

balancing news

Information on the quality and performance of rotating equipment - From the Schenck Balancing & Diagnostic Systems Group

Introducing Schenck Mexico

Tarek El-Sawaf - Director of Business Development, Schenck Trebel

Schenck Corporation is proud to introduce its new sales office in Mexico City, Mexico.

The office was established to expand local presence in Mexico through direct representation. Schenck provides a complete range of balancing machines and systems, vibration analysis and condition monitoring equipment, and on-site/field service for the production, maintenance and repair of all rotating components, as well as assembly, end of line testing and filling systems for the motor vehicle industry. The Mexico City office will represent all of the above product lines, as a division of Dürr de Mexico.

“Knowing that some of our largest customers are located in Mexico signifies how much our presence in Mexico City is needed. It will increase our business relationships and benefit all the companies and industries we serve.”

– Juan-Pablo Fernández, Director of Sales at Schenck Mexico. Fernández has been with Schenck for over 10 years. His expertise and knowledge is very well known and respected in the Mexican industrial marketplace.

Working along-side Juan-Pablo Fernández are Mexico City natives Trinidad Castro, Arlett Rodriguez, Luis Soto, and Ricardo Tellez. Castro comes to Schenck as Business Coordinator. She has her degree in Marketing and over 6 years experience in Sales Administration.

Rodriguez comes to Schenck as a Sales Engineer with a degree in Engineering and over 7 years experience in sales and engineering.

Soto and Tellez join the Schenck team as Service Engineers. Soto comes to Schenck Mexico as an 8 year veteran with Schenck RoTec and is an Electrical Engineer by trade. Tellez joins Schenck with degrees in Mechanical and Electrical Engineering, specializing in Electronics.

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Juan-Pablo Fernández



Arlett Rodriguez



Trinidad Castro



Luis Soto



Ricardo Tellez

His experience includes over 25 years in packaging, maintenance, and service for various industries.

Feel free to contact Juan-Pablo Fernández or a member of his team for an appointment or for more information on how they can fulfill your company needs and requirements.

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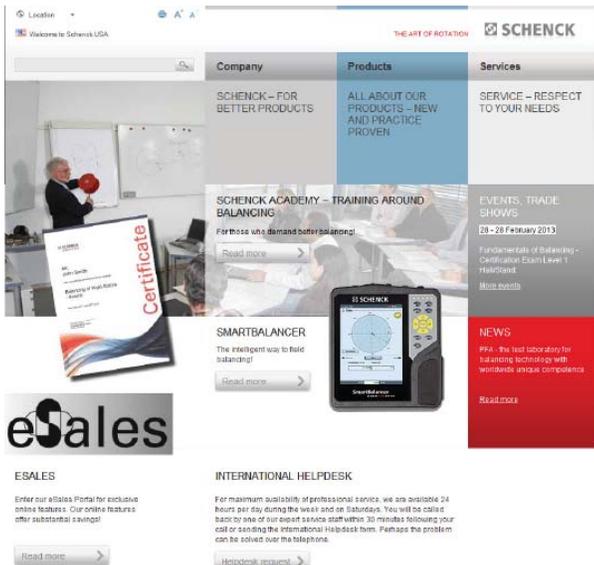
The New www.schenck-usa.com

Belinda Jenkins, Marketing Coordinator - Schenck Trebel

Schenck Trebel Corporation introduces its new website:

www.schenck-usa.com

The new look of the website is sleek, stylish and full of new products and services. Site features, include new imagery, interactive applications and videos.



The new site is multi-lingual, offering English, Spanish, German and other language views. Navigation is also improved. The search and download options available will serve as a great resource for those looking for information on specific products and services. As it continues to be a great source of information on Schenck product lines and services; visitors (who register) will also find our digital library for company brochures, literature, newsletters and white sheets.

The new site provides for more user interaction. Visitors have broader search criteria - inclusive of the Schenck product catalog. Visitors will quickly navigate their way through our products by utilizing various search criteria, and be guided to an appropriate machine type. Searching by rotor or industry type is best suited for new visitors.



Additionally, those already familiar with our products, can utilize our "Product groups" criteria to quickly search through our product lines and obtain technical specifications. Full text search is also available.

The website showcases detailed information, and a new online image, of Schenck's seminar/workshop education program - Schenck Academy. The design of the site allows for multiple company member registrations, as well as the ability to place inquiries for on-site seminars and workshops, through the use of our new registration forms.



The above logo, prominently displayed on our home page is the entry way to our eSales portal. Here one is introduced to a simplified method for evaluating and ordering our H-series balancing machines online. Choosing the right H machine for your application is easy. Simply find the maximum weight and dimension of your rotor, then click on the corresponding "Type" link provided to reveal the appropriate machine size for your rotor. Ordering a Schenck machine has never been easier.

View our online shopping cart and order Schenck parts including cables, photocells, accessories, and much more!



Schenck Trebel offers a variety of common spare parts online, in a familiar shopping cart format. The "Order Parts" link provided under the "Services" tab on our site, allows easy navigation through the categories of parts and accessories offered. Select your product and the quantity required and place your order. We accept most major credit cards. All transactions are processed on a secure server. Prices are valid for US transactions only.

If you need assistance feel free to contact us at 1-800-873-2357 (M-F 8:00 am-5:00 pm EST).

Ordering with Schenck is now, faster and easier than ever before. Visit our website today to experience our new features.

Schenck RoTec (Michigan) - 10 Years of Balancing Services

Mark Hass, Vice President of Operations - Schenck RoTec

Automated Balancing Services

2013 marks Schenck RoTec Corporation's 10 year anniversary in balancing services. Since its inception, we have serviced and supplied our automotive customers with millions of balanced components using our high quality processes. We have also remained an industry competitor with the expansion of our facility and its capabilities to keep up with the ever evolving production, supply and demand of our customers.

Contribution to the Quieter Vehicles

If you have travelled in a modern vehicle lately, you have noticed how quiet and smooth the cabin and ride are. This is in part due to Schenck balancing machines and services – produced and provided by Schenck to the quality requirements of major automobile manufacturers.

RoTec's Facility and Equipment

Our facility has equipment that ranges from simple manual vertical and horizontal balancers to semi-automatic axle and propshaft balancers, capable of volumes from one part to >250,000 per year.

Typical machines include:

- Axle balancers
- Propshaft balancers
- Crankshaft balancers
- Vertical balancers of several types, suitable for transmission balancers, flywheels, disk brakes, tire/wheel assemblies etc.

We have many methods for correction - including drilling, milling, welding, punching, piercing etc. We can mill hardened steel and if necessary use such methods as laser correction, gluing, etc.

Case Study #1 – Production Axle Balancing

Schenck set up a production system to produce balanced axles to the Automotive industry standards of quality, including PPAP process etc. A typical complete axle assembly is shown below: these axles can weigh up to 450 lbs. (200 kg), and require special material handling capabilities.



Figure 1: Complete Balanced Axle Assembly

Case Study #2 – Process Development of Transmission Components



Figure 2: Typical Transmission Part

Traditionally, the internal components of transmissions have not been balanced. Many parts are fabricated from sheet metal and there are no provisions in the initial design to allow for balancing. Schenck worked with the automotive designers and developed the balancing process, coming up with novel, highly efficient methods to combine weight reduction with balancing in one operation.

Case Study #3 – Crankshaft Balancing

Most crankshafts are produced by the Automotive manufacturers themselves, using lines that cost \$200 million. When a crankshaft fails the final balance operation, the part can be worth up to \$100 to replace.



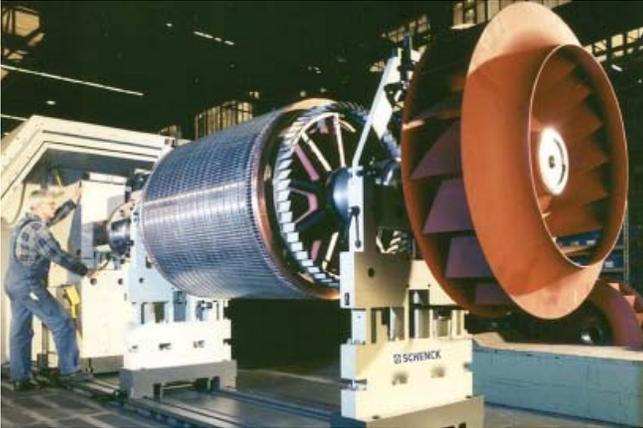
Figure3: Typical Crankshaft

Thus rectification, if possible, is very worth-while if performed to automotive quality requirements. Schenck Rotec balancing services has been performing this function for many years, and can accommodate all types of cranks including large V10 truck crankshafts.

Education is Balancing Power

David Fanning - Senior Application Engineer, Schenck Trebel
Belinda Jenkins - Marketing Coordinator, Schenck Trebel

In today's competitive industrial marketplace, education can mean the difference between mediocrity and exponential profit or loss. Knowledge, training and know-how are critical deciding factors on whether a company has the capability and ability to grow, evolve and succeed.



Let's take Balancing. It is not as simple as it looks. There are many challenges that must be considered before the job can be done right. For many industry professionals, balancing is a closed book. Often those who have to deal with matters of balancing and diagnostics on a daily basis have limited knowledge of the theoretical background. In addition, balancing is usually not part of vocational training and is rarely touched upon at universities or technical colleges. Those who possess knowledge of balancing often learned from colleagues or by private study. Needless to say, lack of systematic training is a latent source of mistakes. Rotor unbalance cannot be assessed simply by visual inspection and failure to follow accurate and correct balancing processes may result in substantial extra cost and lost revenue.

When discussing the topic of balancing, many industry professionals agree on one thing – without streamlined balancing processes, there will be a loss in productivity and revenue. Preventing loss and maintaining production efficiency must be continually reviewed, measured and evaluated. Companies like Schenck Trebel Corporation are committed to the concept of life-long learning and personal growth not only for its own employees, but for all associated with the balancing industry. Striving toward this goal, Schenck developed an academic program that educates members of the balancing industry, from the novice to the veteran engineer. Having provided balancing seminars and workshops since 1969, Schenck Trebel understands the needs and requirements for training in the workplace. Over the course of 40+ years, the educational program has evolved into a multi-tiered program consisting of three

levels: certification, workshops and company on-site programs.

Sound advice for and from our customers – balancing professionals

To arm your staff with the knowledge they need for their daily work schedule, find an education center that provides an extensive range of courses in the area of balancing and diagnostics. Make sure they cover the theoretical aspects of balancing as well as hands-on practical applications, including universal balancing problems and solutions for highly specific balancing tasks. Many of our customers agree that professional level training sessions always pay for themselves. Companies will find the investment in their staff worth-while, because in the final analysis the gain received is a better product and smoother processes. In the long run, proper training will enable individuals to develop in-house expertise, make full use of the potential inherent in their production facilities, reduce errors, and improve quality.



“Our seminar educators are balancing professionals with extensive practical experience, they're happy to share their expertise, and take pride in passing their knowledge on to our students” - David Fanning – Schenck Senior Application Engineer. These specialists within the balancing field are often available to provide advice on specific aspects of balancing and diagnostics. Building accurate, dependable equipment is only part of their responsibility. The balancing specialists and educators at Schenck have a complete understanding of the balancing process and are skilled in modern balancing procedures in order to help their customers maximize performance and quality standards.

With its association with the balancing committees of ISO, ANSI, SAE, and API, Schenck Trebel's courses are designed to provide students with the most recent industry practices and procedures. Courses are taught in seminar and workshop formats – ranging from 1 to 3 days. These seminars and workshops cover a broad range of topics, at a variety of levels. In the end, all attendees learn proven techniques to increase balancing efficiency and streamline production.

(MORE>>>)

The Schenck Academy at a glance - Fundamentals of Balancing and Level 1 Certification

If you are new to balancing, a Fundamentals of Balancing seminar with Schenck is the place to start learning the basics. The seminar is designed to provide individuals with a strong foundation, covering both basic theory and practical hands-on skills. The course begins by defining unbalance and explaining the benefits of properly balanced rotating machinery. Various methods of evaluating unbalance problems including single-plane and two-plane techniques are explored, along with balancing tolerances and developing specifications for rotor balancing.

The seminar also focuses on the principles of rotor dynamics as well as the operating principles of a balancing machine and includes both classroom sessions and practical demonstrations on the balancing equipment and instrumentation. In addition to the classroom and practical sessions, students will work together and receive hands-on experience from the dynamic interaction between Schenck technicians, engineers, and the seminar instructor. Schenck Trebel offers its seminars at Schenck facilities throughout the year or by request on-site at the customer's facility. The on-site training option offers a solution to aid in dealing with logistics constraints. The on-site seminars also allow customers to utilize their own facility's balancing machines and rotors for the hands-on practical demonstrations.

Whether on-site or off-site, training seminars offer hands-on exercises with trained service technicians and engineers to re-enforce the skills that have been earned in the classroom and improve operator techniques on both the balancing machine and instrumentation. **(See page 8 for our seminar/workshop schedule for 2013)**



Specialized Seminars

All seminars can be custom tailored to your applications and presented on-site at your facility on your equipment. Annual training programs are also available to keep companies up to date on balancing procedures and your operators up to date on balancing theory. Seminars and workshops dealing with specialized subject matter are also offered throughout the year for those students who would

like to focus on a specific industry.

An example of such a seminar is Schenck's Pump & Impeller Balancing seminar. The pump & impeller balancing seminar is ideal for individuals who work with pumps and turbine compressors. During this seminar, attendees will learn critical techniques focused on reducing balancing time and rotor rejection due to excess vibration. In addition, application of API 610 is covered in detail. Other course topics include index balancing, tolerances per ISO 1940/1, tooling error compensation, overhung rotor applications, and applications involving narrow plane separation. Overall, students will learn to sharpen their skills to maximize production in a comprehensive two-and-a-half-day seminar.



The Workshop

Rotor balancing workshops provide an opportunity for attendees to focus on a specific area of interest within the balancing process while considering various balancing applications. Due to the reduced commitment required, the 1-day workshops present a unique opportunity that may prove beneficial in allowing for multiple attendees. Upon the conclusion of a seminar/workshop, each attendee is acknowledged and issued a certificate of completion.

Education helps you save/cut costs and improve quality - Post education advantages

Back in the field and now armed with the extensive training documentation received during the training session, technicians have the ability to consult these reference materials to review any details they may have forgotten or are unsure about. In addition to the training materials, attendees can contact the Schenck help desk or the seminar instructor directly, without any red tape. In this way, Schenck can assist you and point you in the right direction for finding a solution to your problem.

"Knowledge is power"- Sir Francis Bacon

At Schenck the foundation for prosperity stems from the idea that with higher education, resources and support, a company's continual growth and success are only more and more attainable.



Balancing Disc-Shaped Rotors

Modern Technology applied to Traditional Balancing
Kevin Spillane, Director of Sales - SCHENCK RoTec

SCHENCK has been a Balancing Industry leader for over 100 years. One of the earliest balancing machine types was the vertical balancer - and we've evolved it to a new level.

Common balancers with a vertical measuring spindle are ideal for disc-shaped rotors because they hold the part in an orientation that allows for convenient part handling & easy access for unbalance correction by material removal.



The **Distec** takes this classic form of vertical balancing and makes significant advances to create greater flexibility and a superior price/performance ratio.

Universal Flexibility from an Automatic Balancer

Many are familiar with the flexibility of Schenck manual Universal Balancers. When designing the **Distec**, we brought this universal flexibility concept to an automatic machine. Unbalance correction of disc-shaped rotors is typically accomplished by removing material vertically (axial) or horizontally (radial) depending on the application. The **Distec** can perform either correction method with a quick and easy manual adjustment of the drill correction unit.

The **Distec** has a wide working range and can handle rotors up to 500 mm in diameter, 150 mm height and weights up to 30Kg (including tooling). It is also capable of supporting various production requirements from small batches of parts to high volume continuous production. The **Distec** can be manually or automatically loaded. The pneumatically actuated automatic front door is perfect for easy and ergonomic manual loading and unloading of the rotors. Fully automatic loading can be accomplished with a separately controlled load system; such as a gantry, robot or transfer system via the available overhead access.

This combination of adjustable correction, wide application range and loading flexibility allows you to use the same machine for a large range of applications or production requirements.



Proven Technology with Convenient Modern Features

The **Distec** uses SCHENCK's state of the art CAB 759 measuring unit positioned at an ideal working height which allows for simple and direct input of all data via a touch screen. With its logical operating concept, clear and well organized screens, the **Distec** is easy to control. It also can provide an evaluation of statistical data or interface for integration to other statistical production control systems.

The **Distec** has an operator friendly ergonomic design with all the operating elements including the control panel, correction unit and the measuring unit mounted onto the easily accessible single base of the machine. The fully automatic safety door along with an extremely short spindle spacing and ideal working height makes it easy to load and very accessible.

With everything mounted on the single main base, the **Distec** can be easily put into place or relocated if necessary with very little effort – only a connection of air & power and it is ready for operation.

Safe & Energy Efficient

The **Distec** fulfills the safety requirements set by ISO 7475 so your operators are protected. It also fulfills the requirements in the latest Machinery Directive 2006/42/EC in every respect and is CE certified.



The design incorporates modern economic drives and does not require costly and messy hydraulics or coolants. The energy optimized drill unit also reduces your operating costs.

Efficiency is also a matter of floor space and the **Distec** was designed with this in mind as well; as it only requires an area of 4 m².

Immediate Availability

The **Distec** is not a concept waiting to be built for your request. It is a fully tested Standard Product immediately available and in stock. It only needs to have tooling added according to your rotor dimensions and you are off and balancing parts. It is perfectly suited for flywheels, pulley wheels, dampeners, dual mass rotors, gear components, brake drums, differentials, clutches, hybrid rotors and any assortment of disc shaped rotors.

Distec is available for immediate review, demonstration and purchase at our Auburn Hills, Michigan facility. Please feel free to contact SCHENCK RoTec if you are interested in the **Distec** for your disc-shaped rotor balancing application.

Schenck Trade Shows

...are you attending?

Therese D'Ambrosia , Marketing Assistant - Schenck Trebel

This year, like previous years, we will be presenting a wide range of products and services at our various national and international events. You are welcome to visit us at our booths for more information and/or demonstration.

Schenck Trebel has added a new trade show to its roster - **TECMA** (Tecnología en Máquinas Herramienta y Equipos Periféricos) - Technology of machine tools and its peripherals. The show will be on March 5-8 in Mexico City, Mexico.

Over 260 exhibitors from the metalworking industry and all over the world will display their products and productivity solutions. Attendance will include exhibitors from over 15 countries including Argentina, Brazil, Canada, China, Korea, Spain, USA, India, Italy, Japan, Mexico, Portugal, Czech Republic, Russia, and Taiwan.

Schenck will be showcasing its Pasio 50, SmartBalancer, Vibrotest 60, and CAB (computer aided balancing instrumentation 920/925). **Visit us at Booth 441.**

In April and May, Schenck Trebel will be exhibiting the **EASTEC** and **MRO** Americas trade shows. The **MRO** Show will be on April 16-18 in Atlanta, Georgia and the **EASTEC** Show is scheduled for May 14-16 in West Springfield, Massachusetts.

With its focus on leaders in the aeronautics industry, the **MRO** Show is highly anticipated for both exhibitors and attendees. Schenck's presence, as in the past, plays a vital role in demonstrating the need for balancing the integral parts of aeronautic engines. **Schenck will be located at Booth 1453**, featuring our Moment Weighing Scale the ESD Static Machine.

As with past shows, this year's **EASTEC** Show will focus on attendees and exhibitors leading the manufacturing industry. With a wide range of machines dedicated to balancing in this area, Schenck will be featuring both their large machines as well as their portable line of products. This year's booth features include the Pasio 15, Tooldyne, Smart Balancer and VT-60 machines. **Schenck will be located at Booth 5653** for this year's EASTEC Show.

Come and see first hand some of our latest developments and trends in balancing and diagnostic systems.

We look forward to seeing you there!

2013 Trade Shows

SHOW	DATES	BOOTH/SIZE
TECMA Bancomer Santa Fe Expo Mexico City, Mexico	March 5-8	441
MRO Conference & Expo Georgia World Congress Center Atlanta, GA	April 16-18	1453
EASTEC Eastern States Exposition West Springfield, MA	May 14-16	5653
EASA Mandalay Bay Las Vegas, NV	June 30 – July 2	215
ADS Manchester Grand Hyatt San Diego, CA	July 30 – Aug. 2	214
PUMP/TURBO SYMPOSIUM George R. Brown Conv. Ctr. Houston, TX	October 1-3	1131-1133
POWERGEN Orange County Convention Center Orlando, FL	November 12-14	3259

Schenck Seminars and Workshops Schedule

Designed for the balancing professional by the balancing experts.

Our balancing seminar program is designed to give both maintenance and manufacturing personnel the opportunity to learn new concepts, and improve skills. "Universal theories," applicable to all balancing machines are presented in an interactive environment where students can discuss particular problems and experiences. Hands-on sessions are used frequently to reinforce theory and practice the skills that have been learned.

Seminar and Workshop Schedule

March		
Balancing Workshop III	March 1	Houston, TX
Fundamentals of Balancing	March 5-7	Deer Park, NY
Certification Level 1 Exam	March 7	Deer Park, NY
Balancing Workshop II	March 15	Santa Ana, CA
Fundamentals of Jet Engine Balancing	March 19-21	Deer Park, NY
Balancing Workshop I	March 22	Chicago, IL
April		
Advanced Balancing Theory & Applications	April 9-11	Deer Park, NY
Certification Level 3 Exam	April 11	Deer Park, NY
Pump & Impeller Balancing	April 23-25	Houston, TX
May		
Advanced Jet Engine Balancing	May 7-9	Deer Park, NY
Balancing Workshop IV	May 10	Houston, TX
Fundamentals of Balancing	May 21-23	Chicago, IL
Certification Level 1 Exam	May 23	Chicago, IL
Balancing Workshop III	May 17	Santa Ana, CA
June		
Fundamentals of Balancing	June 11-13	Auburn Hills, MI
Certification Level 1 Exam	June 13	Auburn Hills, MI
July		
Balancing Theory & Applications	July 9-11	Deer Park, NY
Certification Level 1 & 2 Exam	July 11	Deer Park, NY
Balancing Workshop II	July 12	Chicago, IL
Balancing Workshop VI	July 19	Houston, TX
Balancing Workshop IV	July 26	Santa Ana, CA
August		
Balancing Workshop III	August 16	Chicago, IL
Fundamentals of Balancing	August 20-22	Deer Park, NY
Certification Level 1 Exam	August 22	Deer Park, NY
September		
Balancing Workshop I	September 6	Houston, TX
Balancing Workshop VI	September 13	Santa Ana, CA
Fundamentals of Balancing	Sept 17-19	Miami, FL
Balancing Workshop IV	September 20	Chicago, IL
October		
Fundamentals of Jet Engine Balancing	October 8-10	Deer Park, NY
Balancing Workshop I	October 11	Santa Ana, CA
Balancing Workshop VI	October 18	Chicago, IL
Balancing Workshop II	October 25	Houston, TX
November		
NO SEMINAR/WORKSHOPS		
December		
Fundamentals of Balancing	December 3-5	Santa Ana, CA
Certification Level 1 Exam	December 5	Santa Ana, CA