TAKACHI

Overlay Sheets with Embossed Push Buttons No Complete Die Cost Required!

Achieving results from just 1 piece without using a die!
Dramatically reducing initial costs with TAKACHI's proprietary new production method.

External dimension 99×53mm

1 type of embossing pattern, total 7 locations

● Previous Price (1 Sheet)

Initial cost	USD185.90
Sheet product cost	USD 60.80
Total cost	USD246.70

● New Method Price (1 Sheet)

Initial cost	USD 45.00
Sheet product cost	USD112.00
Total cost	USD157.00

36% reduction in total costs!

External dimension 70×70mm

1 type of embossing pattern, total 16 locations

● Previous Price (1 Sheet)

Initial cost	USD222.40
Sheet product cost	USD 68.90
Total cost	USD291.30

● New Method Price (1 Sheet)

Initial cost	USD 45.00
Sheet product cost	USD129.40
Total cost	USD174.40

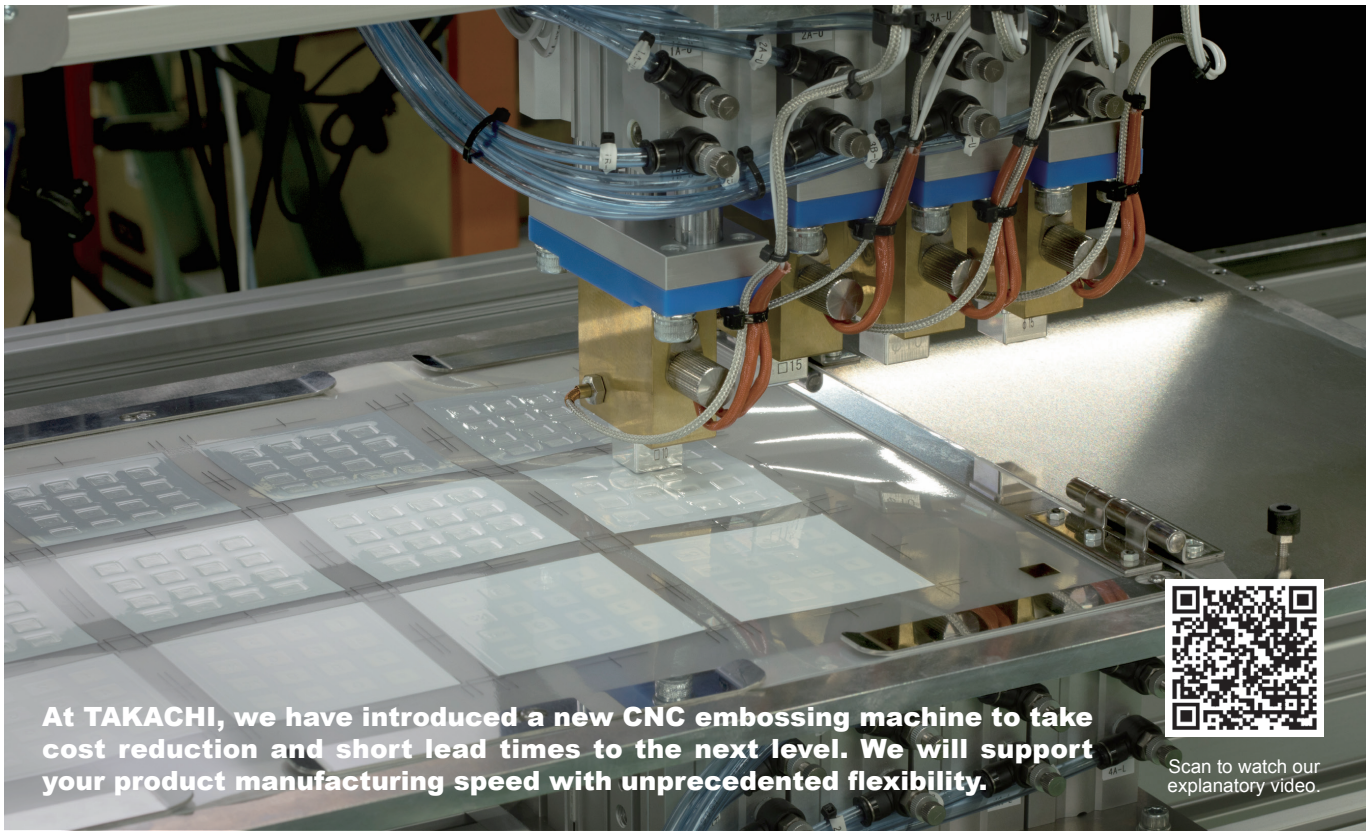
40% reduction in total costs!

*Calculations are based on 1USD=140JPY; rounded to the nearest ten cents.
*Prices as of October 2025.
*Prices are subject to change depending upon requirements.

Please see the following pages for more information.

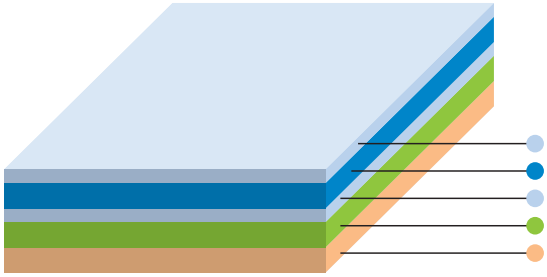
Digital printed overlay

Overlay Sheet for Boxes and Enclosures Introducing the New CNC Embossing Machine



Product Specifications

Technical Data
Operating temperature : 5°C ~ 35°C (Room temperature environment recommended)



Layer details

Layer		Material	Thickness
Protective layer		Polypropylene	0.040mm
Printed film layer		PET	0.188mm
Laminated film layer		PET	0.016mm
Double-sided tape layer	Standard	Acrylic	0.17 mm
	Waterproof	Acrylic	0.15 mm
Paper liner		Paper	-

*Remove the protective layer before using.

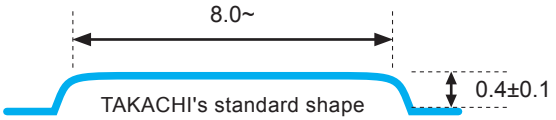
Embossing Process

Embossing process is the process of creating raised patterns on the overlay sheet by applying pressure with a die.
In addition to embossing using dies prepared with TAKACHI's proprietary method which can reduce the cost by half compared to standard dies, we now also offer CNC embossing process which eliminates the initial die costs.

CNC Embossing Details

Max. sheet size : 400×250mm
Size : Varies depending on TAKACHI's attachments.
Height : 0.4±0.1mm (reference value)
Shape : Round or Rectangular.
Min. distance : 5mm
(From edge of sheet & between two embossed shapes.)

Embossed Surface Details



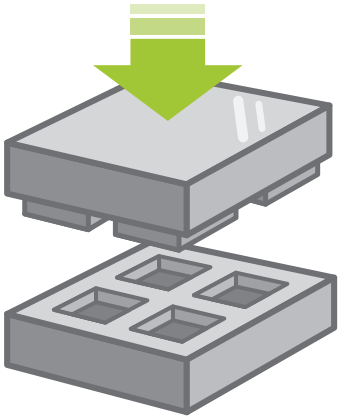
Feature 1 No Initial Cost Required for Ready-Made Shapes! Exceptional Low Cost Operation!

Until now, intial costs were a burden in embossing processes as complete dies must always be prepared. This was unsuitable for creating prototypes and small-volume production. At TAKACHI, we have adopted a proprietary processing method which does not require a complete die, which realizes production without initial costs.

ZERO initial die costs!

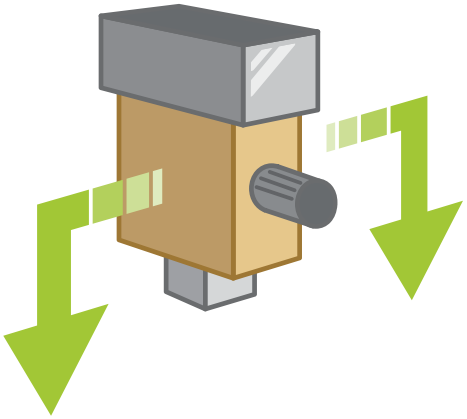
- **Production available from just 1 sheet**
- **Ideal for prototypes and high-mix, low-volume production**
- **Embossing process can be easily integrated in the development phase**

Conventional Method (Complete Die)



Requires dies to be prepared for each sheet design

CNC Embossing Machine



No dies required as it moves and presses automatically

CNC embossing process can be performed with embossing attachments available at TAKACHI.
No initial cost is required for embossing using the following embossing attachments.

List of Embossing Attachments Available at TAKACHI - CNC Embossing Available

Round shape	Rectangular shape				
ϕ8	□8(R1)	—	—	—	—
ϕ9	□9(R1)	—	—	—	—
ϕ10	□10(R1)	□10(R2)	□10(R3)	—	—
ϕ11	□11(R1)	□11(R2)	□11(R3)	—	—
ϕ12	□12(R1)	□12(R2)	□12(R3)	□12(R4)	—
ϕ13	□13(R1)	□13(R2)	□13(R3)	□13(R4)	□13(R5)
ϕ14	□14(R1)	□14(R2)	□14(R3)	□14(R4)	□14(R5)
ϕ15	□15(R1)	□15(R2)	□15(R3)	□15(R4)	□15(R5)

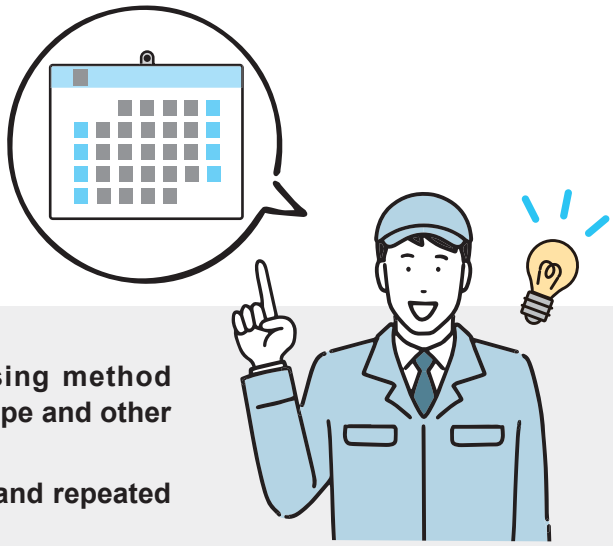
*Misalignment may become more noticeable when embossing exactly on a printed design.
*Minor cracks may be present on the outer edge when embossing.
*Clicking may feel different depending on the shape and size of the embossing.

Feature 2 Short Lead Time

As complete embossing die design and manufacturing is not required, lead time for new product designs can be reduced significantly compared to conventional methods.
Changes to designs can also be applied instantly, due to this method not requiring a complete die. This is the perfect solution for product development requiring speed.

Category	Processing lead time
New	10 working days
Repeated orders	8 working days

*Lead time is standard lead time. It may vary depending on the content, volume, order status at TAKACHI, etc.
*Data check days are not included in 'working days'.



We can propose the most suitable processing method based on the embossing dimensions, shape, type and other conditions.

Please consult us regarding mass-production and repeated orders.

Prototypes
Low volume

CNC embossing + Cutting plotter

[Feature] Complete embossing die cost not required (select embossing shape from TAKACHI's attachments).
Specializes in low-volume, high-mix orders.
[Lead time] New : from 10 working days Repeat : from 8 working days

Complete embossing die (TAKACHI's proprietary method) + Cutting plotter

[Feature] Embossing in various shapes is possible
*Complete embossing die manufacturing (TAKACHI's proprietary method) is required
[Lead time] New : from 17 working days Repeat : from 8 working days

Mass production
High volume

CNC embossing + Cutting die

[Feature] Complete embossing die cost not required (select embossing from TAKACHI's attachments)
*Complete dies are required for exterior shape cutting and double-sided tape pasting.
[Lead time] New : from 22 working days Repeat : from 20 working days

Complete embossing die + Cutting die

[Feature] Embossing of various shapes is possible, while keeping the product cost down
*Complete dies are required for embossing, exterior shape cutting and double-sided tape pasting.
[Lead time] New : from 27 working days Repeat : from 22 working days

Reference Price Example

External dimension

123 × 65mm

Embossing

2 types of embossing patterns, total 7 locations

Double-sided tape

Waterproof type

		CNC embossing + Cutting plotter				Conventional complete embossing die (TAKACHI's proprietary method) + Cutting plotter			
Production lot		1 pc	5 pcs	10 pcs	30 pcs	1 pc	5 pcs	10 pcs	30 pcs
Inkjet printing data processing fee		USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00
Complete embossing die production fee (TAKACHI's proprietary method)		USD 0.00	USD 0.00	USD 0.00	USD 0.00	USD151.10	USD151.10	USD151.10	USD 151.10
Sheet product cost	Unit price x qty	USD135.40 x 1 pc	USD 65.50 x 5 pcs	USD 53.30 x 10 pcs	USD 43.70 x 30 pcs	USD 76.50 x 1 pc	USD 47.20 x 5 pcs	USD 36.10 x 10 pcs	USD 30.10 x 30 pcs
	Total	USD135.40	USD327.50	USD533.00	USD1,311.00	USD 76.50	USD236.00	USD361.00	USD 903.00
Total cost		USD180.40	USD372.50	USD578.00	USD1,356.00	USD272.60	USD432.10	USD557.10	USD1,099.10
Per sheet		USD180.40	USD 74.50	USD 57.80	USD 45.20	USD272.60	USD 86.40	USD 55.70	USD 36.60

External dimension

151 × 116mm

Embossing

4 types of embossing patterns, total 14 locations

Double-sided tape

Standard type

		CNC embossing + Cutting plotter				Conventional complete embossing die (TAKACHI's proprietary method) + Cutting plotter			
Production lot		1 pc	5 pcs	10 pcs	30 pcs	1 pc	5 pcs	10 pcs	30 pcs
Inkjet printing data processing fee		USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00	USD 45.00
Complete embossing die production fee (TAKACHI's proprietary method)		USD 0.00	USD 0.00	USD 0.00	USD 0.00	USD286.20	USD286.20	USD286.20	USD 286.20
Sheet product cost	Unit price x qty	USD175.70 x 1 pc	USD 92.60 x 5 pcs	USD 74.20 x 10 pcs	USD 63.80 x 30 pcs	USD 86.20 x 1 pc	USD 57.80 x 5 pcs	USD 48.30 x 10 pcs	USD 40.80 x 30 pcs
	Total	USD175.70	USD463.00	USD742.00	USD1,914.00	USD 86.20	USD289.00	USD483.00	USD1,224.00
Total cost		USD220.70	USD508.00	USD787.00	USD1,959.00	USD417.40	USD620.20	USD814.20	USD1,555.20
Per sheet		USD220.70	USD101.60	USD 78.70	USD 65.30	USD417.40	USD124.00	USD 81.40	USD 51.80

*Costs will be for sheet product costs only for repeated orders.

*Initial costs can be reduced significantly if you provide design data which does not require editing by TAKACHI.

*Calculations based on 1USD=140JPY; rounded to the nearest ten cents.

*Prices as of October 2025.