Press Release

Karlsruhe/Germany, 2023-03-07

Romaco at interpack 2023

Sustainable – from powder to pallet

Romaco will take advantage of the upcoming exhibition to show its latest technologies for granulation, tableting and film coating as well as filling and packing solids, powders and liquids. The provider of system solutions will focus on the energy and cost efficient design of its newest innovations.

With its innovative one stop solutions for the pharmaceutical, nutraceutical, food, cosmetics and chemical industries, Romaco covers the entire process chain from powder processing to the finished pallet. The manufacturer's sustainable machine concepts impress with their excellent carbon footprint, which goes hand in hand with lower production costs. All systems can also be supplied in a carbon-neutral version, and they ship with an energy monitor for recording and documenting actual power consumption online.

The supplier's comprehensive portfolio of services will likewise be on show, including selected digital tools such as the service app, which concentrates detailed information in one place and offers numerous options for interaction. E-learning programs and the web-based BlisterMagic platform – freely available to users for designing blister packs and folding cartons – round off this broad array. Last but not least, Romaco's six laboratories for granulation, tableting, film coating, filling and packing allow customers to be supported in a targeted way. These knowledge centers serve as the first port of call for expert advice, product analyses, process optimization and development activities.

MicroRobot 50 microdosing machine from Romaco Macofar – smart performance for demanding products

The MicroRobot 50 microdosing machine is Romaco Macofar's ultra-flexible, high-tech solution for filling high-potency and cytostatic powders and liquids. This compact high-containment unit (up to level OEB 5) is less than four meters in length and features a robotic vial transfer system that ensures reliable processes

under isolation technology. Three anthropomorphic robots transport the vials to the dosing, stoppering and capping stations, avoiding the proliferation of particles which happens with different kinds of transport technologies. Since these smart systems are completely size parts-free, significantly shorter changeover times are realized. All product-contacted parts are extremely small and light, and hence very easy to remove and install. Thanks to a whole series of control systems and the flexibility ensured by the three independent robots, the waste rate for the high-priced medicines is almost zero. The filling technology is particularly suited for aseptic dosing of sticky, hygroscopic or challenging pharmaceutical powders in general. The oxygen content inside the vial can be reduced to below 3%, so that high quality processing is possible even with oxygen sensitive products. Sterile liquids can be filled as well by installing the relevant filling system. The MicroRobot 50 achieves a maximum total output of 3000 vials per hour, including one-hundred-percent in-process weight control with automatic filling volume adjustment where necessary. Due to the precision filling processes, the Romaco Macofar MicroRobot 50 allows a minimum dose rate of 20 mg or 0.5 ml.

Unity 600 blister line from Romaco Noack with up to 45% energy savings

Romaco Noack's new Unity 600 blister packaging line combines high efficiency with a sustainable system concept. This double-lane, high-speed line achieves a maximum output of 600 blisters and 350 cartons per minute and enables flexible processing of blister packs up to 145 mm long and 90 mm wide. Its innovative transfer system eliminates the need for conventional vacuum pumps, significantly improving the energy efficiency of the monobloc, which consists of a blister machine with rotary sealing and a continuous motion cartoner. The vacuum for transferring the blisters to the cartoner and for removing the cartons and leaflets is instead produced in a more climate-friendly Venturi process. Venturi pumps are comparatively small, need less maintenance and give off much less heat, so that the cooling requirements in the cleanroom are greatly reduced. The blisters are transferred to the cartoner by a carousel-shaped indexing wheel with a downstream stack transfer unit, which ensures that the cartoner is only supplied with complete blister stacks. As a new feature, any gaps are mapped in the software and compensated. Since good blisters are no longer held back, a manual blister top-up magazine can be dispensed with. Furthermore, this highly automated transfer solution allows seamless tracking and tracing of the blisters from the product feeding unit onward. Due to its very good line clearance and short

changeover times, Romaco Noack's flexible-format Unity 600 blister packaging line also scores with excellent OEE (overall equipment effectiveness).

IGL integrated granulation line from Romaco Innojet – sustainability through optimized processes

The granulation lines in the Romaco Innojet IGL series are used to manufacture good quality granules for tableting. The line concept consists of a high shear mixer and a fluid bed dryer with integrated wet and dry mills and a downstream batch hopper. The bottom driven, high shear mixer proves extremely homogeneous granulation, even with products with a very small proportion of active pharmaceutical ingredients (API). Its very short processing times are due in part to the impactor blade's higher top speed of approximately 10 m/s. The small distance between the impactor blade and the bowl base reduces product losses to a minimum, resulting in a higher yield from the mixer coupled with shorter cleaning times. The conical upper part of the bowl design enables working at capacities from 25 to 80 percent, providing maximum batch size flexibility. In addition, the linear bowl geometry also makes it easier to scale-up. Several spray nozzle tips offer very fine droplet distribution as well as uniform application of the binding liquid. Spray liquid consumption is consequently reduced and the quality of the wet granules improved. The transfer of wet granules into the fluid bed processor is carried out by gravimetric unloading and can be assisted by a process air supply. Due to the precisely controlled product movement of the ORBITER® booster air distribution plate, drying times are significantly shorter with the VENTILUS® fluid bed multi-processor. A centrally controlled WIP system permits GMP-compliant cleaning of all line components. Overall, Romaco Innojet's IGL granulation lines process filling volumes from 1 to 1500 liters.

KTP 720X double-sided rotary press from Romaco Kilian – optimized for high output

For the first time, Romaco Kilian's KTP 720X double-sided rotary press is now also available with a segment turret for up to 30% more performance. The new configuration with five segments and up to 115 punch stations paves the way for a maximum output of up to 1,380,000 tablets per hour. Not only that, but the segment turret significantly reduces retooling and cleaning times. The individual segments have product-specific punch holes and are easy to remove for cleaning; the time-consuming removal of the dies has been dispensed with. Thanks to the hermetic separation between the compaction and service areas, no tablet dust gets into the

machine area during production, so that far less effort is necessary for cleaning. The number of product-contacted parts has been systematically reduced at the same time. Patented punch bellows protect the tablets reliably from contamination with lubricants. The high-speed press can be used to manufacture both mono-layer and bi-layer tablets, whereby the temperature in the compaction area is kept at a constant level below 30°C. This is achieved, for example, through low-friction pressure rollers, pins and bearings as well as efficient cooling of the V-ring seals and drives. The technology is consequently ideal for processing temperature sensitive medications such as Metformin or Ibuprofen. All in all, the double-sided rotary press convinces with its excellent TCO (total cost of ownership) and OEE (overall equipment effectiveness).

KTP 1X R&D tablet press from Romaco Kilian – access to research data worldwide at any time

The KTP 1X is the newest generation of Romaco Kilian's R&D tablet presses for laboratory use. This single-stroke press was designed as an all-in-one instrument for research and development activities. It is suitable for pressing mono-layer, bi-layer and triple-layer tablets as well as tab-in-tab formats. It achieves a maximum output of 1800 tablets per hour and compression forces of up to 80 kN depending on the model. This versatile R&D press enables the various tableting parameters, such as compression force or the possible tableting speed, to be automatically determined. The smart measurement system evaluates huge amounts of data in next to no time for this purpose. The KTP 1X is moreover capable of simulating any standard rotary press, making it much easier to conduct scale-up trials. In addition to the production of clinical samples, the technology also allows detailed troubleshooting and hence supports process optimization. Thanks to the machine's very good rigidity, the punch position in particular can now be measured more precisely. This high measuring accuracy goes hand in hand with extremely low product consumption – so that the KTP 1X is not only very accurate but also cost-efficient and sustainable. Only a few test series are required to obtain meaningful results because compression studies are highly automated. With its very small compaction area, the tablet press has a small footprint and is quick and easy to clean – for even bigger time and energy savings. What's more, the machine ships with a data module that gives users access to raw measurement data worldwide at any time, even when the machine is not in operation.

TP R Optima tablet coater from Romaco Tecpharm – 10 to 100 percent batch variability, fully automatic without any mechanical adjustments

The TP R Optima tablet coater from Romaco Tecpharm genuinely processes any batch size from 10 to 100 percent in a single drum and achieves optimum coating results no matter how small the filling volume – fully automatically without any manual adjustments. Its wide range of applications is the outcome of the fully automated perforated coating pan with its GMP-compliant in-wall design. An extendable spray arm with movable spray nozzles ensures not only the correct spray distance but also the ideal spray angle. Both the batch volume and the tablet bed inclination, which varies according to the turning speed of the pan drum, are measured continuously using sonar technology. The patented spray system is thus capable of aligning the nozzle distance and angle automatically throughout the entire process. Furthermore, air exhaust flaps that can be opened steplessly allow exact adjustment of the air path inside the drum. This precise flow control provides loss-free application of the coating suspension and efficient drying of the tablet bed, ensuring shorter processing times, lower energy consumption and up to 50 percent savings in coating suspension. In short, the TP R Optima supports sustainable production of pharmaceuticals and nutraceuticals. Last but not least, Romaco Tecpharm's smart film coating technology includes a system for detecting and accurately identifying blocked spray nozzles.

On show at interpack in Dusseldorf (Germany) from May 4 to 10, 2023 (Hall 16, Booth D22).

For more information on Romaco, visit our website and social media channels: www.romaco.com – Showroom – LinkedIn – YouTube

Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets, tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO_2 emissions.

The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of the Truking Group, a globally operating high-tech enterprise based in Changsha (China). Truking's core competency is handling and filling pharmaceutical liquids.

Romaco operates from five European business sites, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a leading manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 850 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

The following pictures are enclosed with the press release:

1. MicroRobot 50 microdosing machine from Romaco Macofar
   MicroRobot-50_Macofar_Romaco.jpg

2. Unity 600 blister packaging line from Romaco Noack
   Unity-600_Noack_Romaco.jpg

3. IGL granulation line from Romaco Innojet
   IGL_Innojet_Romaco.jpg

4. KTP 720X double-sided rotary press from Romaco Kilian
   KTP-720X_Kilian_Romaco.jpg

5. KTP 1X R&D tablet press from Romaco Kilian
   KTP-1X_Kilian_Romaco.jpg

6. TP R Optima tablet coater from Romaco Tecpharm
   Optima_Tecpharm_Romaco.jpg

Company contact

Susanne Silva
Market Communications
Romaco Group
Am Heegwald 11
76227 Karlsruhe
Germany
T +49 (0)721 4804 0
E susanne.silva@romaco.com

Press contact

Micha L. Harris
Senior PR Consultant
Carta GmbH
Iggelheimer Str. 26
67346 Speyer
Germany
T +49 (0) 6232 100 111 20
E harris@carta.eu

Press Release

Karlsruhe/Germany, 2023-05-04

Romaco Macofar MicroRobot 50 microdosing machine

Avant-garde filling technology

The MicroRobot 50 microdosing machine is Romaco Macofar's innovative high-tech solution for filling sterile powders and liquids into vials. Three anthropomorphic robots ensure reliable processes protected by an isolator.

Romaco Macofar's MicroRobot 50 is a robotic microdosing machine specifically designed for the production of small to medium batch sizes that is used to fill injectable sterile powders and liquids. The powder filling technology is particularly suited for aseptic dosing of sticky, hygroscopic or challenging pharmaceutical powders in general. Sterile liquids can also be filled by installing the relevant filling system. The oxygen content inside the vial can be reduced to below 3%, so that high quality processing is possible even with oxygen sensitive products. For cytotoxic or high potent drugs, the Macofar MicroRobot 50 can be supplied with isolator technology up to OEB 5 high containment applications level. Alternatively, it can also be configured with cRABS or oRABS for non-cytotoxic products.

During the production process, three anthropomorphic robots transport the vials under an isolator to the dosing, stoppering and capping stations. The robotic transfer system avoids the proliferation of particles which happens with different kinds of transport technologies. Since the robots work independently of specific formats, the product change times are significantly shorter. Furthermore, thanks to the clearly structured system concept, the MicroRobot 50 is readily accessible and easy to clean. The robotic grippers can be equipped with cleaning guns in order to validate the cleaning processes.

The Macofar MicroRobot 50 achieves a maximum total output of 3000 vials per hour, including one-hundred-percent in-process weight control with automatic filling volume adjustment where necessary. In other words, each vial is individually weighed both before and after filling. Numerous control systems and the flexibility of the three independent robots ensure a reliable process and a very low waste

rate with these high-priced medicines. If a stopper is missing, for example, the filled vial is fed back to the station in question, where the process is repeated, rather than simply removed. The same applies to missing caps. The remaining quantity of the batch has been reduced to a minimum in the dosing station, so that product loss is virtually zero. Due to the precision filling processes, the Romaco Macofar MicroRobot 50 allows a minimum dose rate of 20 mg or 0.5 ml.

This ultra-compact machine is less than four metres long and was designed with ergonomic principles in mind. All product contact parts are extremely small and lightweight. The use of components which are easy to remove and install was likewise a development priority. Access to the machine is via glove ports and RTP systems. The isolator features a built-in VHP generator for bio decontamination.

On show at interpack in Dusseldorf (Germany) from May 4 to 10, 2023 (Hall 16, Booth D22).

For more information on Romaco, visit our website and social media channels: www.romaco.com – Showroom – LinkedIn – YouTube

Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets, tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO_2 emissions.

The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of the Truking Group, a globally operating high-tech enterprise based in Changsha (China). Truking's core competency is handling and filling pharmaceutical liquids.

Romaco operates from five European business sites, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a leading manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and

coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 850 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

The following pictures are enclosed with the press release:

1. Romaco Macofar MicroRobot 50 microdosing machine
   MicroRobot-50_Macofar_Romaco.jpg

Company contact

Susanne Silva
Market Communications
Romaco Group
Am Heegwald 11
76227 Karlsruhe
Germany
T +49 (0)721 4804 0
E susanne.silva@romaco.com

Press contact

Micha L. Harris
Senior PR Consultant
Carta GmbH
Iggelheimer Str. 26
67346 Speyer
Germany
T +49 (0) 6232 100 111 20
E harris@carta.eu

Press Release

Karlsruhe/Germany, 2023-01-24

New Unity 600 blister packaging line from Romaco Noack

For more sustainability and performance

The new Unity 600 blister packaging line from Romaco Noack impresses with more sustainability coupled with the highest possible performance and process reliability. Furthermore, for the first time, the monobloc's innovative transfer unit enables blisters to be traced back to the primary packaging unit.

Romaco Noack has expanded its state-of-the-art Unity family with the Unity 600 blister packaging line. The new technology leads the way in terms of sustainability, process reliability and performance. The heart of this monobloc is the innovative transfer unit, which is not only designed for much higher cycle numbers, but also provides more format flexibility as well as better traceability and energy efficiency. All in all, the double-lane high speed line – comprised of a blister machine with rotary sealing and a continuous motion cartoner – achieves a maximum output of 600 blisters and 350 cartons per minute. With a maximum foil width of 304 mm, blister packs up to 145 mm long and 90 mm wide can be safely processed.

And for all applications demanding even higher performance, Romaco offers a three-lane version of the Unity 600 with an output of up to 750 blisters per minute.

More energy efficiency by eliminating vacuum pumps

With the Unity 600, blisters are transferred to the cartoner via an indexing wheel with a downstream stack transfer unit. First, the die-cut blisters are removed from the die-cutter by vacuum and then placed on the transfer belt to the cartoner by a carousel-shaped shuttle. The vacuum is generated in a Venturi process, eliminating the need for a conventional vacuum pump. Apart from reducing noise emissions, this has the advantage that significantly less heat radiation is emitted in the cleanroom – which would have to be cooled down in an energy-intensive operation. What's more, the suction cups of the indexing wheel are only ever active while blisters are being transferred. This means that no air is drawn in erroneously and power consumption is minimized.

Better traceability in the primary packaging process

The Unity 600's newly developed stack transfer unit stacks the blisters from below and guides them safely from all sides, ensuring ultra-stable processes that are gentle on the product. The blister stacks are subsequently positioned one behind the other in the cartoner's bucket chain by so-called stack carriers. Only complete stacks are transferred to the cartoner. For the first time, any compensation of gaps in the process is mapped in the software, so that good blisters no longer have to be held back. As a result, a manual blister top-up magazine can be dispensed. This highly automated transfer solution from Romaco Noack additionally allows seamless tracking and tracing of blister packs from the product feeding unit onward.

Features for more sustainability

Romaco Noack's new Unity 600 was developed according to the principle "avoidance is better than reduction is better than compensation", the aim being to dramatically reduce the blister packaging line's carbon footprint both during its manufacture and later in operation. That is why the line ships with an energy monitor that measures not only power and air consumption, but also the machine's carbon dioxide emissions during production. Its smart standby functions enable a reduction in base load without any negative impact on OEE (overall equipment effectiveness). Components made from carbon-reduced ASI aluminum and a recycled acrylic glass housing give the line an even better environmental balance. The insulated heating plates of the blister forming station moreover restrict the amount of waste heat in the air-conditioned primary packaging room. And the cartoner abides by the same principle: Romaco relies on the more sustainable Venturi process to produce the vacuum that is essential for carton and leaflet pick up. Last but not least, the blister line features motors with energy recovery.

The Unity 600 can be supplied in a carbon-neutral version on request. Romaco's offsetting initiatives are undertaken together with Forliance – one of the "Alliance for Development and Climate" foundation's offsetting partners – on behalf of the German Federal Ministry for Economic Cooperation and Development.

Wide range of applications

The Unity 600 blister packaging line from Romaco Noack meets all the requirements of the pharmaceutical and nutraceuticals industry when it comes to flexibility, quality and performance. The technology is utilized for the primary packaging of solid products such as tablets, capsules and oblongs, and is also

suitable for manufacturing sustainable packaging like paper blisters. This GMP compliant line convinces with excellent OEE values – due to short changeover times and very good line clearance.

On show at interpack in Dusseldorf (Germany) from May 4 to 10, 2023 (Hall 16, Booth D22).

For more information on Romaco, visit our website and social media channels: www.romaco.com – Showroom – LinkedIn – YouTube

Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets, tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO_2 emissions.

The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of the Truking Group, a globally operating high-tech enterprise based in Changsha (China). Truking's core competency is handling and filling pharmaceutical liquids.

Romaco operates from five European business sites, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a leading manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 850 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

The following pictures are enclosed with the press release:

1. New Unity 600 blister packaging line from Romaco Noack
   Unity-600_Noack_Romaco.jpg

2. Blister transfer with the Romaco Noack Unity 600's indexing wheel
   Indexing-wheel_Unity-600_Noack_Romaco.jpg

3. Stack transfer unit of the Romaco Noack Unity 600
   Stack-transfer_Unity-600_Noack_Romaco.jpg

Company contact

Susanne Silva
Market Communications
Romaco Group
Am Heegwald 11
76227 Karlsruhe
Germany
T +49 (0)721 4804 0
E susanne.silva@romaco.com

Press contact

Micha L. Harris
Senior PR Consultant
Carta GmbH
Iggelheimer Str. 26
67346 Speyer
Germany
T +49 (0) 6232 100 111 20
E harris@carta.eu

Press Release

Karlsruhe/Germany, 2023-04-04

Romaco honors jubilarians

Entire class of 1982/83 celebrates 40 years of service

Karlsruhe-based Romaco Pharmatechnik has just honored seven employees for 40 years of service and another six for 25 years. Among them is the entire "class of 1982/83", which is celebrating four decades at the company together this year.

The entire "class of 1982/83" at Romaco Pharmatechnik is celebrating 40 years of service this year. Four decades ago, all four of them began their apprenticeship with Siebler, which has been part of the Romaco Group since 1998. In total, the Karlsruhe-based pharma machinery manufacturer, which has its headquarters in Durlach's Breit business park, is honoring seven employees for 40 years of service and another six for 25 years.

Since completing their training to become industrial clerks and machine fitters, the former apprentices have held various positions at the company in the course of their careers and also gained management experience as sales manager, team and trainee leaders. Today, the jubilarians are employed in the pharmaceutical machinery manufacturer's Sales, Customer Service and Operations departments.

"We're very proud that our entire class of 1982/83 is now celebrating its 40th anniversary at the company," points out Markus Regner, Managing Director of Romaco Pharmatechnik GmbH. "To remain loyal to a single firm over such a long period of time is extraordinary enough in itself – but for an entire cohort of apprentices to stay with the same employer for four decades must surely be unique."

Romaco Pharmatechnik has been building packaging machinery for the pharmaceutical industry since 1934. Around the globe, pharmaceutical manufacturers package their medicines using technologies from the international Romaco Group. All blister, heat sealing and rigid tube filling machines traded under

the brand names Noack and Siebler are developed, designed, assembled and sold in Karlsruhe.

“It’s really something quite special to be looking back on 40 years of service together with colleagues I’ve known since my days as an apprentice and to now be responsible myself for upcoming generations of trainees,” explains Gerd Becker, Team Leader Industrial Trainees, who has been qualified to train future industrial and tool mechanics since 2001. “For more than 20 years now, I’ve had the privilege of seeing first-hand how our young apprentices develop into experienced and valuable employees for the company. It’s a circle that closes over and over again.”

Long tradition as a training organization

Romaco Pharmatechnik currently employs 14 apprentices as well as four dual students. Apprenticeships for prospective industrial mechanics, electronics technicians, industrial business management assistants and warehouse logistics specialists have again been advertised for the coming year.

“Against the backdrop of demographic change and the resulting shortage of skilled workers, we’re very keen to train our own employees and commit them to our company from an early stage,” emphasizes Andreas Wolfangel, Director HR & Legal at the Romaco Group. “In-house training is an important investment in the company’s future, especially since pharmaceutical machinery manufacturing involves highly specialized know-how, and we as employers have a vested interest in keeping this expertise on board.”

This tradition of tying employees to the company in the long term also has a positive impact on customer relations. Some of the jubilarians in Sales and Customer Service have been working with the same contact persons at their customers for 40 years now. The trusting cooperation that has grown over the past four decades clearly benefits both sides!

For more information on Romaco, visit our website and social media channels: www.romaco.com – Showroom – LinkedIn – YouTube

Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets, tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO_2 emissions.

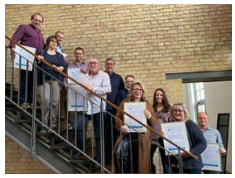
The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of the Truking Group, a globally operating high-tech enterprise based in Changsha (China). Truking's core competency is handling and filling pharmaceutical liquids.

Romaco operates from five European business sites, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a leading manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 850 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

The following pictures are enclosed with the press release:

1. Special ceremony in honor of the jubilarians at Romaco Pharmatechnik
   Jubilarians_Romaco-Karlsruhe_2023.jpg



2. Markus Regner, Managing Director of Romaco Pharmatechnik GmbH, during his speech in honor of the jubilarians
   Jubilarians_Markus-Regner_MD_Romaco-Karlsruhe.jpg

3. Gerd Becker, Team Leader at Romaco Pharmatechnik, with the industrial trainees in Karlsruhe
   Becker_Team-Leader-Trainees_Romaco-Karlsruhe.jpg

4. Andreas Wolfangel, Group Director HR & Legal, Romaco Group
   Wolfangel_Group-Director-HR_Romaco.jpg

Company contact

Susanne Silva
Market Communications
Romaco Group
Am Heegwald 11
76227 Karlsruhe
Germany
T +49 (0)721 4804 0
E susanne.silva@romaco.com

Press contact

Micha L. Harris
Senior PR Consultant
Carta GmbH
Iggelheimer Str. 26
67346 Speyer
Germany
T +49 (0) 6232 100 111 20
E harris@carta.eu

Press Release

Karlsruhe/Germany, 2023-05-04

Research & development partner

Broad portfolio for laboratory applications

Romaco offers various technologies and services for laboratory applications. The one stop solutions provider's processing portfolio includes, amongst others, the multipurpose VENTILUS® Lab fluid bed processor from Romaco Innojet and the KTP 1X R&D tablet press from Romaco Kilian.

Romaco supports its customers with various technologies and services for laboratory applications. The one stop solutions provider's processing portfolio includes high shear mixers, fluid bed processors, tablet presses and tablet coaters for laboratory scale production. Sustainable system design is a key development priority with all Romaco machines – for example, through targeted energy savings in processing or reduced raw material consumption in the manufacture and processing of pharmaceutical powders, granulates and tablets. These measures not only improve the carbon footprint; they also go hand in hand with lower production costs.

Romaco additionally has six laboratories for granulation, tableting and film coating as well as filling and packing of pharmaceutical solids and liquids. These knowledge centers serve as the first port of call for expert advice, product analyses, process optimization and machine training. Parallel to this, lab specialists from Innojet, Kilian and Tecpharm provide scale-up and product development support to users in the pharmaceutical industry.

VENTILUS® Lab fluid bed processor from Romaco Innojet – a multipurpose all-rounder with significant energy saving potential

Designed for laboratory-scale applications, the VENTILUS® Lab fluid bed processor from Romaco Innojet is used for granulating, drying and coating particle sizes from 10 µm to 2 mm. This multipurpose lab unit produces batches from 0.7 to 7.0 liters in size. Due to the enhanced processing efficiency inside the cylindrical product container, the VENTILUS® Lab allows up to 25 percent shorter batch

processing times and hence much lower power consumption. The process air is introduced through the ORBITER® booster plate, which ensures homogeneous flow conditions and extremely gentle intermixing of the materials. In combination with the ROTOJET®, the central bottom spray nozzle, the ORBITER® booster forms a unique functional unit enabling simple scale-up. Thanks to the innovative fluid bed components invented by Dr. h. c. Herbert Hüttlin, the product movement inside the process container can be accurately controlled. The spray liquid is consequently applied very precisely, so that formulations achieving the modified release profile are possible using 10 to 15 percent less material. The targeted reduction in spray liquid and power consumption means the VENTILUS® Lab also results in substantially fewer carbon dioxide emissions from fluid bed processes. Furthermore, the rotating SEPAJET® filter system minimizes product loss by preventing any particles retained by the filter from being discharged from the process.

KTP 1X R&D tablet press 2.0 from Romaco Kilian – access to research data worldwide at any time – Industry 4.0 ready

The KTP 1X is the newest generation of Romaco Kilian's R&D tablet presses for laboratory use. This single-stroke press was designed as an all-in-one instrument for research and development activities and is suitable for pressing mono-layer, bi-layer and triple-layer tablets as well as tab-in-tab formats. It achieves compression forces of up to 80 kN depending on the model and a maximum output of 1800 tablets per hour. This versatile R&D press enables the various tableting parameters, such as compression force or the possible tableting speed, to be automatically determined. The smart measurement system evaluates huge amounts of data in next to no time for this purpose. The KTP 1X is moreover capable of simulating any standard rotary press, making it much easier to conduct scale-up trials. In addition to the production of clinical samples, the technology allows detailed troubleshooting and hence supports process optimization. Thanks to the machine's extremely good rigidity, the punch position in particular can be measured more precisely now. This high measuring accuracy goes hand in hand with extremely low product consumption – so that the KTP 1X is not only very accurate but also cost-efficient and sustainable. Only a few test series are required to obtain meaningful results, because compression studies are highly automated. With its very small compaction area, the tablet press has a small footprint and is quick and easy to clean – for even bigger time and energy savings. What's more,

the machine ships with a data module that gives users access to raw measurement data worldwide at any time, even when the machine is not in operation.

For more information on Romaco, visit our website and social media channels: www.romaco.com – Showroom – LinkedIn – YouTube

Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets, tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO_2 emissions.

The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of the Truking Group, a globally operating high-tech enterprise based in Changsha (China). Truking's core competency is handling and filling pharmaceutical liquids.

Romaco operates from five European business sites, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a leading manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 850 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

The following pictures are enclosed with the press release:

1. VENTILUS® Lab fluid bed processor from Romaco Innojet
   VENTILUS-Lab_Innojet_Romaco.jpg

2. KTP 1X R&D tablet press from Romaco Kilian
   KTP-1X_Kilian_Romaco.jpg

Company contact

Susanne Silva
Market Communications
Romaco Group
Am Heegwald 11
76227 Karlsruhe
Germany
T +49 (0)721 4804 0
E susanne.silva@romaco.com

Press contact

Micha L. Harris
Senior PR Consultant
Carta GmbH
Iggelheimer Str. 26
67346 Speyer
Germany
T +49 (0) 6232 100 111 20
E harris@carta.eu

Press Release

Karlsruhe/Germany, 2022-10-18

Romaco India management enlarged

Sanjeev A. Nimkar appointed new Managing Director of Romaco India

Romaco has just appointed Sanjeev A. Nimkar as Managing Director of Romaco India. From mid-October 2022, he will take over as Head of Romaco's Indian Sales & Service Center headquartered in Mumbai.

Romaco Holding GmbH has appointed Sanjeev A. Nimkar as new Managing Director of Romaco India Pvt. Ltd. From mid-October 2022, he will be responsible in this role for managing all operations of Romaco's Indian Sales & Service Center, with headquarters in Mumbai and a branch office in Hyderabad. Romaco India currently employs around 35 people and oversees both original equipment business and customer service on the Indian subcontinent. The subsidiary also has a spare parts store as well as its own demonstration and training center.

"With Sanjeev A. Nimkar to support us at the helm of Romaco India, we're aiming not only to further strengthen our sales and service activities in the region but also to take advantage of the Indian infrastructure to offer services for the entire Romaco Group. In short, the idea is to gain maximum leverage from the enormous growth opportunities provided by the Indian market", explains Jörg Pieper, CEO Romaco Group. "Mr Nimkar is very client-focused and highly regarded in the industry for his expertise and experience dealing with both local and international business partners. He also has the professional background to put service structures in place at our Indian facilities. That is why I'm really pleased that we've succeeded in getting him on board as Managing Director of Romaco India."

In the course of his professional career spanning nearly 30 years, Sanjeev A. Nimkar has held numerous top sales and management positions at international manufacturers of machinery and components. These include around six years as General Manager of IMA-PG India Pvt. Ltd., where he was in charge of the IMA Safe Division. Prior to joining Romaco, Sanjeev A. Nimkar was Vice President

Sales of Optel Vision India Pvt. Ltd., a provider of track & trace technologies. He graduated with a degree in mechanical engineering from the Veermata Jijabai Technological Institute (VJTI) in Mumbai.

“It was the very broad product range of a full service provider with technologies covering the entire process chain from powder to pallet, that particularly attracted me to Romaco”, acknowledges Sanjeev A. Nimkar, Managing Director of Romaco India. “The international Romaco Group has an excellent reputation in India, which gives us a very good starting point for successful operations in this highly dynamic market. I’m greatly looking forward to this new challenge, and I’m confident that my leadership experience and extensive technical know-how will stand me in good stead when it comes to boosting confidence in our products and building long-term customer relationships.”

For more information on Romaco, visit our website and social media channels: www.romaco.com – Showroom – LinkedIn – YouTube

Romaco Group

Romaco is a leading international supplier of processing and packaging equipment specializing in engineering technologies for pharmaceutical products. The Group provides individual machines, lines and turnkey solutions for manufacturing, filling and packing powders, granulates, pellets, tablets, capsules, syringes, liquids and medical devices. The company also serves the food and chemical industries. Through its various technologies, Romaco is committed to sustainable production and to systematically reducing CO_2 emissions.

The Romaco Group has its headquarters in Karlsruhe (Germany) and is part of the Truking Group, a globally operating high-tech enterprise based in Changsha (China). Truking’s core competency is handling and filling pharmaceutical liquids.

Romaco operates from five European business sites, with a broad portfolio comprised of seven established product brands. Noack and Siebler (Karlsruhe, Germany) supply blister, heat-sealing and rigid tube filling machines. Macofar (Bologna, Italy) markets technologies for filling sterile and non-sterile powders and liquids. Promatic (also Bologna, Italy) specializes in cartoners, track & trace systems and case packers. Kilian (Cologne, Germany) is a leading manufacturer of tablet presses. Innojet (Steinen, Germany) is in the business of granulating and

coating fine solid particles. Tecpharm (Barcelona, Spain) offers tablet coating technologies.

More than 850 highly skilled and committed Romaco employees are dedicated to the development of future product technologies and to the continuous implementation of internal improvement processes. The Romaco Group's multi-brand system solutions are sold worldwide through nine Sales & Service Centers and a dense network of local agent organizations. Over 12,000 installations delivered by Romaco are currently in use in more than 180 different countries.

The following picture is enclosed with the press release:

1. Sanjeev A. Nimkar, Managing Director, Romaco India Pvt. Ltd.
   Nimkar_Managing-Director_Romaco-India.jpg

Company contact

Susanne Silva
Market Communications
Romaco Group
Am Heegwald 11
76227 Karlsruhe
Germany
T +49 (0)721 4804 0
E susanne.silva@romaco.com

Press contact

Micha L. Harris
Senior PR Consultant
Carta GmbH
Iggelheimer Str. 26
67346 Speyer
Germany
T +49 (0) 6232 100 111 20
E harris@carta.eu