

# RNA SERVICE

#### SERVICE FOR MORE PERFORMANCE

Production is comparable to competitive sport: only those who always deliver will make it to the top in the end. That's why we support our customers not only with perfect feeding systems, but also with perfect service.

This starts with the option of adjusting the feeding and assembly system to each other in an ideal way during an additional commissioning phase on your premises. If new faults suddenly occur, we can systematically identify their cause with our measurement analytics.

With our simulation tools, we can optimize the feeding system parallel to ongoing production - for example, if the feeding parts change or the supplier wants to adjust its production tolerances, of course, additional performance increases, mechanical revisions or routine check-ups, are also part of our offer.

Last, but not least, comfort aspects can also be taken into account: by aligning the frequency of several systems or providing additional noise protection.

#### CONTACT

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# **OUR APPROACH** RNA feeding systems are of recognized high quality and reliability. With a wide range of service offerings, we help to ensure that performance and availability remain top-class for many years to come. Whether production start-up, employee training, system expansion or routine check-ups - our goal is to ensure that you can always produce competitively.

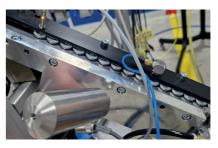
### **OUR SERVICES**

Whatever you want - the RNA Service is there for your: Fast, easy and flexible.For permanently high performance and availability.



Commissioning
Production start-up with backup

Feeding systems can be large and complex systems. During commissioning at your premises, usually as part of the production start-up, we adjust the feeding and assembly systems to each other and train the machine personnel.



Measurement analytics
We reliably bring light into the darkness.

We take an analytical approach. If faults cannot simply be rectified, we must first identify their cause. With our measurement analytics, we reliably shed light on the darkness - even on third-party products.



# Productivity optimization Increase performance and availability

Problems with different feeding part batches, modified product geometry or simply more performance required? Thanks to simulation with **Digital Feeder**, **Digital Motion** and FEM, we can determine optimizations to the feeding system parallel to ongoing production, which you can then implement yourself or with us.



Check-up & repair
Refurbishing and renewing
parts

Tools wear out, material abrasion damages surfaces and sometimes a mishap occurs and elements are damaged - no problem for our service. We inspect, overhaul, replace and recoat - reliably, quickly and easily. Because we want your production to always run smoothly, our service naturally also applies to feeding systems from competitors.



Spare parts
Fast delivery ex-works

You make your money with production - every production stop is expensive. For this reason, our standard components are available from stock within 48 hours worldwide. We manufacture special parts to order with high priority for you.

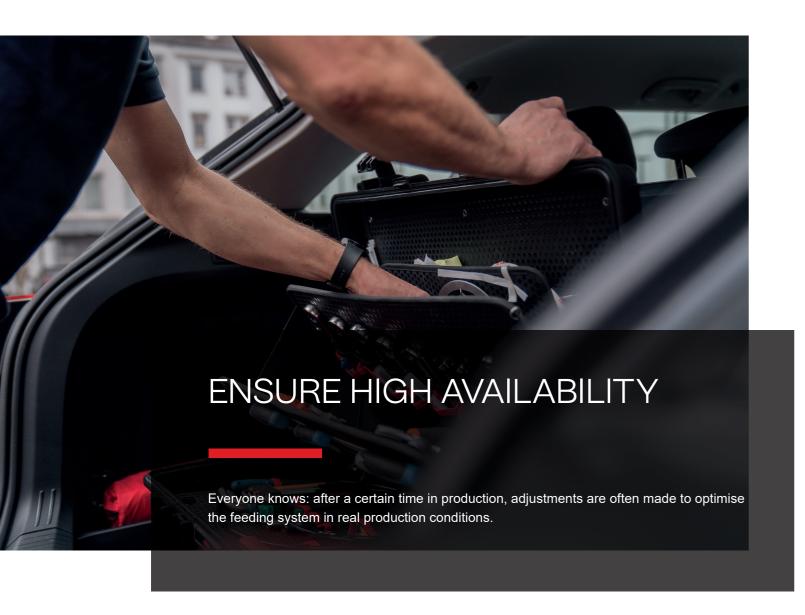


Trainings
Always up to date

RNA is a technology leader in the field of feeding systems technology and is constantly driving the industry forward with innovations. As part of our training for feeding systems technology, we provide your machine operators and maintenance personnel with the necessary know-how and the latest knowledge to get the maximum performance out of the feeding system.

# COMMISSIONING & MAINTENANCE CONTRACT

CASE STUDY #1



# **Customer**Electrical industry

#### Scope

Commissioning & maintenance contract

Duration 36 months

Production is a highly dynamic environment. Three-shift operation, shutdown phases, changing climatic and spatial conditions, new parts suppliers, new employees... the framework conditions not only change on the way from the RNA plant to your production facility, but also repeatedly afterwards. However, feeding system technology must always function consistently. To ensure this, many of our customers rely on the proven combination of on-site commissioning and a maintenance contract - especially for complex high-performance systems. These customers have recognized that optimally adjusted and regularly maintained feeding systems run more reliably and that pays off in the end.

# IF THE FEEDING SYSTEM IS NOT RUNNING, THE ENTIRE PRODUCTION COMES TO A STANDSTILL.

To ensure that this does not happen even under dynamic production conditions, RNA offers commissioning and maintenance contracts for routine check-ups.

#### Commissioning on site

or: 'from test match to competitive match'

A development with proprietary simulation tools, intelligent sample part management for system testing at RNA, special monitoring tools - but despite all these measures, commissioning at RNA cannot cover the real production conditions. The "second side of feeding systems technology" with all its pitfalls and unforeseen facets only becomes apparent at the customer or end user.

#### Faster production start-up

thanks to on-site commissioning

For this reason, many RNA customers take advantage of the option to carry out a commissioning phase accompanied by RNA experts under real production conditions on their own premises. In this way, the most effective measures can be taken efficiently and quickly to optimize the interaction of the feeding and assembly system under real production conditions for maximum availability and performance.



Our experts. Always at your side with a maintenance contract.



#### Maintenance contract

Regular check-ups for consistent performance

Regular check-ups ensure that there is no drop in performance or machine downtime in the first place. Our experts systematically check the feeding system, identify weak points and potential hazards immediately and initiate appropriate measures if necessary. Good to know: RNA experts also take care of competitor feeding systems.

#### Repair, if necessary

Particularly fast with a maintenance contract

As a maintenance contract customer, you benefit from particularly fast service. Critical order-related production parts can be stocked on request and delivered from the warehouse by express. Your personal service contacts know all about your system and prioritize the necessary measures.

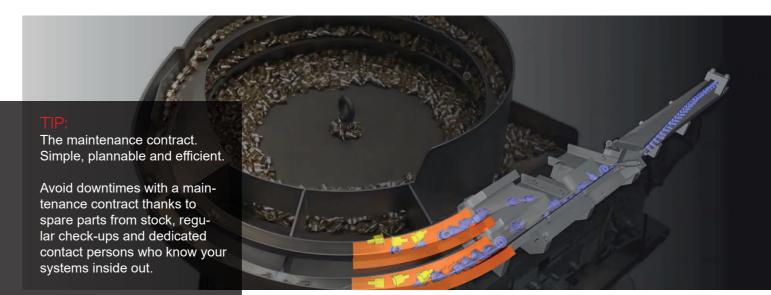
### MEASUREMENT ANALYSIS

CASE STUDY #2



# PRODUCTIVITY OPTIMIZATION

CASE STUDY #3



Pharmaceutical production is expensive and especially in the cleanroom every stop costs a lot of money.

The reliable feeding of a syringe stopper was only possible at 140 parts/min. The end-user wanted 200 parts/min with the same availability. With the help of measurement analytics, the movement behavior of the linear feeder was analyzed and the uneven distribution of the oscillation angle was identified as the cause of the error. The digitized drive was retuned with the help of Digital Motion without interrupting production. After optimization, the system runs reliably at more than 200 parts/min.

#### Customer

Pharmaceuticals

#### Scope

Feeding syringe stoppers

#### Problem

Feeding capacity

For complex problems, the combination of measurement analytics and simulation is an effective solution.

# Measurement analytics

RNA measurement analytics has been specially developed for the needs of feeding technology. Using high-resolution measuring equipment and our own software, we precisely record the actual movement behavior of the feeding system, determine natural frequencies or evaluate the feeding track's rigidity. Identifying the causes of faults lays the foundation for optimizing the system.

#### Simulation

If the feeding system is set up with the digitized components from RNA, the running behaviour can be optimized completely digitally using our Digital Motion module. If necessary, we optimize the feeding track's stiffness using FEA. Perfect vibration is the basis for perfect feeding. In a second step, Digital Feeder can then be used to optimize the sorting if required for example, to take real feeding part's tolerances into account.

#### Long-term monitoring

Some errors only occur very rarely and are difficult to observe. This makes it all the more difficult to eliminate them. With our tools for long-term monitoring of feeding systems, we record almost 100% of all jamming, misfeeds etc. and therefore have an ideal starting point for further improving feeding systems at the limits of availability.

#### Customer

Mechanical engineering

Scope Productivity optimization

Duration 5 weeks

#### Closer to practice

More stable processes thanks to simulation with feeding parts with tolerances.

The first feeding parts that are used to commission the feeding system often differ from the final feeding parts: batch fluctuations, new parts suppliers, adapted production processes, etc. can lead to differences and have a negative impact on the performance and availability of the feeding system. With our keyence 3D scanner, we can digitize poorly running feeding parts and then find an optimized solution for you with the help of our simulation module Digital Feeder. If you have opted for a digital feeding system from RNA, we can develop and manufacture optimized sorting segments parallel to ongoing production and install them in the feeding system during an on-site check-up appointment with RNA experts particularly practical for feeding systems that are to be expanded to include additional feeding parts.

#### 5 STEPS TO OPTIMIZE PRODUCTIVITY



First contact

We will clarify your service requirements together. Whether you need an express service, preventive measures or a system extension - we will find the right solution for your needs.



Measurement analytics

A systematic measurement of the system at your premises helps to determine the actual condition of the feed system and thus forms the basis for targeted optimization.



Perform simulation

If necessary, our engineers use our proprietary simulation modules or FEA to work out optimization measures.



Present results

The results are discussed with you. You can then implement our recommendations either on your own or via the RNA service.



optimizations

Finally, the feeding system

Finally, the feeding system is taken to the next level: New drive tuning, optimized sorting segments, feedback to the parts supplier...



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