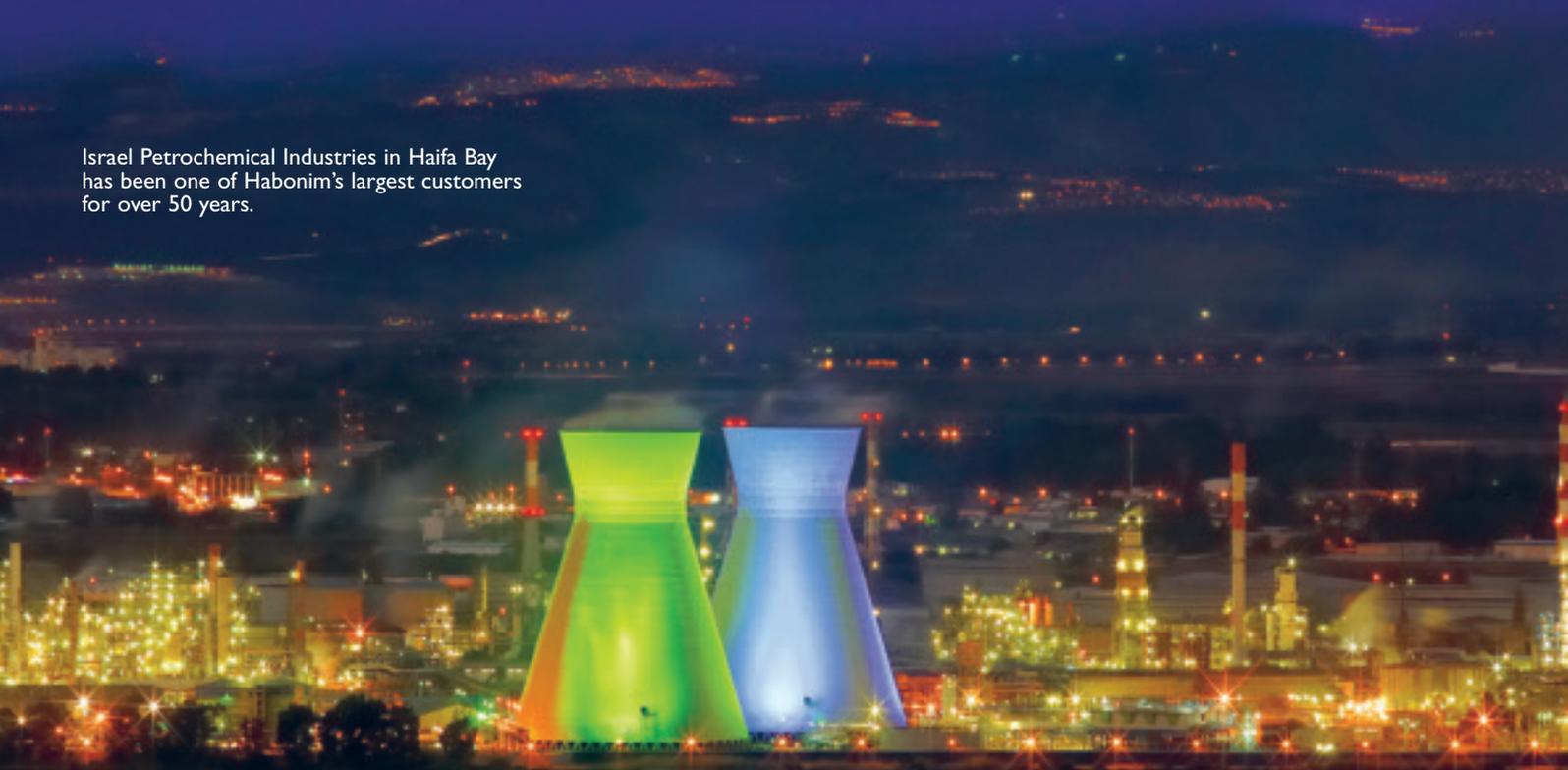


Israel Petrochemical Industries in Haifa Bay has been one of Habonim's largest customers for over 50 years.



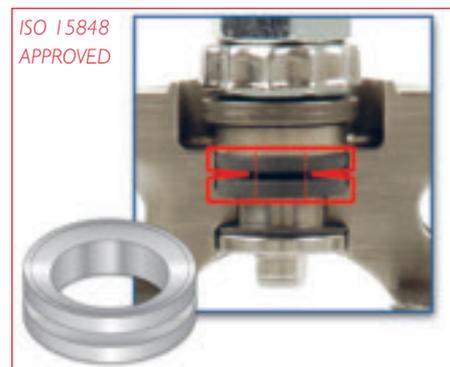
Habonim – A tradition of innovation

Two years ago, Warren Buffet spent US \$4Billion purchasing 80% of Iscar, the world's second largest metal cutting tool supplier. This news surprised the business community: not only was this Mr Buffet's first investment outside the US, but Iscar was located in Northern Israel. His action sparked an unprecedented surge of interest, as entrepreneurs started to realize the technological sophistication available within Israel. In the same spirit, the Namdar investment group purchased Habonim, a 50-year company with a solid reputation in manufacturing valves and actuators. Valve World spoke to some of Habonim's young and energetic management team about its impressive engineering and R&D capabilities.

Companies can be defined in several ways. Habonim, for example, can easily be viewed in terms of its principal activity - manufacturing ball valves and pneumatic actuators. But that definition would hardly do justice to Habonim's impressive engineering talents. This company is really dedicated to innovation. Its strong engineering force combines a team of quarter-century specialists working alongside a new generation of young, talented engineers, graduates of the Technion – Israel's premier technology institute. "In recent years," commented President and CEO Mr Uri Oliner, "Habonim has further augmented its engineering team with world-class engineers who arrived in the mass immigration from the former Soviet Union, upgrading Israel even further with their extraordinary technical capabilities. Habonim therefore has access to one of the world's largest per-capita engineering and scientific pools, enabling it to choose only the best."

One of the latest product lines to emerge from Habonim's R&D department is a cryogenic ball valve. R&D Manager Mr Gaby Jaccoby discussed its genesis. "Before beginning the design phase we surveyed our end-user customers to fully

understand the needs of the cryogenic market. Safety was of the most important concerns and thus became a central design feature." Habonim therefore decided to offer a fire-safe-ready valve as standard, with expanded graphite body seals and stem packing, suitable for both non-hazardous and hazardous environments. In addition, shorter bolts are used which reduces linear thermal expansion and limits the likelihood of any leakage to the atmosphere. A unique tongue-and-groove interface design also eliminates the chance for leakage at the body ends connection. Finally, the stem and ball assembly has been specially designed to eliminate any doubt in determining position of the uni-directional valve ball. "Habonim is confident that the



The new HermetiX™ stem seal maintains integrity for a much longer, leak-free service.

novation

new cryogenic series is the safest valve available in the cryogenic market," claimed Mr Jaccoby.

Specializing in specials

As well as being able to produce standard valves in large series, Habonim has been increasingly focused on offering special solutions quickly and effectively. Alongside its full line of quality standard ball valves up to 8", all produced at the main manufacturing facility, Habonim now has engineering and production resources in place to provide superior and faster solutions to extraordinary challenges. Giving an example from an oil and gas application, Vice-President of Marketing and Sales Mr Ethan Matlaw said that Habonim designed a revolutionary Multi-Valve-Ensemble (MVE) as an alternative to a large and heavy skid-mounted valve assembly. "The solution saved 90% of the original space and piping, virtually eliminating the leakage problem with was typical of the previous complex piping configuration. The MVE also weighed 30% less than the original assembly," he commented. International Sales Manager, Mr Chaim Schwartz, quickly noted another success story, this time from the pharmaceutical industry. Here, the implementation of Habonim ZEPOK (Zero-pocket) valves

eliminated bacterial contamination caused by 'Dead Leg' or improper circulation in the pipeline. "ZEPOK provides a high reliability, fire-safe solution available in a full range of sizes using non-welded construction for zero defects, zero dead-leg, and full drain ability," he said.

Solving 'sticky' problems

In the chemical industry, too, Habonim is active in meeting and exceeding the expectations of its customers. Said Mr Jaccoby: "We enjoy any challenge that gives us the opportunity to deliver interesting and non-conventional solutions. Working with a leading manufacturer of adhesive dispensing machines, Habonim re-engineered one of their off-the-shelf units by integrating two valves into one body. This eliminated superfluous lengths of piping and fittings."

As well as taking on such headline-making challenges, Habonim's engineers are always looking at ways to improve valve technology, however mundane the area may appear: Just recently, for example, the Habonim R&D team developed and patented a new stem seal. Named the HermetiX™ after its distinctive X-shaped design, the new stem seal maintains the integrity of the unit for a much longer, leak-free service. Mr Jaccoby explained: "The flexible X shape of the HermetiX™ allows



Yet another successful and innovative solution from Habonim: two valves integrated into a single body.

a dynamic sealing arrangement in case of stem side load occurrence. Sealing is improved with increasing pressure. Stem packing integrity is maintained due to relaxation of stem spring preload due to erosion of soft parts. This is a great advantage over linear motion valves like globe valves which by definition are prone to leakage and require a rigorous, time-consuming maintenance operation and product loss."

Eltav Wireless Process Control

Thus far during our interview, Habonim's managers had discussed developments in



Habonim's MVE can save 90% of the original space and piping, virtually eliminating leakage issues.

ball valve technology. However, the company also has a strong track record in developing control technology, working with hi-tech startup companies in the area of sensors and electronics. Most recently, its association with Eltav Wireless Monitoring Ltd has resulted in a number of successful pilot applications of Habonim valves controlled and monitored with Eltav's pioneer wireless sensors. Commented Mr Matlaw: "Wireless monitoring of process control applications, while still in its infancy, is the latest advance in process control. The primary advantage of this innovation is the elimination of all of the wires and the cost of installing and maintaining a vast network of wiring in the modern factory of the future. The Eltav valve device is attached to each actuated or manual Habonim valve. Valve device readers distributed around the facility feed the status of all the valves to a communication server and the Eltav management system software provides the operator with realtime information on the valve positions and health status." Mr Matlaw further explained that Habonim and Eltav are working together on proving how the benefits of wireless technology stretch far beyond saving installation and wiring costs by opening new possibilities in control and accountability.

Profix™— one-stop control shop

Keeping with the control theme, Habonim's managers next turned to Profix™, combining a control valve, pneumatic actuator and positioner in one integrated package. Profix™ was developed when Habonim saw that more and more of their customers lack the time



Profix(™) offers the convenience of a control valve, pneumatic actuator and positioner in one integrated package. Offered as a free download, the unique software package makes choosing the best Profix(™) package as simple as possible.

to specify, design and purchase the individual components of a control application. Mr Jaccoby explained further: "The Profix™ control valve, constructed in a wide range of materials including exotic alloys, is offered with either a metal downstream seat for abrasive media, steam and high differential pressure applications, or with a characterized ball design for general purpose applications. The Habonim control valve combined with its unique 4-piston pneumatic actuator, Compact4, and mounted with any positioner offers a virtual plug-and-play, time-saving solution in a highly reliable, accurate and very economic package."

Making sizing easy

To make the task of choosing the best Profix™ control valve package as simple as possible, Habonim introduced the HVS (Habonim Valve Sizer), a free software tool which can be downloaded from the Habonim website. This tool has some unique features, emphasized Mr Schwartz. "The HVS accesses a database of over 5800 different media and leads the engineer step-by-step through all the parameters needed to define the process from the first operating point. Within seconds, HVS then provides accurate calculations of process Cv, valve opening percentages, velocity, critical condition warnings and predicted noise levels



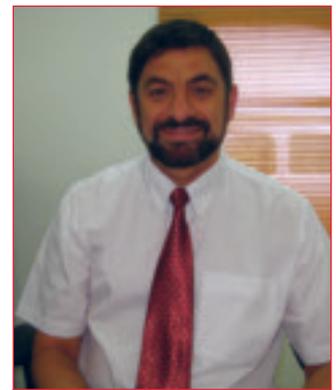
Mr Chaim Schwartz,
International Sales Manager



Mr Uri Oliner, President and CEO



Mr Gaby Jaccoby, R&D Manager



Mr Ethan Matlaw, VP Marketing
and Sales

according to IEC 60534 and ISA S75-17 1989 for liquids, gases and vapours. With the process defined, HVS displays a list of all the Habonim control valves that meet the process acceptance criteria. Once the desired valve is chosen, the program displays the resultant velocity through the valve, angle of rotation and valve modifiers. HVS automatically performs a correction of the flow rate calculation, taking into account the resistance of installation fittings while performing noise level calculations, both features unique to the HVS sizing software. HVS will soon be available in multiple languages."

In recent months Profix™ has also been the subject of Habonim's 'Stop Globe Waste' campaign. Mr Schwarz: "Habonim is stressing the advantages of a using a single control ball valve system over a globe control valve which, by definition, requires an additional shut-off valve. Habonim believes that by installing an integrated control system unit – control ball valve plus pneumatic actuator plus positioner - in



Compact4, industry's first-ever 4-piston pneumatic actuator, is now offered with a 7-year warranty.

one package increases its reliability significantly, reduces its size and price, and shortens implementation time and cost. The lower cost-of-ownership of these critical processes is the true measurement of success."

IMPACT™ - the extra 'punch'

Coming towards the end of the interview, Habonim's managers turned their attention to the second product line for which the company is rightly famous – pneumatic actuators. The first product they discussed was the IMPACT™ spring assist - a pneumatic device which increases spring

closing torque on spring return actuators. Mr Jaccoby explained how this device works. "By diverting air pressure from the inner chamber to the spring chambers, an increase of 50% and more in the total closing torque of the actuator is achieved. For example, when an actuator doesn't achieve its published torque output, the IMPACT™ can be field-mounted to improve its reliability without having to be replaced or stopping the process. In situations where a valve experiences closing problems, IMPACT™ actually serves as 'first-aid kit', providing the actuator with that extra 'punch'."

Similarly, in situations where unexpected pressure drops occur, the IMPACT™ will keep the air pressure level at its maximum and prevent the actuator from shifting its position. "In many cases it is possible to substitute a smaller actuator with the IMPACT™ and achieve the torque output of a larger actuator," concluded Mr Jaccoby. Another product which has proven itself over the years with hundreds of thousands of successful applications is the Compact4. This is the industry's first-ever 4-piston pneumatic actuator. Thanks to its small size and high power, the Compact4 has been especially popular in skid applications where space is at a premium and reliability crucial. Said Mr Matlaw: "As in every mechanism, the stress on the critical components in an actuator is the key factor that determines its cycle life. Typically, pistons with longer strokes exert more stress on the critical components creating torque in the actuator. The symmetric design mechanism of Compact4 with its shorter piston strokes has proven itself over the years. In fact, we are so confident in the Compact4 that we now offer an unprecedented seven-year warranty in our 'Welcome to Valve Heaven' campaign". Such a copper-bottomed guarantee



Habonim's IMPACT(™) increases closing torque on spring-return actuators.

reflects Habonim's engineering and manufacturing excellence plus the reputation it has built over during many years of business. Concludes Mr Oliner: "We recently celebrated our fiftieth anniversary and are proud to be known for our quality products. There is no secret formula; our success boils down to hard work, thorough engineering and a willingness to invest. With an impressive 70% market share in a highly diverse Israeli market, Habonim has access to virtually every type of application in every process industry. It has turned Israel into a huge beta site, designing, implementing and proving 'out-of-the-flanges' solutions. Habonim has built a reputation of being small, fast and not afraid of a challenge. That's crucial in supporting demanding customers like Gazprom, GSK, National Oil, Shell and Pfizer. I would therefore like to invite the valve community to come and see all the products listed in this interview at the forthcoming Valve World Exhibition in Maastricht. We are at booth number N870, and will make you most welcome."

Facts & Figures

Name:	Habonim
Headquarters and main manufacturing facility:	Kfar Hanassi, Israel (nine miles north of the biblical Sea of Galilee)
Offices:	USA, UK, India, China
Key products:	ball valves, pneumatic actuators
Key markets:	chemical, petrochemical, oil refineries, energy, offshore drilling, marine, pulp and paper; pharmaceutical, biotech, food and beverage, etc