



PHOENIXIA

News from the world of
Phoenix group of companies

Volume 3 . Issue 1 . March 2011

Adaptability *Quality* Innovation



General Manager Perspective

INDEX Participation & Invitation

INDEX 11, world's leading nonwovens exhibition, takes place in Geneva, Switzerland from 12 - 15 April 2011. The event is a global gathering for all the players in the nonwovens industries from all over the world. Phoenix Machinery will meet customers, as well as exhibit and present our latest innovative solutions in disposable machines at INDEX 2011.

“Our mission is to contribute to our customer’s growth”

Through our participation, we are seeking new business opportunities to expand our business networks, especially in the Middle Eastern and African markets. Our competitive solutions offer competitive advantages to disposables manufacturers. Our excellent quality / price ratio allows our customers to acquire and benefit from new high performance machinery at very competitive prices.

Phoenixia, quarterly newsletter, describes the latest news and activities at Phoenix group of companies: technologies, product launches, services, events, and customer testimonials. Phoenix Machinery & Phoenix Energy are members of the multinational INDEVCO group.

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General Manager Perspective Continues

Furthermore, by conducting regular visits, our technical specialists, with years of experience in our group production plants, provide customers with the technical expertise necessary to optimize and improve machine performance.

Customers benefit from higher productivity and profitability due to our quick response to customer requests. Our prompt after-sales service team is ready to be at a customer's site within 24 hours after the request and to help trouble shoot the machines, thus reducing considerably machine break down.

We invite you to visit our **Booth # 4142 in Hall 4** at INDEX 2011 to observe our new 'Low Waste Stretch Ear Applicator Unit', a self standing unit that can fit to any diaper machine without modifying the existing line.

On a daily basis during the show, we will run our 'Online Stretch Ear Applicator Unit' machine at a speed of 600 pads / minute. Visitors to our booth have the opportunity to view our machine performance.

SIEMENS' strategy to forge a better and more sustainable future coincides with our vision to provide tomorrow's technology and machineries. By building a closer relationship with SIEMENS, we gain the competitive advantage to provide high-tech solutions to the Middle Eastern industrial sector.

Rabih Osta, General Manager



Flying around the globe
Survolant le monde

Tomorrow's Technology, Today



12 - 15 April 2011, GENEVA PALEXPO, Hall 4, Booth # 4142

Editorial Committee

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Hygiene Converting Production Machines

For Converting Baby Diapers



BD-06 Baby Diaper Production Line

Main Technical Data	Production Speed:	Up to 600 pcs / min
	Production Linear Speed:	300 m / min max
	Efficiency:	85 - 90 %
	Product Width (min - max):	250 - 380 mm
	Product Length (min - max):	370 - 600 mm



BD-04 Baby Diaper Production Line

Main Technical Data	Production Speed:	Up to 400 pcs / min
	Production Linear Speed:	200 m / min max
	Efficiency:	85 %
	Product Width (min - max):	250 - 380 mm
	Product Length (min - max):	370 - 600 mm

For Converting Adult Diapers



AD-250 Adult Diaper Production Line

Main Technical Data	Production Speed:	Up to 250 pcs / min
	Production Linear Speed:	200 m / min max
	Efficiency:	85 - 90 %
	Product Width (min - max):	480 - 800 mm
	Product Length (min - max):	710 - 975 mm

For Converting Sanitary Napkins



LN-05UT Ultra Thin Sanitary Napkin Production Line

Main Technical Data	Production Speed:	Up to 500 pcs / min
	Production Linear Speed:	150 m / min max
	Efficiency:	85 - 90 %
	Product Width (min - max):	70 - 115 mm
	Product Length (min - max):	210 - 320 mm



LN-05F Fluffy Sanitary Napkin Production Line

Main Technical Data	Production Speed:	Up to 500 pcs / min
	Production Linear Speed:	150 m / min max
	Efficiency:	85 - 90 %
	Product Width (min - max):	70 - 115 mm
	Product Length (min - max):	210 - 320 mm



LN-08UT Ultra Thin Sanitary Napkin Production Line

Main Technical Data	Production Speed:	Up to 800 pcs / min
	Production Linear Speed:	225 m / min max
	Efficiency:	85 - 90 %
	Product Width (min - max):	70 - 115 mm
	Product Length (min - max):	210 - 320 mm

Hygiene Converting Automation Projects

Phoenix Machinery Automation & Drive Division has recently launched its latest generation of high-speed diaper machines, after three years of conception and engineering. More than 10 mechanical, electrical and process engineers combined efforts to develop the state of the art high-speed machine.

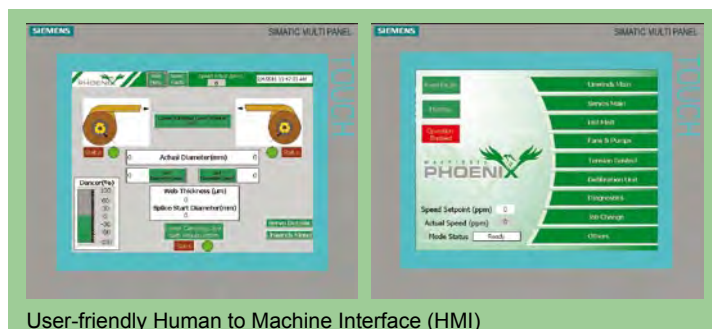
SIEMENS Germany / Turkey and Phoenix Machinery worked together during the conception, design and testing phases of the 'BD-06' Baby Diaper Production Line to provide the best solutions for operation friendliness, synchronization consistency, telecommunication ruggedness and low power (below 500 KVA) consumption. The machine, including automation, Human Machine Interface (HMI), communication, motion and power distribution, is based on SIEMENS systems.

The machine was designed to decrease job change duration, thus reducing machine stoppage time. A fully sectional driven concept covers all pullers and cyclers. Seventy-two motion axes were used, driven by the latest generation of absolute feedback servomotors from SIEMENS and powered by the recently introduced high-speed servo drivers 'SINAMICS S120'.

DRIVE-CLiQ communication at 100 Mbps provides accurate motor position and a speed feedback system. DRIVE-CLiQ communication enables a digital acquisition of the absolute position of each axis and has high noise immunity, especially at operation high-speed.

The required motion sequences and process control loops are governed by the Motion Controller SIMOTION D445-2DP combined with 12 control units CU-320 to handle following motion tasks:

- Virtual line shaft
- Load cell based closed loop tension control
- Position synchronization
- Speed synchronization
- Caming & shear cutter
- Pick & place
- Indexing



User-friendly Human to Machine Interface (HMI)

The S7-414-2DP central automation station drives 756 digital and analog I/Os distributed over 11 remote stations. In addition, 3 PROFIBUS networks are adopted and distributed for:

- High performance motion at 12 Mbps with the isochrones feature providing coherent communication for critical axis
- Normal performance motion at 12 Mbps
- Remote and local control including the HMI at 1.5 Mbps

A user-friendly 10-inch touch panel is used for HMI, to access all machine parameters, enter recipes for several stored jobs and monitor alarms / actual values.

Different types of sensing are provided through 178 elements for accurate control and monitoring: inductive, photoelectric, magnetic, vacuum, micro-switches, temperature. Moreover, Safety Category IV is implemented.

“ 10 diapers / second ”

Full online quality control is integrated using two high-speed digital cameras and one central digital image processor. The system detects any defect in each manufactured diaper and rejects the defected product even at the highest speed of 600 diapers / minute equivalent to 10 diapers / second. The diaper inspection covers the pad formation, legs cutout, elastic distribution, stretch ears, tape, and frontal tape.



Electric panel for Shark IV

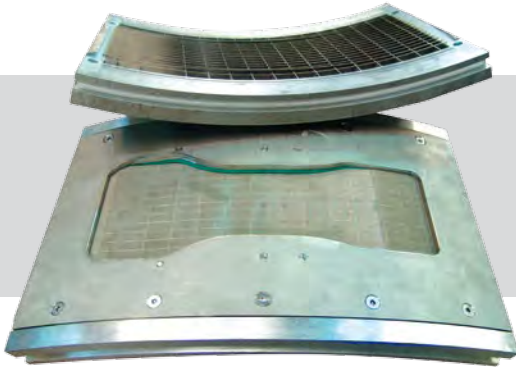
CNC Parts for Hygiene Machines

Phoenix Machinery's CNC Division successfully completed the installation and run ability of the DMC 63V 4-axis machining center and the CNC wire-cut CTWG, in line with the capital expenditure plan for 2010. Both machines are now in full operation.

Bechara Yared, CNC Line Manager, explains,

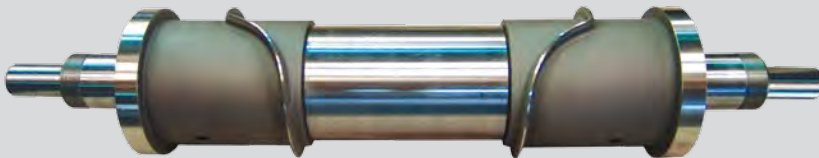
"Our highly skilled operators, with years of experience and close cooperation with Sanita and Napco Group Hygiene Divisions, as well as other players in the nonwoven sector in the Middle East North Africa (MENA) region, master all the processes needed to serve this industry."

Phoenix Machinery's operator expertise covers the following:



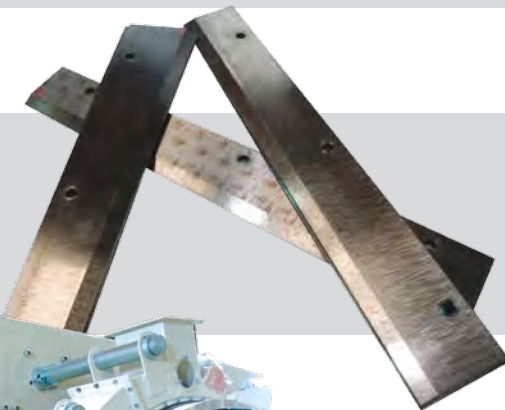
Pocket (for fluff formation)

Length: 31 - 60 cm
 Width: 10 - 25 cm
 Geometry: 2D / 3D
 Fluff Cap: 8 - 25 g



Rotary Die Cutters (for baby diaper and feminine napkin lines)

Length: Up to 100 cm
 Diameter: Up to 60 cm
 Hardness: 60 - 65 HRC



Knives & Anvils

Length: 100 cm
 Width: 30 cm
 Geometry: plane or curved



Drum Forming

Width: Up to 60 cm
 Diameter: Up to 130 cm
 Number of Pocket: any required amount

Phoenix Machinery to Exhibit at INDEX 11

Phoenix Machinery will exhibit at the world's leading nonwovens exhibition from 12 - 15 April 2011 at the GENEVA PALEXPO in Switzerland. The manufacturer of hygiene converting machines will meet attendees at **Hall 4, Booth # 4142.**

index11
WORLD'S LEADING *nonwovens* EXHIBITION



Located in Safra, Lebanon, Phoenix Machinery will present its machinery and retrofit units for adult and baby diapers and feminine sanitary napkins, tissue converting machines, machinery automation, and CNC parts for hygiene converting machinery.

Phoenix Machinery will also showcase the 'Online Stretch Ear Applicator Unit'. The machine's operating speed is 600 diapers / minute. Phoenix Machinery manufactures industrial machinery, high precision CNC parts, and refurbishes and performs control upgrades, in addition to paper, plastic, tissue, and hygiene converting machinery for the Middle East North Africa (MENA) region.

The triennial event provides a forum for key players from all levels in the nonwovens and supporting industries to meet, expand business networks, look for and grab new business opportunities, and present innovative solutions for nonwovens. ^[1]

The four-day event is the 10th consecutive of its kind presenting the latest innovative developments in the nonwovens industry. INDEX 11 will provide a series of training courses and side-events focusing on growth areas. ^[2]

Phoenix Machinery's representatives are:

Rabih Osta
Phoenix Machinery General Manager

Fadi Saify
Phoenix Machinery Hygiene Chief Engineer

Jean Chalhoub
Phoenix Machinery Sales Manager

Chadi Mattar
Phoenix Machinery Hygiene Line Manager

Phoenix Machinery Sponsors NDU 3rd Annual Engineering Awards Ceremony

Phoenix Machinery sponsored Notre Dame University's (NDU) 3rd Annual Engineering Awards Ceremony on 1 December 2010, in Abou Khater Hall Auditorium at NDU main campus in Zouk Mosbeh, Lebanon.

A 7-minute video introduced Phoenix Energy, sister company to Phoenix Machinery, to attendees of the award ceremony. Rabih Osta, Phoenix Machinery General Manager, distributed the awards to engineering students for their accomplishments at the end of the ceremony.

Elie Sawma, Phoenix Machinery Electrical Design Engineer from NDU Class of 2010, received two awards in the ceremony: Dean's Award for Academic Excellence and Dean's Award for Engineering Innovation.



Phoenix Machinery sponsors NDU's engineering awards ceremony

References: [1] <http://www.index11.org/en/index.php>

[2] <http://www.index11.org/en/the-exhibition/welcome-to-index-11-0-74>

Three Dean's Awards for Engineering Innovation were granted to students who presented the best senior projects and showed innovation in their engineering design project. Four Dean's Awards for Academic Excellence were given to the students with highest GPA's in the graduating class in each engineering department.

The Dean's Award for Outstanding Service went to the committee members of the engineering societies, who had shown dedication to provide services for the benefit of fellow students, such as tutoring or planning professional events.

In addition, the Sarmad Rihani Award, a special scholarship award, was granted to the 3rd year civil engineering student with the highest GPA.



Phoenix Machinery to Attend Tissue World 2011

28 – 31 March 2011

Acropolis Palais des Expositions in Nice

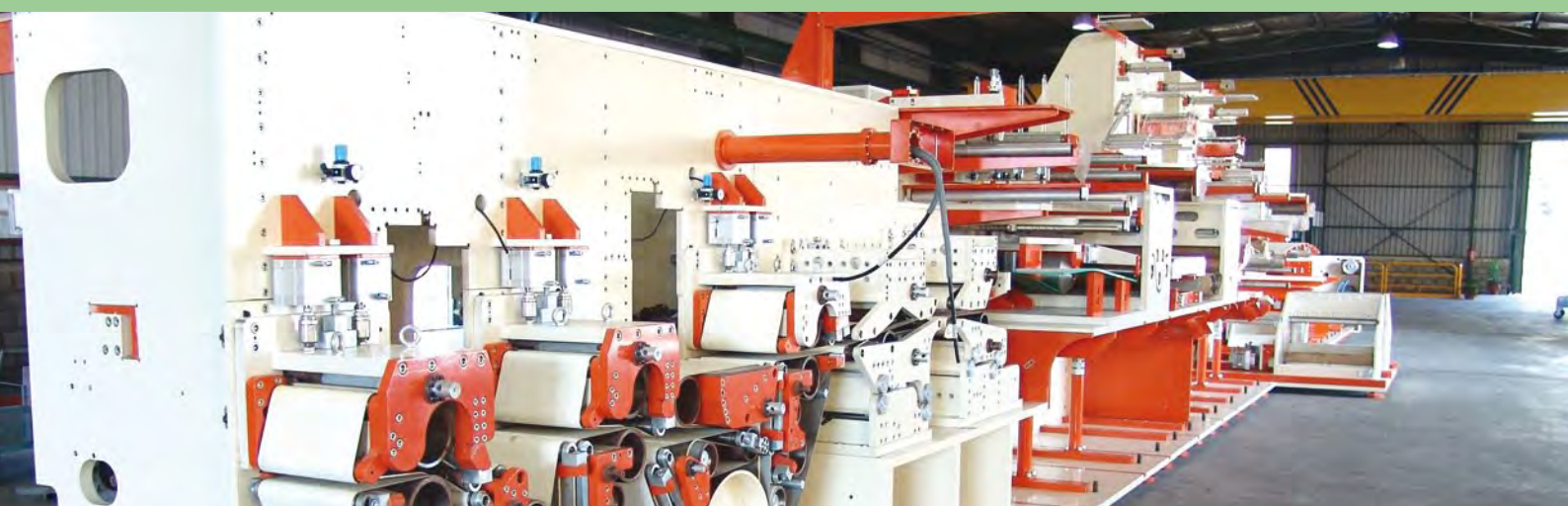
Stand # D 175



Phoenix Machinery, Lebanese industrial machine manufacturer, will attend Tissue World 2011 from **28 – 31 March 2011**. The biennial meeting for the tissue converting industry will take place at Acropolis Palais des Expositions in Nice, France.

Phoenix Machinery produces tissue and paper making converting machines. Phoenix Machinery representatives will be ready to meet visitors at sister companies' **Stand # D 175**. Sister companies, Unipak Tissue Mill and Interstate Paper Industries will exhibit jumbo tissue rolls at Tissue World 2011.

Tissue World 2011 starts with a conference on 28 March 2011, one day before the opening of the exhibition show floor. The 4-day event brings together international tissue makers, converters, executives, traders, analysts, distributors, and buyers, as well as suppliers of the tissue industry. The conference explores new trends and gives attendees a concise update on developments in the tissue industry.^[3]



"High-Speed Adult Diaper" machine

Phoenix Machinery Honored at LIRA Program 2010



Phoenix Machinery, member of INDEVCO Group, was recognized for its innovative 'High-Speed Adult Diaper' machine at the 10th annual Lebanese Industrial Research Achievements (LIRA) Program from 1 - 3 December 2010 at the Dbayeh Convention Center in Dbayeh, Lebanon.

LIRA Program 2010 conference, under the patronage of Lebanese President Michel Sleiman, brought together industry specialists and officials. INDEVCO Group is a founding member of the LIRA program.

Phoenix Machinery received the LIRA Award for its innovative re-design of every unit in the 'High-Speed Adult Diaper' machine.

This machine produces up to 250 diapers / minute with configurations for three sizes.

Chadi Mattar, Phoenix Machinery's Hygiene Division Line Manager, explained to the LIRA committee Phoenix Machinery's specific innovative approach and accordingly received the award on behalf of Phoenix Machinery.

At the LIRA Program 2010, Phoenix Machinery exhibited a scaled-stitched picture of the "High-Speed Adult Diaper" machine and a video of the machine producing adult diapers.

The winning machine was designed using SIEMENS Platform with 9 remote stations using decentralized intelligence, 254 sensors, 32,815 logical sequences, and 1,051 Input/output (I/O).

LIRA Program seeks to develop effective links and cooperation among research centers, academic bodies, and industry players to boost growth by meeting crucial research and development needs, increasing productivity, and improving competitiveness.^[4]



Scaled-stitched picture display of the "High-Speed Adult Diaper" machine

References: [4] <http://liraprogram.org/dotnetnuke/default.aspx?alias=liraprogram.org/dotnetnuke/default.aspx>

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