

The European Busworld takes place every two years in Kortrijk, Belgium. Many if not most bus people consider it the most important bus show in the world. This photo was taken during the show at the entrance to the Kortrijk Expo. BUSWORLD.

Busworld 2015 was held at the Expo in Kortrijk, Belgium from October 16-21, 2015. It celebrated 44 years for Busworld, the 41st event and the 23rd Busworld to be held in Kortrijk. It set new records with 34,932 attendees and a total of 411 exhibitors from 36 different countries. The Expo included nine different halls plus connecting passageways plus outside displays.

A wide range of exhibitors includes both bus manufacturers and suppliers. While virtually every bus builder and supplier from Western Europe is there, there is a strong presence from Eastern Europe and even China and other countries. In addition to both intercity coaches and transit buses, the displays include mid-size buses and vans as well as garage equipment and related services. Busworld Kortrijk is so popular that the press are given two days to review the show before it opens to the public.

I should note that virtually none of the bus models on display in Kortrijk are available in the United States and Canada. However, some of the exhibiting suppliers in Kortrijk do have products available on both sides of the Atlantic. While some of the manufacturers including Temsa, Setra, Volvo and Van Hool may have similar models for sale

on this side of the Atlantic, they are different for the American market.

The event is held every two years in Kortrijk, a larger community in southwestern Belgium, only a few miles north of the French border. While Kortrijk has good rail service, Busworld tends to overwhelm the community. Local lodging cannot handle the crowd and many end up staying in Gent, Brugge and even Brussels.

Local taxicabs are often inadequate to handle the crowd. Our staff has had to frequently use pubic city transportation between downtown Kortrijk and the Expo. This year Van Hool and the local transit provider, De Lijn, helped with the local transport problem. Two new Van Hool ExquiCity tram buses destined for Martinique were used by De Lijn to provide service from the railroad station in downtown Kortrijk to the Expo area. Rides were free and passengers were asked to fill out a questionnaire that provided a chance to win a trip to Martinique.

A major activity in the days prior to Busworld was the European Coach and Bus Week or ECW. Coaches and buses from several manufacturers competed to win several awards and labels. A total of 15 different jury groups were charged with reviewing the applicants that included

seven coaches and five buses and then coming up with decisions.

The big winner was Setra's TopClass S 516 HDH. Setra's TopClass models are traditionally regarded as the top of the line in Europe. Their S 516 HDH took the "Grand Award Coach" and then also was awarded the "Styling & Design Label" as well as the "Ecology Label." Other winners included the MAN Lion's Coach Efficient Line that received the "Comfort and Ergonomics Label" and the Volvo 9900 that received the "Safety Label." Van Hool also received the "Ecology Label" for their new EX 17 H model that is positioned below their TX series and is built in Macedonia.

In the bus category, the jury failed to find winners for the "Grand Award Bus" and for the "Styling and Design Label" as well as the "Safety Label." The diesel-powered Cityport bus by Isuzu won the "Comfort and Ergonomics Label." Two winners for the "Ecology Label" included the Ebusco 20 LFP and the BYD 12-meter EBus, both electrically powered.

It would be impossible to review all of the exhibitors, but here is some information on several of them that are related in one way or another to the American market or are of interest to your editor.



Temsa introduced their new short MD-7 short coach at Busworld. Just barely longer than 25 feet, it becomes the shortest coach in the Temsa product line. TEMSA.



Another new Temsa model shown at Busworld was the European version of the Maraton that has a length of about 40.6 feet and a capacity of 50 passengers. TEMSA.

Temsa has been selling coaches in the United States since 2008. They have been a regular exhibitor at Busworld and once again had a stand in Hall 7. Their main production facility is in Adana, Turkey and they are part of Sabanci Group, a major Turkish conglomerate. The buses and coaches on display at Busworld are different models than that offered in the United States. Models on display this year included the HD 13, LD 13 SB, LF 12, MD 9 and MD 9 LE. Their MC 9 model is somewhat similar to the short coaches offered in the United States. In addition, the new HD 7 and Maraton models were shown.

The MD 7 is a new, short coach from Temsa. It follows the success of the MD 9 series but has a shorter length of only 25.4

feet and is designed for multiple uses including paratransit operations. Standard capacity of the MD 7 is 33 passengers plus a driver. It becomes the smallest coach in the Temsa product line that now ranges from seven to 13 meters. Another new model on display is the European version of the Maraton, a coach with a length of 40.6 feet offering a light design and a capacity of 50 passengers.

Temsa General Manager Dinçer Çelik indicated that the company has already exported buses to 64 countries with more than 4,000 in France alone. He said that Temsa had 10 percent of the U.S. coach market. He also mentioned that research and development continues to be a high priority for Temsa.

As most readers know, **Volvo** is the parent company to Prevost. In addition to selling its own coaches, Prevost also sells the Volvo 9700 coach. The 9700 coaches sold by Prevost are built at the Volvo plant in Mexico while Volvo builds the coaches in Europe that were on display at Busworld. Volvo displayed its buses at its usual place in Hall 5, located in the northwest corner of the Expo. The two major new items presented at Busworld included the new Volvo dynamic steering and the new Volvo 7900 electric transit bus.

The unique Volvo Dynamic Steering stabilization system is currently being inaugurated into several of Volvo's coach models. It enables substantially better directional stability, comfort and safety and reduces the risk of drivers incurring occupational injuries. Volvo Dynamic Steering automatically compensates for uneven road surfaces, eliminating vibration and steering kicks. When driving at low speeds, steering wheel inertia is reduced by around 75 percent, which makes reversing easier. The system also facilitates steering, with the wheel automatically returning to center when the driver's grip is loosened somewhat. At high speeds, the bus maintains consistent direction, even on poor road surfaces. It might be noted that Volvo's 9900 series coach won the ECW "Safety Label."

Making its debut at this show is the Volvo 7900 electric transit bus. It has a length of about 12 meters (39.3 feet) and operates totally on electricity. Electricity comes from regenerative braking as well as from the power grid. A six-minute charge at the end of the line extends the operating range by 10 kilometers, about 6.2 miles). Volvo introduced a hybrid bus in 2010 and has sold more than 2,200. The fact that a major engine builder is also offering an ell-electric bus gives you some idea of where Europe is headed.

Busworld saw the debut of the new all-electric 7900 transit bus from Volvo. It has a length of about 39.3 feet and operates totally on battery power. It is interesting that a major engine builder like Volvo is keeping up with the trend to electric transit buses. BUSWORLD.





Although built on the Sprinter van platform, the Sprinter City 65 was obviously configured for city transit operation and could seat 13 passengers. OREN KIPNIS.



Making its introduction at Busworld was the new Mercedes-Benz Citaro NGT transit bus powered by natural gas. It was nearly 40 feet long and had 30 seats. BUSWORLD.

Setra has a long connection with America since they built the first Eagle coaches for Trailways in 1956. More recently, Setra became a part of Daimler and joined with Mercedes-Benz in Evobus. At Busworld, Setra and Daimler had stands in their usual position in Hall 5. Four coaches were on display including a TopClass S 516 HDH, a TopClass S 431 DT double-deck, a ComfortClass S 511 HD and a MultiClass S 415 LE. All four were unique in one way or another. It might be noted that Setra's European model numbering scheme is starting to move from the 400 series to the 500 series.

Setra's TopClass is known as the topof-the-line coach in Europe and the 516 certainly lived up to its name. It had a length of 43.3 feet and came with the Top-Sky Panorama glass roof, homogenous climate control and a new lighting concept. In addition to taking the European Coach Week "Grand Award Coach," the S 516 HDH was also given the "Styling and Design Label" and the "Ecology" label. The S 431 DT double deck had two staircases and seating for 80 passengers. It is one of the more popular European coaches. Setra recently delivered the 2,500th S 431 DT built in Neu Ulm to an Italian operator which was also the 250th S 431 DT built with a Euro VI engine.

The ComfortClass is Setra's next level down from its TopClass. The S 511 HD had a length of about 34.3 feet and seating for 34 passengers plus a driver and a tour escort. It had a club bus interior with some facing seats and tables. This particular model is very fuel-efficient and won the "Green

Coach Award 2014" as well as the "Coach of the Year 2014." MultiClass is Setra's most economical coach level. The S 415 LE business on display had a length of 40.4 feet, seating for 45 passengers plus the driver, and a six-speed manual transmission. It was equipped with transit seats and two-point seat belts. It could be used for regular intercity service or for winning tenders.

Immediately adjacent was the Mercedes-Benz display stand. Being shown were the new Citaro NGT transit bus; the Travego M, Tourismo L and Intouro M coaches as well as a Sprinter City 65.

Making its world premiere debut at Busworld was the new Mercedes-Benz Citaro NGT. The Citaro is to Europe what the GM Old Look and New Look models were to the United States – the ubiquitous and most popular transit bus on the market available in several models. NGT stands for Natural Gas Technology and offers transit agencies a way to reduce their carbon footprint.

The single unit bus on display had a length of nearly 40 feet, was powered by an M 936 G natural gas engine, had 30 passenger seats plus one driver's seat, and had a total capacity of 96 passengers including standees. The Citaro NGT is also available in an articulated version that reportedly has a total capacity of 153 passengers. It is interesting that Mercedes promised to introduce an electric transit bus in 2018.

Three adjacent buses were intercity coaches. The high-deck Travego M has a length of 13 meters (42.6 feet) with seating for 53 passengers, two tour guide seats and a driver. The Travego model was originally introduced in 1999 and celebrated a milestone at Busworld with the delivery of the 10,000th Travego to a Belgian customer. The Tourismo L was 45.9 feet long and seated 52 passengers plus a driver and a tour guide. It is reportedly the best selling tour coach in Europe because of economic operation and

Setra displayed their award-winning TopClass S 516 HDH. In addition to the "Grand Award Coach," it also took the "Styling and Design" label as well as the "Ecology Label." The coach on display had a length of about 43.3 feet and came with the optional TopSky panoramic glass roof. SETRA.





Shown here is one version of the Lion Intercity bus. Both MAN and Neoplan are now part of the new bus manufacturing operation owned by Volkswagen. BUSWORLD.



The Neoplan Skyliner on display had a "bistro" interior on the lower level that included tables as well as a substantial galley behind the lower level seats. BUSWORLD.

reliability. With increasing scheduled service in Europe, the Tourismo is also finding popularity in regular routes.

The third coach was an Intouro M with a length of nearly 41.5 feet and seats for 55 passengers and a driver. Known for economy of operation, the Intouro is used for both scheduled intercity service as well as tours. Also on display was a Sprinter City 65, a larger Sprinter set up for line operation. It was configured as a minibus and had a low platform between the axles with a folding ramp to provide access for wheelchairs. The one on display could seat 13 passengers and had room for a few standees.

Van Hool had a stand in their usual location in Hall 6 on the north side of the Expo complex. Their display was unusual this year because it offered only coaches but no transit buses. However, information was provided on recent transit orders including 200 12-meter (39-foot) diesel transit buses, 33 articulated and 18 hybrid buses for the local Belgium transit operation and 14 Exqui.City tram-buses for Martinique. Other recent Exqui.City orders included two fuel cell buses for London and two full electrical buses for Hamburg.

As mentioned earlier, two of the Exqui.City diesel electric hybrid buses built for Martinique were run locally by De Lijn, the local transit provider, as a test. They connected the railroad station with the north side of the city and the Expo center. It was reported that as many as 14,000 people took advantage of this special service to reach Busworld.

It was announced that the new plant in Macedonia is now 100 percent operational and has already delivered 800 vehicles. It is expected to produce 600 buses annually. An announcement indicated that Van Hool now has a 38 percent market share in the U.S. coach market and that Van Hool has pro-

duced more than 1,050 double-decks for the European and North American market including more than 360 operated by Megabus.

New models include the VS double-deck TDX25, the 35-foot CX 35 for the North American market, and the new EX coach series for Europe that represents a more economical level below the TX series. Two-axle versions of the EX were recently introduced and now Van Hool is offering three-axle versions in lengths of 13 and 14 meters. Some of these models are also available with right hand drive for the British market. I might again mention that the new EX 17 H model received the "Ecology Label" during the European Coach Week awards.

Volkswagen now owns MAN and Neoplan while having a major interest in Scania. They are being combined into a new organization known as Volkswagen Truck and Bus GmbH. A recent announcement indicated that the new company would be headquartered in Braunschweig, located just east of Hanover in northern Germany. Initial indications are that the companies will retain their existing identities.

MAN and Neoplan had a stand in Hall 2, their usual position. The biggest news at MAN was the expansion of their popular Lion line to include an intercity model. It is a two-axle high floor model available in lengths of about 40 and 43 feet and seating for 55 or 59 passengers. An interesting option

Filip Van Hool shows off the new Van Hool EX 17 H. The "EX" series of coaches are a more economical series than the popular TX series. The EX 17 H received the "Ecology Label" during European Coach Week. BUSWORLD.





BYD showed their new 18-meter (59-foot) articulated transit coach that was powered by batteries. It had a capacity of 150 passengers. OREN KIPNIS.



BYD also showed their new electric red double-deck transit bus for London. It had a length of about 33.5 feet and was going into service. OREN KIPNIS.

on this model is an alcohol tester that does not allow the engine to be started until the alcohol concentration in the driver's breath has been tested.

The MAN Bus Modification Center (BMC) meets special customer requirements on coach interiors. Its work was obvious on two of the Neoplan coaches on display. The Neoplan Cityliner shown had an individual lounge interior designed by the BMC. It included a special light and sound system specifically planned for this coach.

Also on display was a Neoplan Skyliner double-deck modified by MAN's BMC. Located on the lower deck is a bistro arrangement where passengers can socialize. It includes 18 seats and two face-to-face double seat groups with height-adjustable

tables. A rather elaborate galley is located behind the passenger seats.

Scania had a stand in Hall 6 at the north end of the Expo. It was announced that Henrik Henriksson was appointed as the new president and CEO of Scania AB. He takes over on January 1, 2016. The buses on display were reportedly the broadest range that Scania has had. Included were the Scania Citywide LE with a hybrid biodiesel engine, the Citywide LF, a lowfloor 12-meter transit bus with a gas engine, and the Touring HD, a high-deck 45-foot coach with a Euro 6 SCR engine and a capacity of 57 passengers.

Being one of the newer exhibitors, BYD had a stand in Hall 9, the newest hall, on the east side of the Expo near the original

entrance. The company became a major manufacturer of batteries and then moved into auto production. From there they began to specialize in battery-electric buses. They did win the "Ecology Label" for their 12-meter (39.4 foot) electric transit bus during the European Coach Week competition.

BYD introduced three new models at Busworld. The smallest was a new eightmeter (26.2 foot) midibus for the European market. It had previously only been sold in China. A Chinese version was on display outside, but a European version would soon be available. Also on display outside was the 12-meter electric transit bus.

Making its debut was an electric double-deck painted red for London. With a length of about 33.5 feet it looked like the iconic London double-deck but was allelectric. Five of these were expected to go into service in London immediately after Busworld. Also on display was BYD's 18-meter (59-foot) articulated transit bus. It could carry 150 passengers and was equipped with an overhead pantograph to simplify charging.

VDL Bus and Coach combines several smaller but high-quality bus builders in the Netherlands and Belgium under one name. While a few earlier coaches made it across the Atlantic, VDL buses are not currently available in America. As has been typical, their stand was located in Hall 4, but activities were particularly busy this year what with introductions and awards.

The company introduced their new Futura three-axle FDD2 double-deck coach at Busworld. It is available in two lengths – 43 feet long seating 84 passengers and 46.4 feet long seating 96 passengers. Other VDL coaches on display included the three-axle Futura FHD2 with a length of 45.6 feet and seating for 57 passengers and the Futura

These two young ladies are showing off the intercity coach product line displayed by VDL. On the left is the new Futura FDD2 double-deck coach that was introduced at Busworld. The other two coaches on display were the FHD2 and the FMD2 models. BUSWORLD.



FMD2 with a length of 42.3 feet and seats for 59.

VDL also expanded the offerings on its popular Citea transit bus line. Displayed outside was their new Citea SLFA Electric, an 18.1-meter (about 59.4 feet) articulated with bus rapid transit design and battery electric operation. It may be the largest battery electric bus yet built. VDL also offers a 12-meter Citea electric, a three-door, lowfloor LLE, and recently delivered a double-deck version of the Citea to Berlin. VDL also offers some mini and midi buses.

To add to the round of activities, Win van der Leegte, the president and chairman of the board of VDL Groep, received the "Bus Builder of the Year 2015" award.

Irizar is a Spanish bus builder. Some of their buses made it to the United States a few years ago. Lately, they have been shifting from body-on-chassis to integral construction. They introduced a few new bus models at Busworld. Noteworthy is their new i8 model luxury coach built for long tours as well as scheduled service. It is the new flag-

Another debut at Busworld was the new i8 model from Spanish bus builder Irizar. The i8 was designed as a luxury coach for longer tours and scheduled service. It becomes the new flagship of the Irizar brand. BUSWORLD.



Intergralia is a Spanish company specializing in custom Sprinter interiors. This photo shows some of the four vehicles they had on display. INTERGRALIA.



ship of the Irizar brand and offers the latest in technology and safety features.

In keeping with current trends, Irizar introduced its new i2e city bus. This 100 percent electric zero emission city bus was named "bus of the year" in Spain. Units are currently operating in San Sebastian and Barcelona in Spain as well as two in London and an order of six for Marseille. Also new is the Irizar i3le, a low entry city bus powered by a DAF biodiesel engine.

Solaris is a major bus builder in Poland, a country increasingly becoming important in European bus building. The company recently introduced their new generation of 12-meter and 18-meter Urbino city buses at the IAA Commercial Vehicles show in Hanover and unveiled additional new models, including their new electric bus, at Busworld.

Noteworthy is their new Urbina 12 electric, a 12-meter (39.4 foot), battery-powered transit bus using the third generation ZF AVE 130 electric drive with axle-mounted motors. Batteries are mounted at the back of the bus and can be recharged by cable at the garage or by a rooftop pantograph while on the route.

Another new model is the Solaris Urbino 12 LE, a 12-meter low entry transit bus. It is powered by a Euro 6 Cummins **ISB** engine. This new series of Solaris Urbino transit buses have been designed to use many identical components and parts to make parts sourcing and maintenance easier.

As in the United States and Canada, there has been increased interest in custom van interiors. A leader in this market is **Intergralia**, a Spanish company that has developed a reputation for custom interiors in Sprinter vans. While they offer four basic models, the company also provides at least 35 solutions for specific customer needs. Morever, Intergralia supports its customers by providing access to online vehicle plans and specifications as well as 24/7 parts ordering.

Their in-vip model seats up to 15 passengers with a special interior that includes leather upholstery. The in-vip plus, built on a Sprinter 519, is an upgraded version and provides seating for 10 passengers. Intergralia's in-urban model is a low-floor urban minibus that can transport as many as 26 passengers including standees. At the top of the line is the in-tourism XL PMR that can accommodate up to 19 passengers but can also be configured to transport up to four wheelchair passengers.

As expected, **ZF** was at Busworld to show off and talk about its most recent product innovations. Their stand was located in Hall 6, which is where I believe they were located at the last show. One

An interesting development during this Busworld was a special transit test operation. Van Hool provided two new Exqui.City tram buses built for Martinique to De Lijn, the local Belgian transit operator, who ran between the Expo Center and the railroad station in downtown Kortrijk. As many as 14,000 passengers took advantage of this special operation during Busworld. BUSWORLD.



recent innovation shown was the ZF-Ecolife automatic transmission that now features a start/stop function. This permits fuel savings of up to 10 percent in diesel-powered city buses.

Attracting a great deal of attention was ZF's AVE 130 electric portal axle. With the movement towards electric buses, this axle has become increasingly popular. It incorporates electric motors in the wheels for propulsion. This frees up space in the vehicle by eliminating the need for a driveline

and related components. It also provides an option for several types of electrical power including overhead wires, hybrid, battery and fuel cell. ZF introduced the next evolutionary stage of the AVE 130 axle with increased performance and torque values.

Busworld is scheduled in Kortrijk, Belgium every two years. The next event is planed for October 20-25, 2017. Other Busworld events at other locations that may be of interest include the following: Bus-

world in Istanbul, Turkey, April 14-17, 2016 – Busworld in Beijing, China, May 23-25, 2016 – Busworld in Moscow, Russia, October 25-27, 2016 – Busworld in Bengaluru, India, November 10-12, 2016 – and Busworld in Medellin Latin America on December 5-7, 2016.

ZF just celebrated their 100th year and is a regular participant at Busworld. Their booth showed several of their products and components including their popular AVE 130 electric portal axle with electric motors in the wheels. ZF also offers a wide range of other products including steering and transmissions. BUSWORLD.



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26 · National Bus Trader / February, 2016