line bevelling machine, with 7 cup wheels. It is equipped with a 9" video and a programming keyboard for the processing of bevel and front arris. The machine is projected in order to bear heavy working rates and to reduce to a minimum the maintenance interventions.



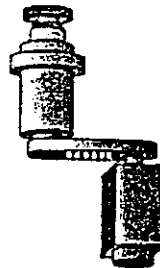
##### Structure

- Electro-welded steel structure with the wide use of iron castings.
- Inlet and outlet arms equipped with anti-friction conveying chains for glass support made of anti-friction material running on stainless steel guides.
- Conveyor running on steel guides without the help of ball bearings in order to obtain a perfect and linear sliding.
- Lubrication system of guides by means of automatic pump.
- Mobile conveyor to be positioned according to the glass thickness through electronic control equipment.

##### Spindles

The machine is equipped with the following spindles:

1. Cup metal bonded diamond wheel for bevel  $\varnothing$  150 mm.
2. Cup metal bonded diamond wheel for bevel  $\varnothing$  150 mm.
3. Cup resin bonded diamond wheel for bevel  $\varnothing$  150 mm
4. Cup resin bonded diamond wheel for bevel  $\varnothing$  150 mm
5. Polishing cup wheel for front arris  $\varnothing$  100 mm.
6. Felt to polish bevel  $\varnothing$  150 mm with Cerium oxide
7. Felt to polish bevel  $\varnothing$  150 mm with Cerium oxide.



High-precision spindles, lubricated by for life special grease (free from periodical maintenance).

Body of spindles in iron casting running on high-precision adjusting guides.

Belt transmission between motor and spindle in order to eliminate any possible vibrations and better adjust the tools number of revolutions.

The spindles for polishing wheels are equipped with a completely pneumatic self-adjustment system to compensate the wheels wear. This system raises the position of the wheel, while it is dulling. In this way a perfect edge finishing is always guaranteed. In conformity with the required finishing and the glass thickness the pressure intensity is adjustable by means of a regulator.

##### Control equipment

Numerical control with 9" video with the following functions:

- Fully automatic programming (NC controlled) of single, double and triple bevels, and drawing display of the working to be processed;





Your Bavelloni contact : Mr. Johnson Teo

- Possibility to memorize 100 working programs;
- High-sensitivity checking of current absorption for the wheels;
- Automatic set up of conveyor to process bevels on glasses of small dimensions, with the possibility to execute diamond faceting and with inclinations up to 45 degrees.
- Automatic management of polishing wheels.
- Adjustment and display of glass thickness.
- Adjustment and display of working speed.
- Display of partial worked meters.
- Display of total worked meters.
- Display of partial working hours.
- Display of total working hours.
- Display of meters worked by each wheel.
- Display of planned maintenance interventions.

#### Electrical plant

Electric installation is carried out in accordance with CE rules with power panel separated from the machine and waterproof connectors. The control panel inboard the machine is of insulating fibreglass and includes ammeters, manometers and the electronic control equipment.  
Standard voltage 400/50 Hz, other available upon request.

#### Coolant plant

Closed circuit coolant plant for wheels cooling, consisting of two stainless steel tanks with a total capacity of 720 litres and a recycle pump.

#### Cerium polishing plant .

Cerium plant consisting of stainless steel tank (200 litres), cerium pump, mixer, filter and connecting pipes.

### TECHNICAL SPECIFICATIONS

Workable glass thickness	3+20mm.
Min. workable height (strips)	35 mm.
Minimum workable size	40 x 40 mm
Maximum width of bevel	50 mm
Inclination of bevel	3° - 45°
Installed power	17.1kW
Min. pressure of compressed air	8 bar
Max. consumption of compressed air	25 Nl/min.
Length	7200 mm
Width	1700 mm.
Height	2300 mm.
Weight	3500 kg.
Working speed	0+4 m/min. 50 Hz/0+4.8m/min. 60 Hz
Water tanks capacity	720 litres



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Quotation : B/73-CN  
Quotation no. : 200200226  
Date : 14-01-2002

Your Bavelloni contact : Mr. Johnson Teo

**STANDARD SUPPLY**

1,00	0202500000	MANUAL FOR USE AND MAINTENANCE B/73-CN WITH SPARE-PARTS TABLE
2,00	SS0013000200	OIL FOR GUIDES/CHAINS PER KGR AGIP EXIDIA 220
2,00	SS0013000201	AGIP ACER MV10-K OIL PER KGR
1,00	0013010000	GREASE FOR BEARINGS PER KGR
1,00	0120025500	SET OF TOOLS FOR MACHINE MAINTENANCE INCL.10 RUBBER PADS FOR INLET/OUTLET ARM
1,00	0013303000	CAN PAINT BAV-GREEN
1,00	SS00150	CAN PAINT BAV-GREY
2,00	SS00120	WATERTANK
1,00	SS00125	WATERPUMP
1,00	SS00001	SET OF DIAMOND- AND POLISHINGWHEELS ASSEMBLED ON THE MACHINE
1,00	SS0013002322	BAV 10-90 EMULSIFIABLE OIL BEVEL PER KGR
2,00	0110059800	PAD FOR CONVEYOR
1,00	SS00140	CERIUM POLISHING PLANT



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## PRICES FOR MACHINES AND SELECTED ITEMS

CODE	DESCRIPTION	QTY	UNIT-PRICE USD	TOTAL PRICE USD
MACHINES 11501	BAVELLONI B/73-CN VERTICAL STRAIGHT-LINE BEVELLER	1,00	89.000,00	89.000,00
			TOTAL AMOUNT	<u>89.000,00</u>

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## TERMS OF DELIVERY

- Price** : CNF Destination Seaport  
Exclude unloading and internal transport.  
Including installation and commissioning.  
Technician's airticket/hotel and local expenses at buyers' account
- Insurance** : Excluded. To be arranged by buyer.
- Delivery time** : To be agreed upon order.  
Currently approx. 120 days after receipt of deposit.
- Installation** : The indicated price of the machine includes installation and commissioning. The conditions for installation and commissioning of the machine are described in the enclosed 'Terms of Installation and Commissioning'.
- Warranty** : The warranty conditions for delivery of machines are described in the enclosed 'General Trading Conditions' and are applicable for a daily machine operation of 8 hours.  
The warranty period for the individual components are specified as follows:  
Mechanical parts : 6 Months  
Electrical parts : 6 Months  
Electronic parts : 3 Months  
Parts subject to normal wear are excluded from the warranty.
- Payment** :  
30 % deposit upon order  
70 % payment by L/C at sight upon presentation of shipping documents
- Bavelloni binds itself to put right eventual imperfections within the applicable warranty conditions. They never can affect the payment conditions.  
All amounts are net without any deductions.
- Alterations** : In case of alterations after confirmation of the order and such alteration would involve additional parts and / or labour costs, these additional costs will be charged to the buyer.
- Validity** : This quotation is valid until 30 days from the date of issue.
- Applicability** : To all our quotations, agreements, deliveries and services our general sales conditions are applicable.



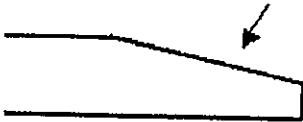
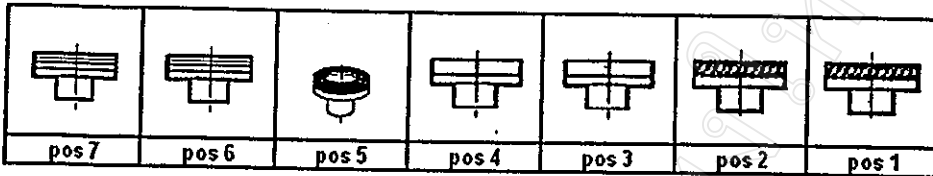
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## STANDARD TOOLS

B/73-CN



MACHINE: B/73-CN  
MATERIAL: CLEAR GLASS & MIRROR  
PROCESS: BEVEL  
THICKNESS:  
SET: STANDARD TOOLS

REMARKS: TOOLS "STANDARD" FOR BEVELLING

POS		CODE	DESCRIPTION	QTY	UNIT-PRICE USD	TOTAL PRICE USD
1	S	18815000038	DIAMONDWHEEL CUP CC 150x46x11 J40 W5 X12 - AA M1069	1,00	192,45	192,45
2	S	18815000040	DIAMONDWHEEL CUP CC 150x46x11 J40 W4 X12 - 140 M1069	1,00	171,95	171,95
3	S	29015000039	DIAMONDWHEEL CUP CC 150x45x11 J40 E15 W15 X10 270 B5293	1,00	179,05	179,05
4	S	29015000036	DIAMONDWHEEL CUP CC 150x45x11 J40 E15 W15 X10 700 B5294	1,00	179,05	179,05
5	S	50610000001	POLISHINGWHEEL CUP+PA CC 100x40x11 J40 E10 W20 B5172	1,00	30,10	30,10
6	S	52815000002	FELTWHEEL FE40 CC 150x40x70 U40 FL SINT.SPIR.	1,00	44,40	44,40
7	S	52815000002	FELTWHEEL FE40 CC 150x40x70 U40 FL SINT.SPIR.	1,00	44,40	44,40
<b>TOTAL AMOUNT USD</b>						<b>841,40</b>



Your Bavelloni contact : Mr. Johnson Teo

## INSTALLATION AND TRAINING

### STANDARD-MACHINES

#### General

- The installation and training will have to be performed by qualified staff of Z. Bavelloni without interruptions and during normal working hours in a frostfree environment.
- It is requested that the future operator will help during installation and training.
- The buyer will have to supply electrical-, water- and compressed air sources at the place of installation as indicated by Z. Bavelloni. (see floorplan).
- The staff of Z. Bavelloni will arrange for the connection to the water- and compressed air sources. The buyer will have to arrange for the connection to the electrical source by a registered electrician.
- The buyer will have to provide free of charge crane- and lifting facilities including their operators.
- The machine does not require any particular foundations; An industrial-type floor with 6 inch concrete layer will be sufficient.
- In case training is requested in addition to the foreseen time, an additional session is to be mutually agreed and will be charged upon the applicable rates for technical interventions.

#### Performance

- The total required time for installation, training for programming and training of the operator is 24 hours, excluding traveling-time.
- Following activities will be performed during these hours:
  - Positioning and aligning of the machine-body, electrical box, water tanks, etc.
  - Connection to the electrical-, water- and compressed air sources.
  - Explanation and training of general machine operations.
  - Explanation and training of general machine set-up.
  - Explanation and training of general machine maintenance.

#### Options

The above indicated conditions are applicable for the standard machine and standard profiles. For certain options and profiles, the relevant installation, explanation and training is not included in the above mentioned standard required working-time. For this it mutually has to be agreed an additional session which will be charged upon the standard rates for conventional machines.



Your Bavelloni contact : Mr. Johnson Teo

## GENERAL CONDITIONS FOR TECHNICAL INTERVENTIONS

- **Working days:**  
The normal working days are from Monday until Friday included.  
Working time during weekends and public holidays is considered as overtime.
- **Normal working time:**  
Normal working time is considered to be the working time on normal working days between 08.00 am and 17.00 pm with a maximum of 8 hours.
- **Overtime:**  
Overtime is considered to be the working time on normal working days, being more than 8 hours between 08.00 am and 17.00 pm.  
Overtime is considered to be the working time on normal working days, commencing before 08.00 am and / or continuing after 17.00 pm.  
Overtime is considered to be the working time during weekends and public holidays.
- **Travelling time:**  
Travelling time is to be considered as working time and may therefore be normal working time or overtime. Travelling time starts upon departure of the technician from the applicable home office and ends upon arrival at the destination and/or starts upon departure from the destination and ends upon arrival at the home office.
- **Waiting time:**  
Waiting time at the customer's premises because of lack of preparations agreed upon, is to be considered as working time and may therefore be normal working time or overtime.
- **Workshop time:**  
The time spent by our technician in our workshop for repair or overhaul of defective goods is to be considered as working time and may therefore be normal working time or overtime.
- **Lodging:**  
For interventions requiring several connected working days, the technician will be accommodated in a mid class hotel, in case the distance to the applicable home-office is more than 100 miles. The following day breakfast, lunch and eventually dinner will be granted to the technician. On the day of return from the destination after the intervention, a dinner will be granted to the technician, in case the arrival to the applicable home-office will be later than 20.00 pm. These meals will be granted in a mid class restaurant.
- **Combined visits:**  
In case the technician executes operations at different machines of the same customer during the same visit, an invoice will be issued per machine. In this case the traveling and lodging expenses will be charged pro rata of the working time at each machine.  
In case the technician executes operations at machines of different customers without returning to the home office in between, the travelling and lodging expenses will be charged pro rata of the working time at each machine.





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## GENERAL TRADING CONDITIONS

The following conditions are part of the Proforma / Sales Contract and any orders accepted by us are subject to these conditions. Acceptance of our Proforma / Sales Contract implies acceptance of these conditions and their applications to any other order given to us and based thereon.

### 1. General

Any circumstances of any kind whatsoever beyond the control of the Sellers interfering with the production delivery or transit of the goods and or any part thereof shall release the Sellers from the responsibility for the whole or any part of this Contract and the Buyers shall have no claim for damages in respect thereof. Any such delay as aforesaid shall not invalidate the Contract or any part thereof still to be fulfilled. No claim shall lie against the Sellers in respect of any loss suffered by the Buyers, except as to the return of any deposit paid.

### 2. Deliveries

Dates given for delivery are approximate only. The delivery of one instalment delivered under this Contract shall be considered as a separate Contract. Default in delivery of any instalment shall not enable the Buyers to treat the Contract as repudiated. Any goods not taken by the Buyers during the continuance of this Contract as herein specified may be sold by the Sellers for the account of the Buyers. Delivery must be taken within (7) days of the issue of a delivery order or written advice of arrival, otherwise the Buyer will become liable for storage charges. All payments for goods to be delivered in instalments to be made on due date otherwise the Sellers may at their discretion refuse to deliver further instalment until such payments be made. Buyers must inspect the goods before signing the delivery order. After acceptance of a delivery order by the Buyers, they will be deemed to have accepted the goods

### 3. Deposits

Any deposit pay by the Buyers to Sellers under this Contract is to be counted as a portion of the payment when the Buyers have fulfilled their part of this Contract, but should the Buyers fail to fulfil same, then the deposit money is to be forfeited to the Sellers as compensation for losses or damages arising there from. If the deposit is not sufficient to cover the damages, the Sellers may claim further compensation.

### 4. Prices

The prices in this Contract are the latest available in Sellers' possession and are subject to manufacturers or contractors final confirmation. Should the cost of goods be increased by any other circumstances of any kind whatsoever beyond the control of the Sellers including (but not by way of limitation) variations in rates of exchange devaluation, import taxes or any relevant rates of freight or insurance, such increase shall be borne by the Buyers

### 5. Guarantees

No guarantee is given by the Sellers in respect of the goods or services specified in this Contract unless such guarantee is added as a special condition hereto, and any guarantee so given is limited to repair of such parts as Sellers consider necessary. Any part subject to wear and tear is generally excluded from any guarantee.

### 6. Goods lost

Should the goods or any part thereof be lost or destroyed in transit or before delivery this Contract will be voided as regards such goods lost or destroyed

### 7. Filing Claims

No claims will be recognised by the Sellers unless made within 10 days after delivery.

### 8. Refusal

If there shall be more than one contract existing between the Buyers and the Sellers and the Buyer shall fail to carry out any of the terms of this Contract, the Sellers shall be at liberty to refuse to carry out any such other contract(s) until the Buyers have complied with the terms of this Contract and the Sellers are also at liberty to utilise the margins on remaining contract(s) for the fulfilment of this particular Contract.

### 9. Certifications

The Seller advises herewith the Buyer to check whether local regulations makes it necessary to provide some certificates, license, permits etc to import and install the ordered goods, Seller is not responsible for arranging this unless specifically mentioned on our Proforma

### 10. Performance claims and disputes

The Seller guarantees that its equipment or material will comply with the contracted specifications and satisfy the purpose which is/was intended, provided said specifications and purpose are specifically described on our Proforma Invoice / Sales Contract but not to accomplish additional functions or possess additional capacity or characteristics from that specifically described on our Proforma Invoice / Sales Contract, or operate under conditions different from those which existed when the equipment was installed or the material sold. The Seller will, under no circumstances be liable to the Buyer for any direct, indirect, incidental, special or consequential damages arising out of the use or operation of the equipment or material notwithstanding the fact that the equipment or material, may, for any reason, fail to satisfy the purpose for which it was intended. In case of disputes, the Sellers and Buyers shall accept as final and binding for both parties decision of two arbitrators appointed by a Chamber of Commerce in Singapore.

### 11. Late payment

For overdue payments, the Sellers shall have the right to invoice the Buyers for interest on the outstanding balance at the rate of 1% per month and the Buyers agree to pay such interest charges.

### 12. Installation charges

Unless otherwise agreed on our Proforma Invoice/Sales Contract, the quoted prices do not include installation or commissioning charges.

### 13. Installation conditions

If installation is included in the Contract, the following will apply:-



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- a. All labour, skilled or otherwise, tools, materials, permits, licenses, services and facilities required for unloading, uncrating, installation, erection, starting, testing, adjusting, maintenance and operation of the Equipment must be provided by the Buyer at the site at its own expense as and when requested by the Seller.
- b. The Buyer shall provide and pay direct for good hotel accommodation for the Seller's personnel from the time they leave the Seller's Singapore Works until they return. In addition, the Buyer, shall pay all expenses incurred by such personnel on meals, and incidentals.
- c. The Seller will charge to the Buyer and the Buyer shall pay for any materials supplied by the Seller in connection with the installation and/or commissioning service.
- d. The Buyer is responsible for any and all preparations required for installation of the Equipment in its Works including but not limited to alterations to building, the provision of proper sound and substantial foundations on the site for the Equipment and the provision of and connection to the Equipment of all the necessary services, all of which shall be carried out at the Buyer's expense.
- e. Any estimate of time for completion of an Installation Contract is approximate only and is given on the basis that all necessary preliminary work, services, labour and facilities (including but not limited to labour, foundations, scaffolding, lifting tackle, water and power) are ready and free for the Seller's use when required.

**14. Drawings**

Drawings, dimensions, designs or layout plans or the equipment will only be provided if indicated on our Proforma Invoice/ Sales Contract, or as otherwise deemed necessary by the Seller (whose decision in this respect shall be final and binding on the Buyer.)

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## ประวัติผู้เขียน

ชื่อ – สกุล	นายนพพร อาชามาส
วัน เดือน ปี เกิด	2 ตุลาคม 2515
ประวัติการศึกษา	สำเร็จการศึกษาระดับปริญญาตรี คณะวิศวกรรมศาสตร์ จากมหาวิทยาลัยเชียงใหม่ ปัจจุบันกำลังศึกษาระดับปริญญาโท สาขาบริหารธุรกิจ มหาวิทยาลัยเชียงใหม่
ประสบการณ์ทำงาน	
ปี 2537 – 2539	ทำงานที่บริษัท จัสมินอินเตอร์เนชั่นแนล จำกัด (มหาชน) ตำแหน่ง วิศวกร
ปี 2539 – ปัจจุบัน	ทำงานที่ บริษัทขุนหะแสง จำกัด