



**HIGH-PRECISION BALL BEARINGS**

**Quality in Perfection**

**Management Manual**  
DIN EN ISO 9001:2008

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## Quality in Perfection

GRW is an industrial company which occupies a leading position in the development, manufacture, and marketing of high precision miniature ball bearing solutions in the international market. Our aim is to win over our customers in the long term with excellent products and outstanding customer service. Continuous optimization of our products and processes guarantees growth and the long-term success of our company.

An integrated management system has been established for successful implementation and observance of our targets, and this makes it possible for us to meet all market demands and the demands of our customers. Our corporate strategy, which is based on growth and innovation, represents the foundation of a successful partnership with our customers and suppliers. Implementation of this strategy allows us to offer our staff a work environment which is – and will remain – interesting and safe for them.

The management system described here is compliant with the demands of **DIN EN ISO 9001:2008** and is applicable to all GRW business areas. The targets and procedures in our management system help to bring about constant improvement of all GRW business processes and services. In addition our entire staff is required to follow this system.

## The Company

The GRW corporate group, with its head office in Rimpfing Germany, an assembly location in Prachatice in the Czech Republic, and a sales office in the US, is a worldwide technology leader in the development and manufacture of high precision miniature ball bearing solutions.

Our core products include a wide range of radial deep groove ball bearing variants, from 1 mm to 35 mm bore and 3 mm to 47 mm external diameter, available in metric and imperial dimensions.

We also have state-of-the-art manufacturing processes to produce accessories and storage units, as well as special ball bearings on the basis of a modular system. This results in reduced development times and optimized costs.

From low volume custom system solutions to high volume standard applications – GRW offers its customers expert advice, outstanding engineering, and minimal implementation times for all their applications.

The GRW corporate group has more than 500 employees and is represented worldwide by a large number of regional representatives.



## The Locations

### Assembly Location – Prachatice, Czech Republic

The business location in the Czech Republic was founded in 1996.

Further future-oriented investments were made in our Czech site in 2012, with the purchase of a plot of land and construction of a new, state-of-the-art production facility for assembly of high precision ball bearings.

Since 2013, GRW in Prachatice has employed more than 170 specialists who work in parallel with the Rimpar plant to carry out pre-assembly and final assembly in an ISO 7 class, 1,400 sq m state-of-the-art clean room.

### Sales Office – Sandston Virginia, USA

Since 2003, the American market has been served by a GRW sales office of its own.

The sales team is made up of specialists in the planning and design of miniature ball bearings and supports our customers with complex engineering services, helping them to reach their goals.

### International dealer network worldwide

GRW's miniature ball bearings are represented in virtually all important world markets thanks to more than 40 distributors and sales offices.



## Our Customers

We supply our products worldwide to leading original equipment manufacturers and dealers working in several fields, including:

- Medical and dental technology
- Aerospace technology
- Vacuum technology
- Mechanical and plant engineering
- Measuring systems
- Electrical engineering
- Microelectronics
- Turbo technologies
- Food industry

## The Basic Philosophy

Our primary goal is to create long-term loyalty among our customers with our high quality products. Our entire staff is required to know the relevant requirements of our customers in their specific field and meet their expectations. Only then can we achieve outstanding, long-term customer satisfaction in terms of quality, delivery and price.

To help GRW live up to these standards each and every day, we maintain constant communication with our customers so we can determine their specific requirements, thus enabling us to efficiently focus our efforts.

We operate a system involving constant improvement of our processes, and we review our processes by means of a modern system of indicators which allows us to recognize and utilize potential for improvement. Our customers are the driving force of all of our business processes.

Our Mission Statement conveys the factors that shape our actions and drive us forward:

**TO BE RECOGNIZED AS  
THE PREMIER PROVIDER FOR  
HIGH PRECISION MINIATURE  
BALL BEARING SOLUTIONS.**



## The Suppliers

The outstanding services offered by our suppliers place us in a position to offer our customers superb products and services.

We truly appreciate partnership relationships and open communication with our suppliers. For us, building up business relationships as a basis for longer-term cooperation is very important.

Our suppliers' performance is also reflected in our capability.

This is why we measure, assess and support our suppliers according to standardized quality benchmarks and the demands of our customers. Only the very best suppliers make it possible for us to provide high quality services for our customers.



## Our Staff

Our staff makes crucial contributions to efficiency, customer satisfaction and hence the success of the company.

They are the most important resource our company has. Each member of our staff bears personal responsibility for the quality and efficiency of the services they provide. They are aware of this responsibility and always work to ensure the highest quality product.

The tasks, responsibilities and targets of each staff member form a framework for supporting their skills and actions.

All staff members work according to a principle:

**"Preventing discrepancies takes precedence over elimination of faults!"**

The internal customer-supplier principle has been introduced throughout the company on the basis of our process model. This means that in the process structure, each person working within this process is viewed as a customer. In other words, external customers and internal process customers are treated exactly the same. The GRW staff is at the very heart of our company.



## The Mission Statement

**TO BE RECOGNIZED AS  
THE PREMIER PROVIDER FOR  
HIGH PRECISION MINIATURE  
BALL BEARING SOLUTIONS.**

WHO WE ARE, WHAT WE DO, AND HOW WE DO IT.

- GRW is a medium-sized company operating globally and focusing on growth and profitability.
  - Our ambition is to create technically innovative products that are beneficial to our customers and help sustain the environment.
  - We constantly strive to expand our leading position with our products and solutions within in our market segments by utilizing our superior know-how and operational excellence.
  - For more than 70 years, we have concentrated on the manufacture of high precision ball bearings that offer our customers sustainable value.
  - We view ourselves as an efficient, reliable partner for our customers, suppliers, staff and shareholders.
- Our products are the result of our efforts to achieve precision and perfection within our core competencies. Our target is always to create the perfect product.
  - Our corporate culture (dealing responsibly with one another and providing further training and development opportunities for all our staff within the company) goes to guarantee a motivated, highly qualified team. This is the core that successfully deals with complex tasks, the rapid pace of technical progress and the constantly changing demands of the market by employing qualified specialists and executives, which keeps us at the top of our game.



## The Values & Drivers

### What moves us, and what characterizes us.

#### Values

- **Respect**
- **Openness**
- **Responsibility**
- **Team spirit**

#### Drivers

- **Profitability**
- **Quality**
- **Innovation**
- **Sustainability**

For GRW, it goes without saying that we need to ensure respectful treatment of all of the resources entrusted to us. This is an indispensable prerequisite for a successful corporate policy. **Respectful** interaction with staff and business partners is very important to our overall success.

**Openness** at all levels of internal and external business communication makes us a predictable and reliable partner. Transferring decision-making power to our staff and allowing them to take over **responsibility** for their own work areas provide qual motivation and are a key to our success. The success of the team is crucial. Our staff shares their knowledge and always manages to maintain overall focus due to our **team spirit**.

Entrepreneurial thoughts and actions not only characterize the commercial development of the company, but are also a driving force for our **innovative** capabilities. When our performance meets the toughest demands we know we have met our **quality** goals. We achieve this by means of consistent quality management in all business areas.

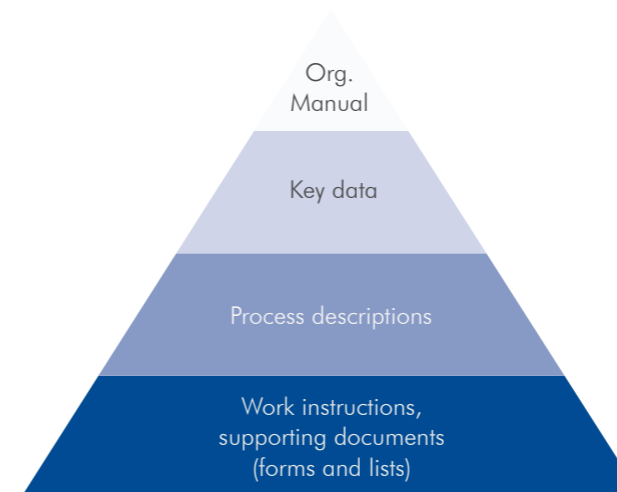
**Profitability** (the opportunity to make a profit which is sustainable in the long-term) forms the fundamental basis for future-oriented corporate policy and investment. **Sustainability:** Conserving natural resources and avoiding unnecessary waste products, are factors which allow us to pursue the target of helping to preserve our environment.

## Our Management System

### According to **DIN EN ISO 9001:2008**

The management system documentation based on DIN EN ISO 9001:2008 is divided into four levels:

1. Organization manual
2. Key performance indicators (KPIs)
3. Process descriptions with responsibilities
4. Work instructions (work and test instructions) and supporting documents (e.g. checklists, forms)



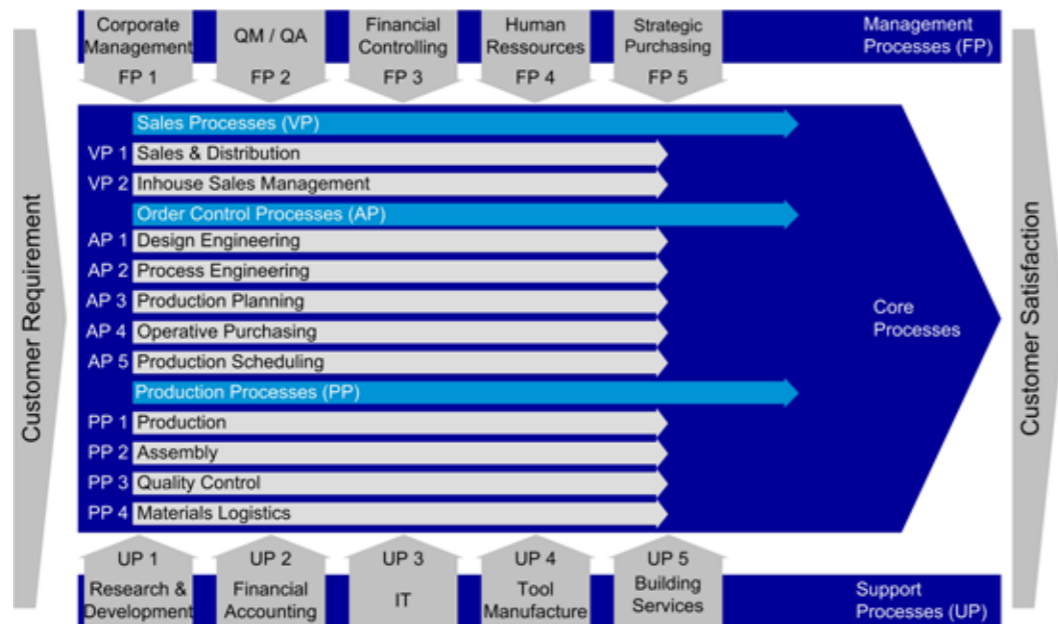
The management manual for customers, staff and suppliers which you see in front of you, belongs to the first level of documentation. It includes our business principles and corporate policy.

The second to fourth levels of the documentation include a process description indicating responsibilities, interfaces and interactions, as well as all key data and documents which are used to control the quality of our products and processes.



# Our Processes

## Process landscape



The GRW group is structured as a process organization. All of the main activities within the company are depicted in these processes and aim to meet customer demands and achieve a high level of customer satisfaction. In this context, we focus on efficient process design and constant process improvement.

As you can see from the process landscape, the processes are divided into three categories:

1. The management processes are used for strategic alignment.
2. The core processes form the value chain.
3. The supporting processes provide the necessary services for the management and core processes.

Reasonable targets are defined in order to ensure effective and efficient process management. Achievement of these targets is constantly monitored by means of a modern key data system. Discrepancies are indicated promptly. A process officer is appointed for each process, and this person is responsible for process design and achievement of process targets.

**At the heart of everything we do:  
Our customers!**

## Reciprocal Effect of Our Processes

The responsibilities matrix which you can see here serves to clarify the integration nature of our management system. It describes the extent to which the individual processes interact with one another.

The strength of this reciprocal effect is indicated by means of a weighting between 0 and 3, with ascending importance.

How strong is process Y effected by decisions or results of process X?

0 no effect  
1 light effect  
2 medium effect  
3 strong effect

No. of process X	on process Y																								
	FP 1 Corporate Management	FP 2 QM / QA	FP 3 Financial Controlling	FP 4 Human Resources	FP 5 Strategic Purchasing	VP 1 Sales & Distribution	VP 2 Inhouse Sales Management	AP 1 Design Engineering	AP 2 Process Engineering	AP 3 Production Planning	AP 4 Operative Purchasing	AP 5 Production Scheduling	PP 1 Production	PP 2 Assembly	PP 3 Quality Control	PP 4 Materials Logistics	UP 1 Research & Development	UP 2 Financial Accounting	UP 3 IT	UP 4 Tool Manufacture	UP 5 Building Services	IA Interaction			
FP 1 Corporate Management	3	3	3	3	3	1	1	1	2	2	1	3	3	1	1	3	2	2	2	2	2	2	42		
FP 2 QM / QA	3	3	1	1	1	3	1	2	2	2	2	1	2	2	3	1	2	0	1	1	1	32			
FP 3 Financial Controlling	3	1	3	1	2	2	1	0	0	1	2	1	2	2	1	1	2	3	0	1	1	27			
FP 4 Human Resources	2	1	1	3	1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	24			
FP 5 Strategic Purchasing	2	1	2	0	3	2	1	0	0	1	3	0	1	1	1	1	1	0	0	1	0	18			
VP 1 Sales & Distribution	3	2	2	2	2	3	2	1	3	2	2	3	3	1	1	1	1	1	0	0	0	34			
VP 2 Inhouse Sales Management	1	1	1	1	0	2	3	2	3	1	2	3	3	1	1	0	1	0	0	0	0	23			
AP 1 Design Engineering	1	1	0	1	0	2	1	3	1	1	1	0	2	2	1	0	2	0	0	2	0	18			
AP 2 Process Engineering	0	1	0	1	0	1	1	0	3	1	2	3	3	1	1	1	0	0	0	0	0	19			
AP 3 Production Planning	2	1	0	1	1	1	2	0	2	3	1	3	3	3	1	1	0	0	0	0	0	22			
AP 4 Operative Purchasing	1	1	1	1	2	1	1	1	0	1	3	1	2	1	3	1	2	0	1	0	0	22			
AP 5 Production Scheduling	1	0	0	1	0	1	2	0	1	2	1	3	3	2	1	0	0	0	1	0	0	19			
PP 1 Production	1	2	1	1	1	1	2	2	1	2	2	3	3	2	2	0	0	0	2	1	0	31			
PP 2 Assembly	1	2	1	1	1	1	2	2	1	2	2	3	2	2	2	0	0	0	2	1	0	30			
PP 3 Quality Control	1	3	1	1	1	1	1	1	1	2	1	2	2	2	0	1	0	0	1	0	0	22			
PP 4 Materials Logistics	1	2	1	1	1	1	2	0	0	2	2	1	2	2	0	1	0	0	1	1	0	21			
UP 1 Research & Development	2	2	1	1	1	2	1	3	1	1	1	1	3	3	1	1	1	0	1	1	0	28			
UP 2 Financial Accounting	2	0	3	1	1	2	1	0	0	0	2	0	1	1	0	1	0	0	0	0	0	15			
UP 3 IT	2	2	2	1	0	1	1	1	2	2	0	1	1	1	1	1	0	1	0	0	0	20			
UP 4 Tool Manufacture	0	1	0	1	0	0	0	2	1	1	0	1	2	2	1	1	0	0	0	0	0	13			
UP 5 Building Services	0	1	0	1	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	8			
IA Interaction	29	28	21	22	18	29	25	18	18	32	27	24	44	45	24	21	20	12	4	18	9	488			



## General Principles on the Responsibility of Management

GRW management and all our staff are responsible to provide services of the best possible quality, as well as observing confirmed deadlines and defined costs. Our principles in this respect are defined by management in the corporate policy. Our long-term targets are defined on the basis of this policy.

Management works in cooperation with the individual business areas on the basis of all the targets as a whole to formulate measurables for each area. This creates the conditions for achieving these targets by providing the necessary resources.

Quality awareness and customer focus are demonstrated by management so that all staff are aware of their personal responsibilities in respect to our products and services.

They also ensure that customer requirements (including environmental, official, and legal requirements) are properly determined. Quality targets are defined and measured for all processes within the company.

A management review takes place once a year in order to assess target attainment and the suitability and appropriateness of the management system.

A quality manager responsible for all business areas is appointed by management to monitor and further develop the management system. This person will also report to management on the performance of the system. Appropriate processes for communication are integrated throughout the entire company.



## General Principles on Product Realization

Customer requirements are determined, checked, and documented by our sales and technical staff. These requirements also include expectations not specified by the customer.

When the product requirements are amended, the relevant documents are adapted and the necessary staff are notified. The arrangements for communication are coordinated with each individual customer.

Our externally sourced components and services are obtained from suppliers who are systematically selected, regularly assessed and authorized by our strategic purchasing.

The services of our suppliers have a major impact on our performance. This is why we measure, assess and support the services of our suppliers according to our own quality benchmarks and the demands of our customers.

All products and services procured externally are checked to a great extent in order to ensure that the quality supplied meets our requirements.

Systematic monitoring of our testing and measuring equipment allows us to ensure that all quality controls and production facilities meet the customers' requirements and the demands of the applicable technical guidelines.

The capability and efficiency of our processes and the uptime of our machines and systems are guaranteed by means of preventative process regulation methods.

## Basic Principles on Management of Resources

The requisite employee and monetary resources are determined and made available each year so that our management system can be implemented and improved. Involving our staff in decision-making processes makes them aware of the significance of their actions and indicates to them their contribution to the attainment of the company's targets.

The necessary resources for the provision of high quality services are acquired via the company.

We provide clear internal company communication and continued systematic training for our staff in order to promote their abilities.

This is why we have installed a process which is used to assess the knowledge and skills of our staff at regular intervals and introduce appropriate training measures.

The implementation and effectiveness of these measures are continuously monitored and assessed.

Our infrastructure including our work environment, workplace safety, safety documents and cleanliness are compliant with the rules and standards in our industry.





## Basic Principles on Measurement, Analysis, and Improvement

Utilizing an extensive key data system allows us to ensure stable process workflows and monitor our management system. A management audit has been introduced within the corporate group which is used to check the organization and its processes at regular intervals.

Our consignments are checked intensively for discrepancies prior to dispatch so that we can supply our customers with products of outstanding quality. Targeted tracing allows us to determine the causes of faults in our products and services and helps eliminate these faults by means of in-house measures. As a result, systematic repetition of faults is prevented.



## Strategic Partnership

Avedon Capital Partners is an independent Private Equity Investor specializing in the provision of growth capital for medium-sized companies in Germany and the Benelux countries. As a partner to the mid-sized sector, Avedon offers flexible, customized participation structures and is able to support growth companies as both a majority and minority partner.

They aims to optimize companies to face future challenges and increase company value in a sustainable manner. A partnership relationship and open communication with portfolio companies are important to Avedon. Maintaining advisory board appointments and regular partner meetings ensures that Avedon remains in constant contact with the management.

The objective is to secure technological leadership and long-term success of the company in the niche market of high precision miniature ball bearings. To achieve this objective, it is essential for management and the staff to continue developing their business processes and products.

**AVEDON**  
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