



### 1. Outstanding Energy Saving

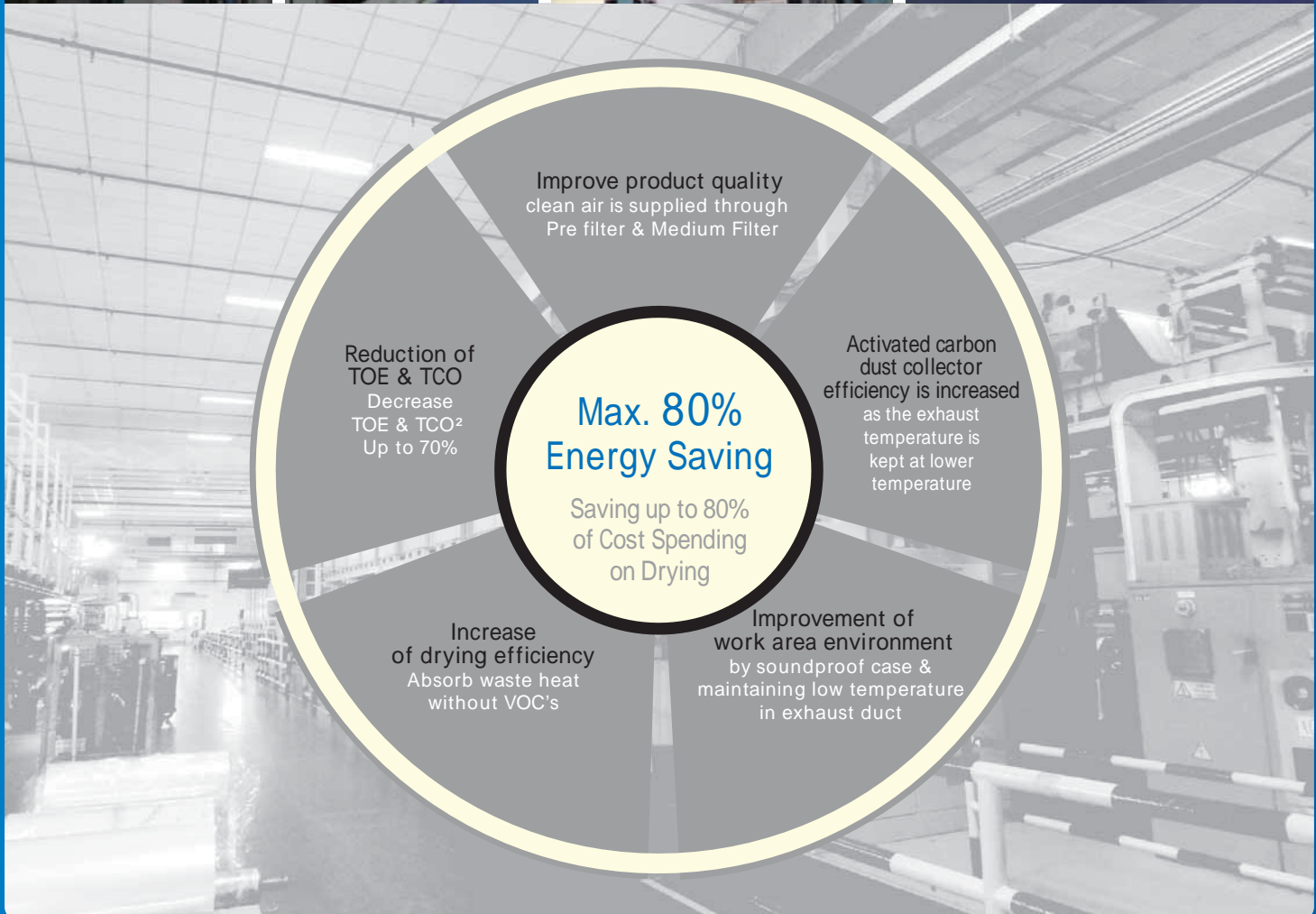
: E-SAVER saves drying energy from 60% to 80% by recovering waste heat without circulating drying air (mixed with solvents).  
This saving effect contributes to the reduction of total production cost.

### 2. Reliable Technical Maintenance Service

: Boosung Engineering has been dedicated to R&D and technical Maintenance service.  
We strongly believe that our reputation comes from customer satisfaction.  
Our maintenancet team is always ready to be sent to our customers.

### 3. Optimized Consulting Service

: E-SAVER runs by automatic control system which provides all the necessary data which includes air volume, temperature, balance between supply and exhaust air to facilitate the optimized operation.



E-SAVER Main Body Specification

1



• BSE-GP MODEL SERIES

2



• BSE-DL MODEL SERIES

3



• BSE-CO MODEL SERIES

NO	MODEL	Applying Machine	Air Volume	Air Pressure	HEAT EXCHANGER	Heat Quantity	FAN			MAX TEMPERATURE
			CMM	mmAq.			HP	kW	POWER	℃
1	BSE-GP21-L	200m/min Gravure Printing	20~90	40~150	15kw (MAX 22kw)	80,000	5	3,7	1,2~2,6	60CMM (95℃)
	BSE-GP21-H				22kw (MAX 35kw)	95,000				60CMM (120℃)
	BSE-GP31-L	300m/min Gravure Printing	20~120	40~150	22kw (MAX 35kw)	110,000	7,5	5,5	2,2~4,0	80CMM (95℃)
	BSE-GP31-H				30kw (MAX 45kw)	125,000				80CMM (120℃)
	BSE-GP41-L	400m/min Gravure Printing	20~150	40~180	25kw (MAX 40kw)	136,000	10	7,5	2,2~5,0	110CMM (95℃)
	BSE-GP41-H				32kw (MAX 50kw)	157,000				110CMM (120℃)
2	BSE-DL11-L	DRY LAMI	20~120	40~150	22kw (MAX 35kw)	110,000	7,5	5,5	2,2~4,0	80CMM (95℃)
	BSE-DL11-H				30kw (MAX 45kw)	125,000				80CMM (120℃)
3	BSE-CO10-OH	Coating Machine	20~100	60~180	60kw (MAX 80kw)	138,000	7,5	5,5	2,2~4,0	70CMM (200℃)
	BSE-CO10-WH				55kw (MAX 80kw)	138,000				80CMM (160℃)

E-SAVER AUTOMATIC CONTROL SYSTEM

ITEMS	SPECIFICATIONS
<p>Air Volume Measurement &amp; Control Devices</p>  	<ul style="list-style-type: none"><li>* FMS + Air Volume &amp; Temperature Measurement Sensor</li><li>* Measure Average Velocity Pressure in Duct (Degree of Precision <math>\pm 0,35\%</math>)</li><li>* Supply &amp; Exhaust Air Balance Sensor</li><li>* Digital Type, Showing figures on Touch Panel(Degree of Precision <math>\pm 0,2\text{mmAQ}</math>)</li><li>* Electric Exhaust Damper<ul style="list-style-type: none"><li>- Damper Position (0~100 %) controlled from E-SAVER control system</li></ul></li></ul>
<p>E-Saver Control Devices (Main &amp; Touch Panels)</p>  	<p>Main Control Panel (Cabinet Style) &amp; Touch Panel for HMI</p> <ul style="list-style-type: none"><li>* Set Air Volume, Temperature, Balance(Supply Air &amp; Exhaust Air)</li><li>* Check Supply Air Volume, Temperature, Air Balance<ul style="list-style-type: none"><li>- Enable to Save Energy by Setting the proper amount of Drying Conditions</li><li>- Operators are convenient to set New Product Drying Condition</li></ul></li><li>* Store up to 3,000 Previous work records</li><li>* Operate Each Unit of E-Saver<ul style="list-style-type: none"><li>- Operation Option 1 : Each Unit</li><li>- Operation Option 2 : Using Heater or Compressor</li></ul></li><li>* Integral Power System (Voltage, Current, Electricity consumption, Power factor)</li><li>* Main Circuit Breaker and Other Circuit Breakers(Electricity Switches)</li></ul>
<p>NEW MODEL SYSTEMATIC DRYER CONTROL</p> 	<p>SYSTEMATIC DRYER CONTROL</p> <ul style="list-style-type: none"><li>* Patent (Patent NO.10 - 1384339)</li><li>* Achieved reasonable price developed by Boosung Ltd., Co.</li><li>* The First Heat Air (Air Volume/Temperature) Controller in the World<ul style="list-style-type: none"><li>=&gt;Notifying Decreasing Air Volume by Alarm System</li></ul></li><li>* Control Air Volume &amp; Temperature Simultaneously (At the Same Time)</li><li>* When Air Volume/Temperature Decreasing, Alarm starts</li><li>* (Notifying the failure of fan/ Heating Device)</li><li>* Filter Alarm(Notifying the Time of Filter Cleaning /Change</li><li>* Degree of Precision : Air Volume <math>\pm 3\text{CMM}</math>, Temperature <math>\pm 0,5</math></li></ul>

## E-SAYER Testing Report from one of multinational flexible Printing Companies (Factory Location: Thailand)

### Gravure Printing

	Operation (Printing) Speed (m/min)	Material	Number of Colors	Temperature	Electricity Consumption	Solvent Retention (10mg)
Before	172	PET	8 Colors	80~90℃	346,1kwh	0,48mg
E-SAYER Installation	182	PET	8 Colors	65~70 ℃	78,17kwh	0,50mg

(▽77%)

### Extrusion Lamination

	Operation (Printing) Speed (m/min)	Material	Number of Colors	Temperature	Electricity Consumption	Adhesion Strength (0,23kgf/25mm)
Before	130	PET/PE	1Dryer	80℃	70,89kwh	0,61
After Installation	122	PET/PE	1Dryer	80℃	18,89kwh	0,74 (Adhesion Strength increased)

(▽73.4%)

### Electricity Heater VS E-SAYER

Category	Electricity Heater	E-SAYER	Note
Temperature Control	Analog/Digital	Digital	Precisely Control Eemperature
Air Volume Control	X	O	Air Volume (Degree of Precision±3cmm)
Exhauste Air (Measurement and Control)	Manual	Electric	Electric Damper (0~100% Positionin)
Exhaust Air Damper	X	O	Measure & Control Air Balance (Degree of Precision±0.5mmAQ)
Energy Efficiency			50%~90% Energy SAVING (Depending on Operation Condition)
Drying Efficiency			Air Balance Monitoring
Working Environment			Noise, Odor
Dust Collector Efficiency			Dust Collector Improvement (Exhaust Air Temperature kept at lower temperature.)
Safety			Lower Air Temperature in Duct