

Held every two years, the Busworld show in Kortrijk, Belgium continues as the flagship show of the international Busworld events and is considered by most to be the most important bus show in the world. It was originally founded in 1971 by a group of Belgian bus operators and has substantially grown in both size and importance over the years. While this particular event was the 21st Busworld in Kortrijk, it also was the 47th Busworld show. This is because Busworld was so well supported and respected in Kortrijk that it has subsequently been invited to expand to Shanghai, China; Istanbul, Turkey; Nizhny Novgorod, Russia; and Mumbai, India.

It was noteworthy that Luc Glorieux, who was instrumental in founding and developing Busworld, was on hand to greet exhibitors and attendees. He pointed out that this 40th anniversary show was noteworthy because it included several coach builder exhibitors from China. We also noted that two of the primary European Coach Week awards went to coaches being exported to the United States.

The week-long show started on Thursday, October 20 which was limited to the press and journalists. A total of 145 specialized bus journalists attended from all over the world. Press activities continued on Friday although some public attendees were admitted. The show itself continued through Wednesday, October 26. A final count showed that there were 31,698 visitors from 118 countries including China, Japan, India and South America.

While not well known internationally, Kortrijk is perhaps the largest city in southwest Belgium and a junction point for several Belgian rail lines. The large number of attendees at this event means that most have to seek accommodations in nearby cities. Both Gent and historical Brugge are about 45 minutes north while Brussels is about an hour east. About 25 minutes south is Lille, France, where you can board a French TGV train to Paris (only one hour), or a Eurostar train that goes under the English Channel to London (less than two hours). Everything is close in Europe.

All of the space at Busworld Kortrijk was fully booked which is somewhat of a joke since this show is always short of space. It was mentioned that some exhibitors were rationed in order to leave space for others. As recently as the 2005 show, there were six exhibit halls with Hall 4 just recently enlarged and remodeled with a higher roof. Subsequently, Hall 7 was developed near the North Entrance and was immediately entirely booked by Temsa. This year the need for exhibit space prompted a total of nine halls plus the Rambla, a wide corridor with booths on both sides that connects halls 1, 2, 3 and 6 with 5 and 4. New temporary halls 8 and 9 were added on the east side of the

Busworld Europe 2011 in Kortrijk Celebrating 40 Years



Article and photos by Larry Plachno

This huge Busworld sign was displayed at the south side of the property with the Halls of Kortrijk. In addition to being a major show for the bus industry, Busworld also has a major economic impact on Kortrijk and the surrounding area. To the left of the sign is Hall 4 while on the right is Hall 3 and the main south entrance into the complex.

complex. The end result was 61,000 square meters of exhibit space under roof which translates into about 656,000 square feet or more than 15 acres under roof.

A final count showed 340 exhibitors, including 70 bus builders, from 32 countries. While these numbers tend to be three to five times what we see at the largest U.S. shows, the actual space requirement is considerably larger.

Many of the larger coach builders build both coaches and transit buses. As a result, it is typical for the larger builders to display five, six or more buses on the show floor. In addition, the larger coach builders will also have an information kiosk, usually administered by two pretty girls, where you can request literature (what language, please?). Over and above this, the major bus builders will also have a refreshment bar or area with tables bordering on a restaurant to offer coffee, soft drinks, beer, wine and sometimes food to their guests. Exhibitors like Temsa,

Van Hool, Mercedes-Benz, Setra, Volvo, VDL and others have relatively large areas for this. Setra actually had a menu for guests. If you go hungry or thirsty at this show, it is your own fault.

I might also mention that several of the major exhibitors have standardized on the same locations for recent shows, which makes it easier for us to find them. Temsa takes all of Hall 7. Van Hool has the south half of Hall 6. Setra and Mercedes take the south and west sides of Hall 5 with most of the remaining going to Volvo. VDL seems to like the north side of Hall 4 and some of the other major exhibitors also seem to be showing up in the same place at every show.

New this year was the Mirror Palace, an after-hours gathering spot in downtown Kortrijk just for Busworld attendees. Less than two blocks from the train station and one block from the Marketplace and historic town square, it was actually located over an

underground parking lot and very convenient. It offered Busworld's champagne bar as well as music and dancers.

If you stop to talk to the European bus operators, you will probably find that their interests and concerns are not substantially different than on this side of the Atlantic. One of their big concerns is the new Euro 6 engine emissions standards that will go into effect on January 1, 2014. They are also fighting an ongoing battle regarding hours-of-service laws for bus drivers that unfortunately are matched with truck driver laws. Then, they have to deal with cities that want tourism but place restrictions on bus access and parking. The price of diesel fuel is a concern as is trying to increase bus business and group tourism. Does any of this sound familiar? Like American bus operators, they are looking for new ideas and innovation with coaches as well as perceived value for money invested. This is why they came to the Busworld show in Kortrijk.

This show is so large that it is impossible to cover all of it (although some European journalists try). We tried to attend many of the press conferences and tended to concentrate on those makes and models known in the United States and Canada (Van Hool, Volvo, Evobus/Setra, and Tamsa), names formerly involved with the United States (Neoplan and Irizar), and, as time permitted, other European builders of interest as well as the Chinese builders. Following are the highlights of what we found out and saw.

In addition to having one of the largest display areas, the **Van Hool** booth was also one of the busiest. They had not one but two new premiers. One was a major step forward



Much of the excitement at the Van Hool display area revolved around the upgrade to their new TX series of coaches, replacing the former T9 series. Shown here is one of the new TX16 coaches. The Astronef TX16 received two awards from European Coach Week.

to a new series of intercity coaches while the second was the introduction of their new Exqui.city BRT-type transit bus.

Typical of many coach manufacturers, Van Hool updates their intercity coach models every few years. Van Hool's T8 series was introduced in 1979 while the transition to the T9 series took place 16 years ago, in the mid-1990s. Van Hool now moves up to the next level but instead of using the number "10," they are using the Roman numeral "X." As in the past, models will be named TX followed by a number designating capacity

and a model name. Thus the T917 Acron will now become the TX17 Acron.

This across-the-board improvement impacts all of Van Hool's rather extensive intercity coach product line. Included are the European intercity coach models named Alllicron, Acron, Astron, Astronef, Allano and the double-deck coaches. There are also four models that we would call two-axle suburbans and six major models (with a total of 12 variations) with right-hand drive for the British markets. Bear in mind that some of these models are available in as many as four different lengths.

All of this apparently impressed the judges from European Coach Week because Van Hool's new Astronef TX16 model was given the Grand Award Coach 2011. The jury members said: "This new coach combines the traditional Van Hool values like perfect comfort for the passengers, the driver and the guide with a number of innovative improvements, like full LED lighting inside the vehicle and at the rear part of the exterior." The jury also gave the Astronef TX16 their Environment Award 2011 because many of the component parts can be recycled.

The Van Hool coaches sold in the United States by ABC Companies use different model numbers. I should note that the Van Hool T2140 and T2145 sold in the United States are the American version of the award-winning TX16. The TD925 double-deck coach is the Americanized version of the TD925 Van Hool sells in Europe. The Van Hool C2045 is strictly an American product and has no European equivalent.

The Van Hool display area was located on the south side of Hall 6 and involved more than half of that hall. At the left and center is a raised area with tables and chairs for serving refreshments to guests. The new buses are parked in a circle surrounding this area.



A second debut at Van Hool was the introduction of their new Exqui.City transit bus for Bus Rapid Transit. The lack of space in Europe for new rail lines has prompted a move towards bus rapid transit and to buses that look like and operate like trams. Van Hool's Exqui.City has a tram appearance and an isolated driver's area, comes in two- or three-section articulated lengths, and can be ordered as a trolley bus, a diesel hybrid or with fuel cell power.

Van Hool also had a press presentation on PolskiBus. PolskiBus was founded by Brian Souter through his Souter Holdings Poland. It follows the Megabus model and started in June, 2011 with 18 coaches operating out of Warsaw. It has been such a success that PolskiBus just ordered an additional 50 coaches from Van Hool; 20 Astromegas and 30 Altanos. All will have Wi-Fi and electrical outlets.

In addition to PolskiBus, the Van Hool factory is already busy building double-deckers for Megabus in the UK and in the United States. Filip Van Hool announced that Megabus in the United States has ordered another 80 double-deck coaches. This is in addition to the 160 already in service and another 60 currently in production. Stagecoach in the U.K. has ordered 11 similar megabus coaches for service between Cardiff and London.

Volvo held a press conference and had an introduction of their own. It was mentioned that sales in the United States and Europe have not yet recovered although Novabus is working on an electric bus and Prevost is now offering commuter coaches.



Van Hool's new Exqui.city transit bus design offers Bus Rapid Transit capabilities with a new exterior designed to look like a tram. It is available as either a two- or three-section articulated with hybrid, fuel cell or trolley bus power. Van Hool has already received three orders. This bus on display was a trolley bus with two poles at the rear.

Volvo's hybrid has now sold more than 300 units and Volvo expects to sell more hybrid and electric buses in the coming years. It was also mentioned that the engineers are expecting better fuel consumption with the Euro 6 engines due out in 2014.

While the Volvo 9700 coach is available through Prevost in the United States, Volvo offers a three-coach range in Europe consisting of the 9500, 9700 and 9900. However,

most of the recent news from Volvo centers around transit buses.

Last year, Volvo introduced their new 8900 transit bus available in different lengths and also in low-floor configuration. Its claim to fame is a completely new body, manufactured from a mixture of different materials, that reduces weight while decreasing corrosion and extending useful life. Even the roof is made of aluminum. All of this increases fuel efficiency by 37 percent.

Unveiled in a special ceremony at this year's show was the new Volvo 7900 which replaces the 7700 in the Volvo product line but is built like the 8900 with a composite body and lighter weight. A wide variety of power options are available including three different Volvo diesel engines, a Volvo gas engine that can operate on CNG and biogas, and a hybrid version. Initially, the 7900 will be manufactured at Volvo's plant in Wroclaw, Poland like the 7700.

In spite of the fact that Daimler continues to market its European buses under the Evobus banner, and the fact that both Setra and Mercedes-Benz buses are framed up in Mannheim, the two operations remain substantially separated as to sales. Their buses were displayed in adjacent areas in Hall 5. For those of you who do not know, the Setra buses are the top-of-the-line coaches in Europe while the Mercedes-Benz brand of buses are considered more bread-and-butter.

Setra has a fairly extensive product line in Europe and had eight buses on display. They offer three different classes of buses in

The gold foil on the bus and surrounding floor means that this photo was taken only moments after Volvo unveiled their new 7900 hybrid city bus. Replacing their 7700 model, the 7900 is similar in construction to Volvo's 8900 and offers a composite body and lighter weight. It is available with conventional diesel power, alternative fuels and hybrid power.





On display in the Setra area was this new S 416HDH. The company is celebrating the 60th anniversary of the introduction of the Setra design and the 60th anniversary graphics can be seen just forward of the rear door.



Setra showed this vending machine adjacent to the center door on one of the coaches. It might be a way to increase bus operator income.

Europe with different models and lengths in each class. The highest is their TopClass 400 which is offered in different lengths and heights as well as a double-deck model. Next is the ComfortClass 400 which offers many of the same features but at a more economical price. There also is a MultiClass 400 which we would equate to more of a suburban-type vehicle. A 45-foot version of the TopClass 400 (the S 417) and the ComfortClass (S 407) are available in the United States.

The biggest news at this show was the fact that Setra was celebrating two different anniversaries. It was 100 years since the founding Kässbohrer family produced their first bus body and mounted it on a Saurer chassis. Kässbohrer also was one of the first bus builders in Europe to use integral construction which came to be called the Setra

from the German "selbsttragend," which means self supporting. 2011 marks 60 years from the date of the first Setra in 1951.

There were unique developments because of these anniversaries. A special 60th Anniversary logo appeared on the display coaches and could be ordered on new coaches. A special TopClass S 416 model was created for this anniversary. The historical Kässbohrer "K" appeared on the steering wheel, wheel covers and on a special wooden dash with a vase for flowers. Fifty coaches have special number plates and an illuminated Setra logo at the entrance. There was even a special exterior color for the anniversary – white metallic.

Interesting notes include the fact that aisle seats in the TopClass Special Edition were moved up six centimeters (about 2½ inches)

from the window seats. This interesting idea provides more shoulder room and a better view through the side window. One of the display coaches had a vending machine positioned at the lower level near the European center door. One ponders whether this might actually be an additional source of revenue. The ComfortClass S 415 GT-HD on display was presented as a "Final Edition." Is the "Final" a reflection on the very special interior or an indication that the 400 series would soon give way to a new 500 series? We will have to wait and see.

Mercedes-Benz had a combination of coaches, transit buses and Sprinters on display. The biggest news on the transit side was the introduction of a new and improved Citaro city bus, replacing the original Citaro that was introduced by Mercedes-Benz in 1997 and saw more than 30,000 units built.

The new Mercedes-Benz Travego Edition 1 coach attracted a great deal of attention because it became the first coach with an installed and operational Euro 6 engine.



The new Citaro city bus from Mercedes-Benz received the Grand Award Bus 2011. More than 30,000 Citaro buses have been built since they were introduced in 1997.





Tamsa's MD 9, with stainless steel construction, received the Grand Award Mini/Midi Coach for 2011. This model will be available in the United States as the TS-30.



On the left, the new Tamsa Safari HD 14 is the newest addition to the Safari product line. It is a high-deck model with a length of 14 meters and is built with stainless steel.

The new Citaro received the Grand Award Bus 2011 from the European Coach Week judges, the highest award for a transit bus. Features mentioned include the new exterior design, improved lighting and several safety features.

On the coach side, the new Travego Edition 1 stole the show by being the first coach equipped with a Euro 6 engine, which does not become mandatory until January of 2014. The six-cylinder in-line OM 471 engine has a displacement of 12.81 liters, develops up to 476 horsepower and uses a common rail injection system. One representative told me that the new engine uses SCR plus EGR plus a particulate trap but has improved fuel consumption over the Euro 5 engine. Giving credit where credit is due, I seem to remember Setra was also the first here in the U.S. to have an EPA 2010

engine fully installed and operational at the 2009 UMA show.

Easily worthy of mention was the new Sprinter City 77 model on display. It has three axles, a length of approximately 28½ feet, two doors and a flat floor. It will seat 10 passengers and stand 30 more for a 40-passenger capacity. While this obviously goes to show that you can push the popular Sprinter design beyond van capacity, it remains to be seen whether a model such as this will find its way to the American market.

Once again taking all of Hall 7, Tamsa from Turkey had several coaches and transit buses on display. Their new motto was "More Than Buses." Having worked on it for the past few years, Tamsa now offers a fairly complete transit bus line. The press

presentation was given by Tamer Ünlü, the new CEO of Tamsa. He formerly worked for Tamsa in earlier years and was there when Tamsa built their first buses. Today, approximately 75 percent of the production from the Tamsa plant in Adana, Turkey is exported. The two newest developments at Tamsa were both involved with the coach side of the product line.

One of the new items at Tamsa is the continued development of their MD 9 product. Due to Turkish streets and traffic patterns, small coaches have developed as the local transportation of choice in Turkish cities. As a result, Tamsa has become a leader in small coach design and development. Their MD 9 is essentially a very sophisticated 30-foot coach that incorporates stainless steel and is even available in a low floor version. It is noteworthy that the European Coach Week judges were impressed with Tamsa's new MD 9 and gave it their top award for this size coach – their Grand Award Mini/Midi Coach 2011. For those of you who do not know, the MD 9 is now available in the United States from CH Trading as their model TS-30. Deliveries are expected to start in August or September, 2012.

The other new development at Tamsa is the introduction of their new Safari HD14. An extension of their popular Safari series, this high deck model has a length of 14 meters, a large luggage compartment and a fairly high seating capacity. It also boasts a stainless steel body for longevity. A 35-foot version of the Safari is currently available in the United States as the TS-35.

Tamsa buses are sold in the United States by CH Trading. They are currently working on parts and service availability. One of their next projects is to put a seven-year financing program in place that will provide attractive monthly payments on Tamsa coaches.

The new Sprinter City 77 model opened several eyes. With three axles, two doors and a length of more than 28 feet, it can carry more than 40 passengers. Whether this or a similar model will become available in the United States remains to be seen.



Anyone in the bus business in the United States and Canada for many years will remember the **Neoplan** name. Founded by Gottlob Auwärter in 1935 and headquartered in Stuttgart, Germany. Neoplan imported coaches into the United States in the 1970s and 1980s, until plants opened in Honey Brook, Pennsylvania and Lamar, Colorado to build Neoplan transit buses and coaches in the United States. They were soon operated by Neoplan USA, a licensee, that is no longer in business.

Neoplan was acquired in 2001 by **M.A.N.** (earlier Maschinenfabrik Augsburg-Nürnberg), the company that originally developed the diesel engine. After Neoplan production was integrated with M.A.N., Neoplan coaches were then built at the Plauen plant in Germany. Initially, M.A.N. and Neoplan bus production was merged under the Neoman name but it appears that they are still marketed separately. Many of the traditional Neoplan models continue in production and a new Tourliner model was added in 2003.

One of the highlights of this Busworld show was the introduction of a new Neoplan Skyliner double-deck bus. Originally introduced in 1967, more than 4,000 double deck Skyliners have been built. The new Skyliner seats as many as 83 passengers and offers rooftop skylights, a new "sharp cut" design, two-point seat belts and more underfloor luggage space for tours.

M.A.N. continues to offer their own line of transit buses and coaches under the Lion model name. They had a Lion city bus on display with a Euro 6 M.A.N. engine in place and operational. This was the first opera-



The latest addition to the Irizar product line is their integral i6 model. Best known for their high quality body-on-chassis coaches, Irizar has recently moved towards offering full integral coaches. The new i6 coach fits between the PB and the i4 in their product line.

tional transit bus with a Euro 6 engine. It shows that the Euro 6 engine could fit into the same space as the Euro 5 engine and there was no need to change the passenger compartment area.

Volkswagen recently acquired a majority interest in M.A.N. and was talking about merging M.A.N. with Scania.

Based in Spain, **Irizar** has a 132-year history and is best known in the United States for some full-sized buses that were sold

through Metrotrans many years ago. Some of these are still in operation. In Europe, Irizar developed an excellent reputation for high quality body-on-chassis coaches that were often built on Scania chassis.

Two years ago at Busworld, Irizar announced that they would move towards integral coaches. While they are still offering higher quality body-on-chassis buses using Volvo and Scania chassis, Irizar showed some of their new integral coaches. Their PD and i4 models were introduced as integral coaches at that time.

Since then, the i6 model is also available as an integral coach and hence three different integral models are being offered. The Irizar PB is the top of the line while the Irizar i6, introduced in 2010, fits between the PD and i4 in the product line and is designed for commuter and touring service. The Irizar i4 is intended for short and medium-distance operations. The new integral coaches are powered by Paccar/DAF engines, have a ZF rear axle and independent front suspension and offer a choice of a ZF 12-speed AS Tronic transmission or the ZF Ecolife power shift transmission.

To support its new integral coach line, Irizar has announced service centers in the UK, France, Holland and Poland. It was also announced that Irizar is working on fully electric bus that will operate in San Sebastián, Spain.

The **VDL Companies** had a large display area in Hall 4 and put on a show for the press that included a marching band. VDL is a Dutch company that consolidated some

One of the highlights of Busworld was the introduction of the new double-deck Neoplan Skyliner. More than 4,000 units have been built since the Skyliner was first introduced in 1967. Several were operated in the United States.





VDL won the International Bus of the Year 2011 Award for their Citea city transit bus. The models do not come with the bus but they will pose with the buses if you ask them nicely.



VDL also took the International Coach of the Year 2012 award with their Futura II coach. Note that the VDL name is now prominent on the buses replacing earlier company names.

smaller but well respected bus builders including Berkhof, Bova and Jonckheere as well as a DAF chassis division under one name and management. It was noted that VDL is aggressively taking advantage of past bus building expertise while consolidating under the VDL name. VDL may have set some type of record by receiving major awards two years in a row.

In transit buses, VDL appears to be concentrating on their Citea model and recently introduced the Citea LLE as the successor to their Ambassador model. This is a low-floor lightweight bus for city and suburban operations. The Citea was recently given the International Bus of the Year 2011 award.

In coaches, VDL recently introduced their Futura II replacing their popular Futura model. The new Futura II is available in two- and three-axle versions and in lengths from 12.2 to 14.8 meters. The Futura FHD2 model was given the International Coach of the Year 2012 award. Judges mentioned the

stainless steel structure, the ease of repair and low weight.

An interesting note is that VDL has developed an 18-meter long transit bus with fuel cell power that they call their Phileas. Two of these buses are already in service in Cologne, Germany and two others in Amsterdam, Netherlands, making them the longest fuel cell-powered transit buses in the world.

Scania, a Swedish company, had four buses on display in Hall 6. Two were their new Citywide model transit bus with one being low-floor. Also shown was their new OmniExpress model introduced in April of 2011. Available with two or three axles, we would equate this to a suburban design since it is a low-deck with some luggage space although versions with a higher deck are available. Also on display was Scania's Touring HD (high deck) model with substantial underfloor luggage capacity and either two or three axles. Scania

was celebrating the 100th anniversary of their first bus.

Scania is also known for their bus chassis. They recently had several requests for double decker coaches and developed a partnership with Van Hool. As a result, Van Hool is now putting their double-deck bodies on Scania chassis and at least 60 vehicles have already been supplied to customers in Sweden and are supported by the Scania dealer network.

Information we were given indicates that 88 percent of Scania is now owned by Volkswagen and M.A.N. There has been some talk about Volkswagen combining Scania and M.A.N. into one company to create a strong truck builder.

Although not well known in the United States, **Iveco Irisbus** manufactures both intercity coaches and transit buses as well as trucks and mining equipment and has 25,000 employees with plants both in France and the Czech Republic. They were recently

Irisbus won the Styling and Design Award 2011 for their newly-introduced Magelys Pro model. It is the latest development on the Magelys model that was first introduced in 2007.



Scania showed both their Citywide transit buses as well as coaches. Included was a bus built by Higer in China. They were celebrating 100 years of bus production.





Viseon is a relatively new company that took over the former Neoplan plant in Pilsting, Bavaria in 2009. They build airport apron buses, trolley buses and are developing a new range of small coaches.



Solaris is a relatively new family-owned company located in Poland. They showed this Solaris Urbino articulated hybrid coach with BRT features and tram styling. It was built for a French operation.

merged into Fiat Industrial, a company with 62,000 employees and operations in 160 countries.

Irisbus had seven buses on display at Busworld. Noteworthy was the introduction of their Crossway LE, a 10.8 meter low-entry bus for suburban service. Also shown was a Citelis 12-meter city bus and the New Daily Tourys, a small 7.4-meter tourism minibus. However, the most interesting was the introduction of their new Magelys Pro model.

The Magelys Pro is a development from the popular Magelys HD which was introduced at Busworld Kortrijk in 2007. Internally, the Magelys Pro makes great use of light and transparency with a rear window as well as a combination of side and over-

head windows. It is noteworthy that the judges from European Coach Week gave the Magelys Pro their Styling and Design Award 2011. They mentioned that while the exterior is just a "classic coach," the interior creates a "wow" experience due to the unique roof construction, "with the large glass roof arches offering a wide panoramic view of the world outside the coach."

One of the newest and most interesting bus builders in Europe is **Viseon Bus**. When Neoplan was acquired by M.A.N., production of the standard coach models was concentrated at the Plauen plant. Viseon Bus was created by the new Neoplan management to take over the less-standard former Neoplan production and the former Neoplan Pilsting plant. Operations started in 2009 with about 200 former Neoplan

employees at Pilsting. Production included airport apron buses, trolley buses and various customization work on Neoplan and M.A.N. coaches.

Viseon is now trying to build its own range of buses over and above the airport apron and trolley buses that compliment rather than compete with Neoplan. This new product line seems to concentrate on shorter coaches up to 12 meters (about 39 feet) in length with M.A.N. engines and ZF axles. Introduced at this show was the new Viseon C12HD, a high-deck, 12-meter two-axle tour coach. In addition to some smaller tour coaches, Viseon also offers a low-floor double-decker coach. One of their more interesting usual projects was a trolley bus order from Saudi Arabia that included a VIP interior.

Another relatively new and interesting company is **Solaris** from Poland. European bus production is moving into Turkey and Poland to a lesser extent to take advantage of lower production costs. This company is a family enterprise and was founded in 1996 by Krzysztof and Solange Olszewski in the Posnan area of Poland. Production is now up to about 1,250 buses annually with sales into 24 countries.

Solaris concentrates on city transit and suburban models in their Urbino series. In addition to conventional diesel power, Solaris offers trolley buses, hybrid buses and all-electric buses. Their press conference included an interesting skit with robots emerging from one of their new Urbino all-electric city buses.

Two buses on display attracted substantial attention. One was the new Alpino 8.9-meter (29-foot) transit bus with all-electric drive and a range of about 60 miles. Another interesting bus was the Solaris Urbino Hybrid MetroStyle with tram-type styling. This articulated 18-meter (59-foot) hybrid was built for a French operation. It

Otokar from Turkey is perhaps best known for a range of small coaches that are popular in Turkey. The bus in the center is the Vectio T model. On the far right is their Kent C model which is closer to a conventional transit bus design.



is powered by a parallel diesel-electric hybrid drive supplied by Allison. Ten similar bus bodies but with conventional trolley bus power were ordered for Salzburg, Austria.

Another company worth watching is **Otokar** from Turkey. Keeping with traditional Turkish bus needs, this company specialized in those short but durable coaches that provide transportation in many Turkish cities. In more recent years, they have expanded with a line of more conventional city buses with lengths of up to 12 meters

(39 feet). One of their more popular new models is called the Kent C which has three doors and an overall capacity of 100 that includes 24 seated passengers, 65 standees and one in a wheelchair.

The European Coach Week judges gave the Kent C the Special Prize Award for 2011. They noted that the interior and exterior design were coordinated and also took notice of the fact that Otokar invested heavily in testing and validation to develop this model.

While there is a Busworld show in China, the Chinese bus builders are showing up in greater numbers at Busworld in Kortrijk looking to export their products to other countries. At this point the Chinese bus market is somewhere between two and three times the size of Europe and approximately 20-30 times the size of the United States and Canadian market. Current information suggests that India will also be a major bus building center in the near future.

The longest running Chinese bus builder exhibitor at Busworld Kortrijk is **King Long**. They first exhibited at Busworld Kortrijk in 2005 so this marks their fourth appearance. King Long was founded in 1988 and has built more than 200,000 buses to date. They have three plants: a primary and secondary facility in Xiamen in Southeastern China and a transit bus plant in Shaoxing which is further north and not too far south of Shanghai. In 2010, the company built 23,561 buses and exported 6,600 of them. They entered the European market in 2005 and currently sell about 460 buses annually into Europe. King Long is also active in several other markets in Asia and South America.

King Long has been selling three different models into the European market. This includes a short 9-meter (29-foot) tour coach, a 12.2-meter (40-foot) intercity bus and a 13-meter (42½-foot coach). Two new models were introduced at this show. One carries model number XMQ6129Y and is a 12.2-meter coach that will seat 53 passengers plus tour guide plus driver and includes a Cummins engine and a ZF manual or automatic transmission. The second new model is XMQ6129Y, a 12-meter low-floor, three-door city bus. It is powered by a Cummins engine and has a Voith automatic transmission.

A previous exhibitor at Busworld Kortrijk, **Yutong Bus Co. Ltd.** is a member of the Yutong Group and is headquartered in Zhengzhou, Henen Province, China. It is considered by many to be the largest bus builder in the world since the company built 40,000 large and medium-sized buses in 2010. The company began exporting in 2003 and has now delivered more than 10,000 buses abroad.

Yutong Eurobus has primarily been concentrating in Northern Europe with sales in Norway, Sweden, Denmark and Iceland. The company offers six models to the European market. These include a 10.5-meter and a 12-meter coach, a 12.2-meter intercity bus, a 12-meter city bus, a 12-meter hybrid city bus, and a 10-meter pure electric bus. The buses are powered by Cummins engines and some have ZF Ecolife transmissions and ZF axles.

New this year at Busworld Kortrijk is **Golden Dragon Bus Co. Ltd.** which is headquartered in Xiamen in Southeastern

Yutong Bus has displayed at Busworld in the past. The company reportedly built 40,000 buses in 2010. They have exported more than 10,000 buses with several operating in Northern Europe including Norway, Sweden, Denmark and Iceland.



Golden Dragon from China made its first Busworld appearance at this event. The company began exporting buses in 2003 and now has buses running in about 40 different countries. Golden Dragon represents about 29 percent of Chinese bus manufacturing.



China. They had two buses on display. The company was founded in 1992 and their main production facility is located on approximately 86 acres and has about 39½ acres under roof. Golden Dragon produces about 30,000 buses annually and they estimate that they represent about 29 percent of Chinese bus manufacturing. They started exporting buses in 2003 and now have buses running in 40 countries including Asia, the Middle East, Africa, South America and Europe.

Golden Dragon is offering both coaches and transit buses to the European market. Noteworthy is their hybrid city bus which was first introduced in 2008. It uses ultra capacitors, is equipped with regenerative braking and offers a reduced fuel consumption of from 20 to 30 percent.

Exhibiting at Busworld Kortrijk for the first time was **BYD Auto**. They had previously exhibited their all-electric bus at Bus-Con in Chicago and at the APTA Expo in New Orleans. While the technology was the same, the BYD bus in Europe was different than the one shown in the United States because it had more seats and less standing room.

BYD was founded in 1995 and has grown to be the largest manufacturer in the world of rechargeable batteries. Taking advantage of a unique opportunity, BYD entered auto manufacturing in 2003 and is now one of the largest domestic auto suppliers in China. In 2008, Warren Buffet acquired a 10 percent interest in BYD.

Combining its interest in batteries with autos, BYD began producing electric cars. This led to the development of the all-



In addition to the various bus manufacturers, there were hundreds of display booths from other suppliers. Bitzer was one of several American suppliers who are also active in Europe. They were introducing a new higher-capacity four-cylinder compressor with quieter operation.

electric, battery-powered bus on display. This is the only all-electric bus in regular service in China. It was mentioned that BYD expects to have 3,000 similar bus in operation in China by the end of 2012.

BYD may be unique in offering an all-electric bus without having previously built buses with engines. The bus itself has some excellent technology and may become popular if BYD can tailor it to local needs and provide support, service and parts.

Time did not permit looking at all of the buses on display but we did stop in at a few

booths. **Bitzer** was showing their new 4GFC larger and quieter four-cylinder compressor that was being introduced in Europe and will go into regular production in 2012. It effectively is positioned between the standard four-cylinder and standard six-cylinder compressors in that it has more capacity than the regular four-cylinder and is also quieter.

The people from **ZF** had a very busy booth. They supply axles, transmissions and steering to many of the European bus builders and even some of the Chinese builders. Their AS Tronic transmission is very popular in coaches, and their new Eco-Life transmission is now offered as standard equipment on many new buses.

We also stopped briefly at the **Voith** display booth. They now offer three types of retarders. Their hydraulic retarder is already well known. They now also offer a magnetic retarder with permanent magnets and a new retarder that works with water.

Forthcoming Busworld events around the world include the following. Busworld Asia in Shanghai; April 1-3, 2012. Busworld Turkey in Istanbul; April 19-21, 2012. Busworld Russia in Nizhny Novgorod, June 3-7, 2012. And Busworld India in Mumbai; January 14-16, 2013. If you are looking for more information, there is a link from our busmag.com Web site directly to the Busworld Web site.

The next Busworld Europe in Kortrijk will take place on October 18-23, 2013. If you are planning to exhibit, you are advised to make a commitment early while there is still room. If you are thinking about attending and have questions or need help, just send us an e-mail to input@busmag.com and we will try to answer your questions. □

The BYD Chinese all-electric bus was previously seen at BusCon in Chicago and at the APTA Expo in New Orleans. It is perhaps unusual coming from a manufacturer that never previously built buses of any type. BYD is best known as a battery manufacturer although the bus had several features praised by the experts.



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