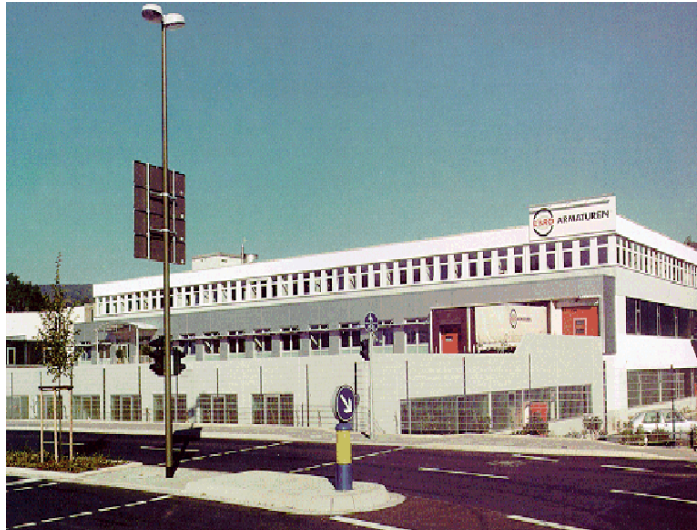



Quality Management DIN EN ISO 9001:2000



Serving our customers since 1972

EBRO ARMATUREN
Gebr. Bröer GmbH
Karlstr. 8
58135 Hagen

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0 Introduction

This Quality Management Manual describes the additional requirements imposed by the Pressure Equipment Directive (PED). The provisions it contains are mandatory for all employees of EBRO ARMATUREN Gebr. Bröer GmbH. EBRO Armaturen is certified under Module H of the PED.

The Quality Management Manual explains the company's structural and procedural organisation as required by ISO 9001. Its aim is to help the company develop and manufacture products that meet the demands of the market and to provide all customers with details of our quality control procedures, thus promoting confidence in the company's products.

1 Scope of application

This Quality Management Manual is intended for use at the Hagen manufacturing plant.

2 Other applicable industry standards and legislation

ISO EN DIN 9001:2000

Pressure Equipment Directive (97/23/EC)

3 Terms used and definitions

This international standard uses the quality management system concepts and terminology found in ISO 9000:2000.

4 Requirements of the Quality Management System

Processes are defined in line with the organisational structure of the company to ensure that finished products comply with the requirements of the customer. The company has introduced a quality management system as a means of developing, maintaining and improving established processes.

5 Management responsibility

Senior management is responsible for compliance with and monitoring of the requirements contained in the Quality Management Manual. It views the application of DIN EN ISO 9001:2000 as a means of evaluating and improving organisational procedures (processes) through the implementation of measurable targets.

Hagen, 02.06.2008

Approved by the Board


Peter Bröer
Dirk Mischnick

5.1 General

EBRO ARMATUREN Gebr. Bröer GmbH is a leading manufacturer of butterfly valves as well as electric and pneumatic actuators.

Our website at www.ebro-armaturen.com contains the following details about the company:

- Profile and history of the company
- Products
- Contacts
- Branches

Visitors to the site can submit praise, suggestions and criticism using a special on-line form.

5.2 Customer expectations and requirements

The determination to fulfil customer expectations and requirements lies at the heart of the company's philosophy.

The company's senior management is dedicated to making continuous improvements in quality at every stage of the production process – from product development to customer support – thus allowing us to manufacture highly reliable products that meet the demands of the market at an excellent price.

5.3 Compliance with official and legislative provisions

The company undertakes to ensure that all business and commercial activities are carried out in accordance with the provisions of the law and official regulations.

The table below gives an overview of the legislation and regulations which apply to the company:

Department	Official and legislative regulations	Reviewed / year
CEO	Pressure Equipment Directive (PED)	97/23/EC
Commercial manager	<ul style="list-style-type: none"> • Commercial law (HGB, BGB) • Tax law • Social security law • Employment law 	Updated by Lexsoft Software 4 times per year
Technical manager	<ul style="list-style-type: none"> • Materials recycling law (technical instructions – waste) 	Updated by TÜV Rheinland, Environment Agency
	<ul style="list-style-type: none"> • Occupational safety law (workplace directive, workplace order, accident prevention regulations) 	

5.4 Company policy

- **Partnership with the customer based on trust**
- **Quality services and products**
- **Qualified and highly motivated personnel**
- **Continuous product development**
- **Development of the quality management system as new guidelines become available**
- **Controlled flow of information between all internal and external sites**
- **Assuring a high degree of flexibility**

in conjunction with economic considerations.

Appropriate training and resources are provided for staff to help us achieve these aims.

5.5 Quality targets and planning (see 4 + 5)

The overall aim of the quality management system is to implement the company policy of EBRO ARMATUREN Gebr. Bröer GmbH by meeting the quality targets of the company and of its individual departments.

The purpose of the quality management system introduced in order to achieve this is to create a transparent system of procedures and of rules governing staff duties, skills and responsibilities, to document all activities, provide support, instruct staff and monitor business processes.

5.5.1 Quality targets

Implementation of Company Policy as established by senior management through the planning, installation, monitoring and maintenance of the quality management system.

5.5.2 Quality planning

The quality management system defines how quality requirements should be met. This is done on the basis of audit schedules. The audit schedules determine responsibilities and actions for all quality management activities in relation to customer orders and for specific projects.

5.6 Quality management system (QM system)

5.6.1 General

The quality management system has been adapted for and integrated into the overall organisational structure of the company (see 'Organisational Structure').

All managerial and non-managerial staff are actively involved in the implementation and improvement of our QM system and in implementing the established rules and processes. Designated process managers are responsible for defining a specific process, coordinating inter-departmental elements of that process, integrating the relevant staff and specifying appropriate remedial and preventive action in the event of non-compliance with the standard procedure.

The quality management system includes the following quality-related system documentation (see figure "Management system documentation: hierarchical structure").

Quality Management Manual (QMM):

The QMH contains the Company Guidelines, defines the structure of the organisation and includes the basic specifications and regulations applicable to the QM system. Responsibility for the Quality Management Manual lies with senior management. This QMH describes the quality management system introduced on the basis of DIN EN ISO 9001:2000. The Quality Management Manual is intended as a source of information about the quality management system for both internal and external use, as a training resource (overview for new staff) and as the basis for planning internal audits.

Process overview (PO):

The Process Overview details the inputs required and the resulting procedures for each specific process.

Procedure description (PD):

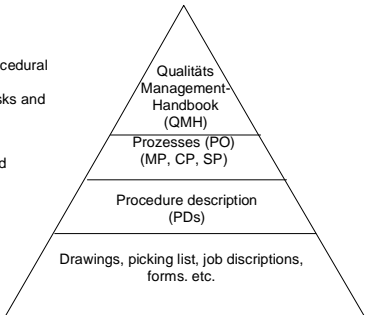
Procedure descriptions provide information about individual elements of a process.

Job instructions, forms, Verification documents (Quality records)

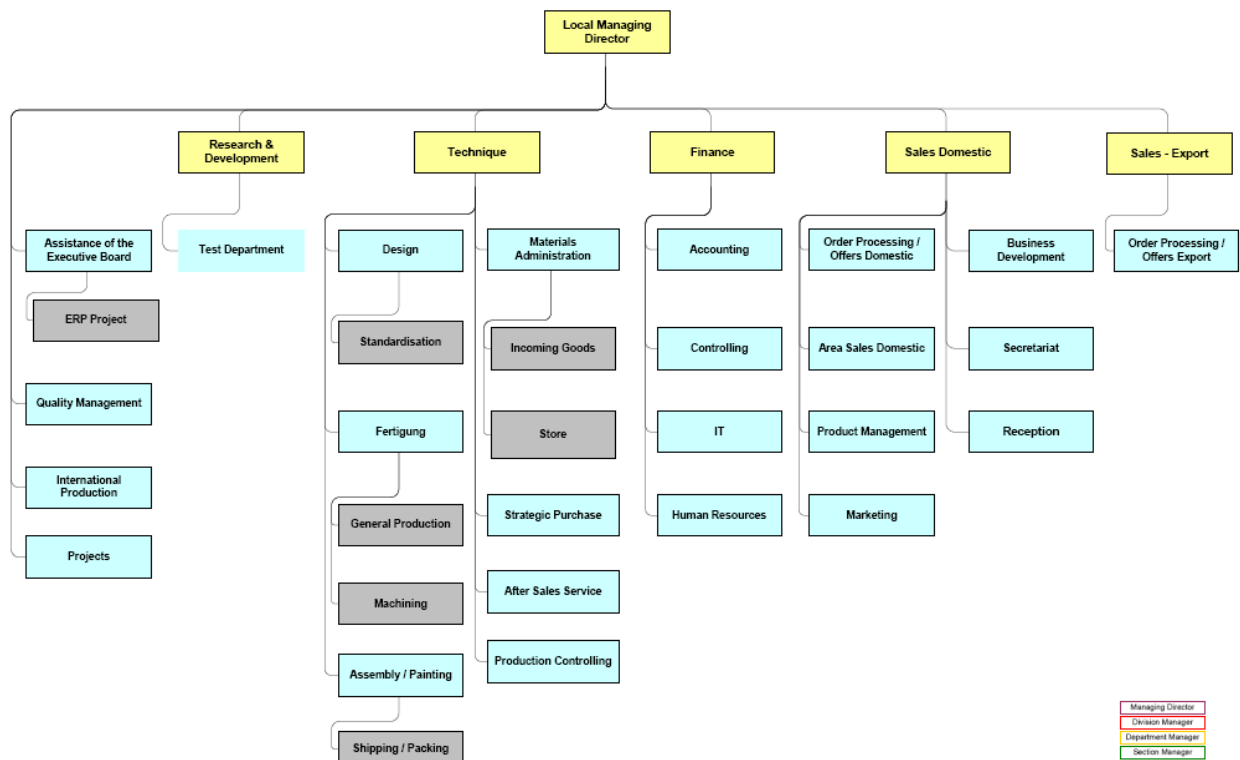
The quality management representative (QMR, see 5.6.5) issues the appropriate QM system documentation (QMH, PDs). These are published on the company intranet. In all cases, the documentation stored in the system is definitive, rather than any hard copies. All staff are obliged to provide the information required.

Process, job and audit instructions, forms and checklists are produced and maintained by the relevant departments.

Quality management system documentation: hierarchical structure

Personnel	Content	Purpose	Evaluation of effectiveness
CEO Senior management Department manager Clerical staff Operator	<div style="text-align: center;">  </div> <p>Quality policy, Structural and procedural organisation, Quality-related tasks and responsibilities</p> <p>Organisational and specific technical regulations</p> <p>Job specifications</p>	<p>Ensure the companies quality capability</p> <p>Ensure staff focus on quality</p> <p>Create quality-focused environment to achieve planned product quality</p>	<p>Management review</p> <p>Key indicators</p> <p>System audit</p> <p>Preventive actions</p>

Organisational structure



5.6.2 Responsibility and authorisation

The necessary resources are provided to carry out specific tests. Staff are deployed in line with their qualifications and given further training where required. Products may only be approved by staff who have been designated by senior management. Interim and final tests during the manufacturing and assembly process are carried out by machine operators themselves in accordance with the audit schedule. Faulty products may be blocked by any employee who identifies a fault.

5.6.3 Quality Management Manual

All processes are described in a Quality Management Manual (QMH) with the aim of meeting customer requirements at all times (see 5.6.1).

5.6.4 System procedures

Process-based classification

- customer-focused target-setting
- flexible organisational structure
- flexible control of operations

Classification of business processes

These are classified on the basis of the company's own business process map.

Management processes (MP)

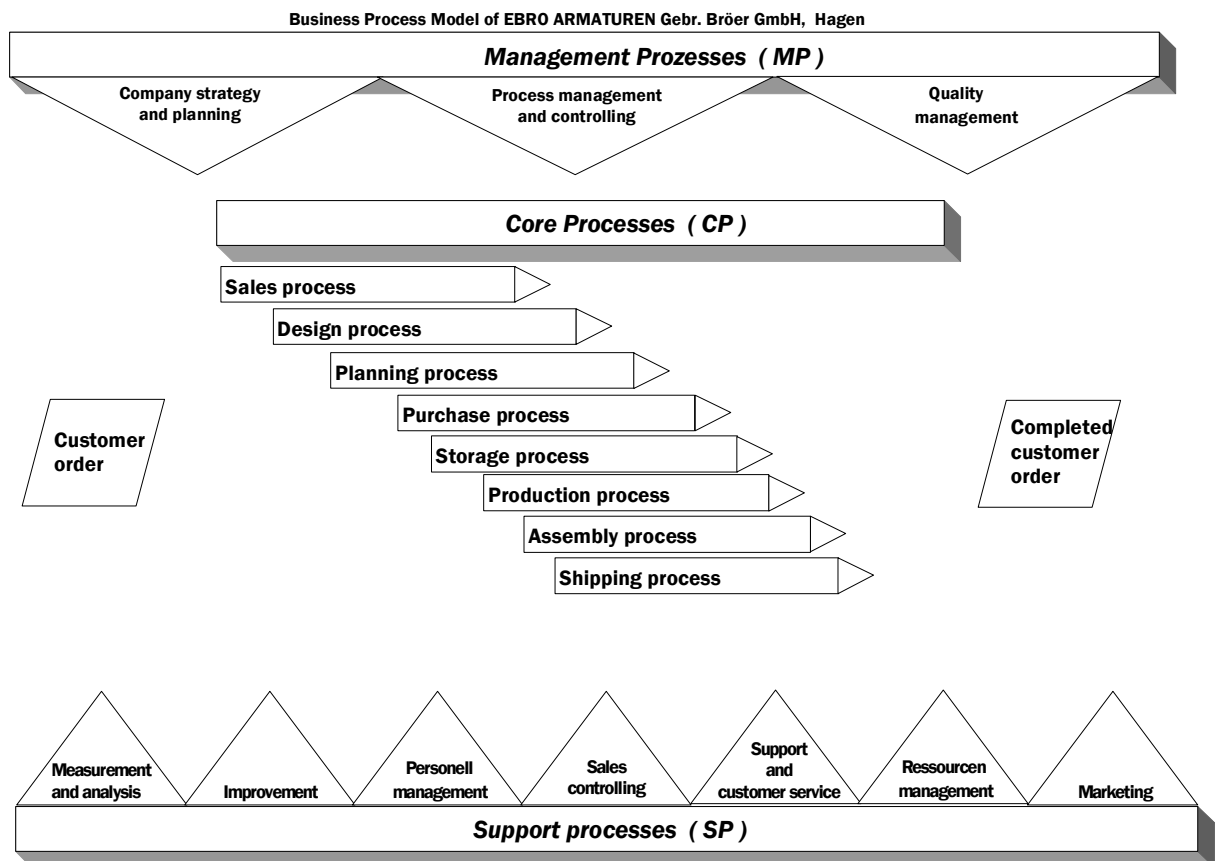
Management processes are those defined by management which establish process targets that plan resources, i.e. the framework for core and support processes, and evaluate company and process performance.

Core processes (CP)

Core processes are those operations which create value across all departments of the company. All core processes are related to customer-focused orders and services.

Support processes (SP)

Support processes involve the completion of tasks such as internal audits which do not directly relate to the customer but which are necessary to ensure the best possible functioning of core processes.



5.6.5 Senior management representative

The CEO delegates responsibility for the planning, introduction, monitoring, modification and further development of the quality management system and the production and updating of the Quality Management Manual to the Quality Management Representative (QMR). The QMR must notify the accredited audit centre (“designated centre”) in advance of any fundamental changes envisaged to the QM system in relation to the

PED. These changes are only implemented following their approval by the designated centre.

The QMR reports to the CEO and is a member of the company's senior management team. Irrespective of any other duties, the QMR has the responsibility and authority necessary to assure the correct operation of the quality management system.

5.6.6 Document control

The checking, release and storage of system-related documentation are laid out in detail in a Procedure Description (PD).

5.6.7 Administration of quality control records

Quality control records serve to demonstrate the fulfilment of quality requirements and the effectiveness of the quality management system. Appropriate records are therefore kept as evidence that the necessary quality assurance measures have been taken. Where required, these records are analysed and used to control the quality management system.

Quality records are defined in individual procedure descriptions:

- which documentation is needed for the records
- which office is responsible for drawing up the records
- storage of the records

5.7 Management review

Senior management evaluate the effectiveness of the QM system on the basis of process indicators:

Process	Area of responsibility	Period	Success indicators
1. Customer satisfaction	Sales	Annually Monthly	1. Customer satisfaction survey 2. Number of complaints received
2. Employee satisfaction	Personnel	Annually	1. Employee satisfaction rate 2. Staff fluctuation rate
3. Output	Production, Assembly	3 months	1. Capacity usage 2. Product quality 3. Orders completed by deadline
4. Supplier evaluation	Strategic purchasing	6 months	1. Qualitative performance 2. Delivery performance 3. Price
5. Acceptance of quality-based approach within the company	QM	Annually	1. Internal audit reports 2. Implementation of action plans
6. Achievement of targets	Senior management	Annually	Implementation of planned targets
7. Economic efficiency	Cost accounting	Annually	Comparison of costs with previous year

Allocation of responsibility:CEO

- Release business plan
- Supervise management review
- Sign Pressure Equipment Directive compliance declaration as confirmation that products conform to the requirements of the directive

Senior management

- Business planning

Process managers

- Analyse and detail internal processes
- Report on the status of action plans established under the last review
- Plan specific targets and resources for the area of responsibility
- Propose improvements

Controlling

- Coordinate reports on business performance
- Prepare basic operational data

Quality management representative

- Prepare results of internal and external audits
- Present status report on improvement measures
- Notify designated centre of any fundamental changes to the QM system

Senior management evaluate the information received in order to set new targets for the next evaluation period (1 year). Each process owner then produces a suitable action plan to help achieve those targets. The effectiveness of the action plan is reviewed at the next evaluation.

6 Resource management

6.1 General

The resources available are checked regularly on the basis of orders and developments. Short-term measures may involve the introduction of overtime, use of temporary staff and the outsourcing of orders; in the long term it may be necessary to make new permanent appointments or increase machine capacity.

6.2 Personnel resources

6.2.1 Appointment of personnel

Job descriptions should contain detailed answers to questions on the organisation of the company, i.e. in relation to decision-making responsibilities, decision-making authority, duties, disclosure requirements, etc. Job descriptions represent permanent written job specifications. The responsibilities of clerical staff and machine operators are laid out in procedure descriptions (PDs) in the Quality Management Manual (QMH) and, where

available, in specific job specifications. Quality Assurance has been integrated by senior management into the organisational structure (see Organisational Structure).

6.2.2 Training, qualifications and skills

The ability of the company to meet quality standards is dependent in large part on its staff. Training is planned and carried out to ensure that staff is well qualified and able to adapt to constantly increasing demands.

6.2.3 Appointment of process managers

Each process has a designated manager appointed by the senior team (see annex). Responsibilities for the individual stages of each process and their corresponding interfaces are laid out in the procedure descriptions.

With regard to all quality-related processes and activities, senior management, middle managers and especially the designated process managers are responsible for ensuring that:

- staff are aware of the impact of their particular tasks on the quality of our overall performance
- all staff are aware of the Company Guidelines and Company Policy
- the applicable system documentation is available for consultation at the workplace
- Processes are introduced in an effective manner and run efficiently.

6.3 Other resources

6.3.1 Information

Information procedures have been established so that the information required to control each process and ensure that products are free of defects can be updated:

- Internal notices, circulars
- Displays (notice board)
- Databases
- Professional magazines
- Industry standards, legislation

6.3.2 Infrastructure

The infrastructure required is identified, selected, provided and maintained through a number of mechanisms including investment, machine and operational planning.

This includes:

- appropriate working areas and equipment
- resources, hardware and software
- support services

Machine downtime is minimised by means of regular documented servicing and repairs.

6.3.3 Working environment

Action taken to create and improve the workplace environment and to implement safety procedures fosters a positive approach to work within the company.

7 Process management

7.1 General

EBRO Armaturen has established processes covering all aspects of the business from the initial customer request to the measurement of customer satisfaction in order to supply the product requested.

7.2 Customer relations processes

7.2.1 Verifying customer requirements

The contract review process takes into account both the customer's requirements and our own quality specifications in relation to products.

The processing of quotations and orders covers both standard products and special products.

7.2.2 Verifying the company's capacity to meet the established requirements

The customer's requirements are checked during preparation of the company's quotation.

Key elements to be checked during preparation of the quotation:

Check requests for technical/commercial feasibility

Clarify which PED category the products belong to

Produce and release the quotation on the basis of the request

Key elements to be checked during processing of the order:

Check the order for specific model required, price and deadline

Produce a job card (JC) on the basis of the order

7.2.3 Communication with customers

The sales department is expected to communicate effectively with customers.

- The Sales department analyses current and potential sales markets and determines customer requirements.
- It processes and assesses customers' requirements and clarifies their feasibility.
- It proposes new products and product modifications to meet the demands of the market.
- It evaluates reports submitted following visits.
- Field sales staff visit the premises of key accounts.
- As part of the overall customer support service it is responsible for evaluating feedback and complaints received from customers.

7.2.4 Customer property

This involves the same organisational process as for EBRO products. Customer property is stored in a separate warehouse or in a designated area.

7.3 Design and development

7.3.1 General

The CEO is responsible for the development of new products. The company's design department has the leading role in the realisation and approval of new products.

Design and development projects

A number of teams are set up during the development phase whose task is to ensure that designs meet requirements. Depending on the complexity of the product, the team is made up of staff from Sales, Development and Design, Testing, Manufacturing, Assembly, Quality Assurance, etc.

The Design manager is responsible for implementation up to release of the initial model and approval of the design by independent companies.

Development order (internal)

New product proposals are collected and evaluated by the Design department. A draft is then presented to senior management, who will decide whether to conduct a market analysis.

Senior management may then issue a development order. The main product details are summarised in a specifications document.

Development order (external)

For the development of customer-specific products, the Design manager receives the order, all the necessary documentation and the relevant customer contact details from the Sales department. Where required, the Design manager presents the specifications document/drawings to Sales for their approval by the customer. Further work may not begin until the customer has issued an approval notice.

7.3.2 Design and development: results

The Design manager is responsible for the preparation of a project plan containing details of specific jobs, responsibilities and deadlines. The Design manager is also expected to update the project plan as required. New developments are added to the project list as they arise.

7.3.3 Design and development: testing

The role of the Design team in collaboration with Quality Assurance, Production and Assembly is to evaluate the technical and economic feasibility of the product (e.g. tolerances, testing potential) as per the specifications document. The Design department then produces the necessary drawings based on the specifications document.

7.3.4 Design and development: verification

Verification of the design result involves checking that the design result matches the relevant design specifications.

All development work is documented by means of drawings, calculation records, technical data sheets, testing reports and trial results. All development documentation carries a reference number to ensure that it is uniquely identifiable.

Development documentation is also checked with regard to legal, safety, environmental and other applicable regulations.

Once a project has been completed and approved by EBRO's (and where appropriate the customer's) senior management, individual departments will be notified by the Design department.

Approval is documented by signing off the project in the specifications document.

7.3.5 Design and development: modifications

Design modifications are treated in the same way as new development projects. The procedure followed is that described in the sub-sections on Defining Requirements and Producing a Prototype. The new specifications document should refer to the design modification of an existing product.

7.4 Purchasing

7.4.1 General

The order centre is responsible for the punctual provision of all materials required by Production and Assembly.

New suppliers are assessed by Strategic Purchasing and Quality Management with regard to their ability to provide materials of the appropriate quality. Suppliers may not be approved until a positive report has been issued. Suppliers are continuously monitored with respect to punctuality and quality.

7.4.2 Purchasing information

In addition to its role of ensuring that materials are purchased with regard to obtaining the best possible financial conditions, the Strategic Purchasing department is also responsible for supplier quality, seeking alternative sources and for pricing and contractual negotiations.

Potential suppliers must also be able to provide evidence of their own quality assurance measures.

7.4.3 Verifying purchased products

Approved suppliers are continuously assessed by the Strategic Purchasing manager through the application of an internal procedure. Assessment is based on the results of sample deliveries, goods inward checks, visits to the supplier's premises, past experience and complaints.

7.4.3.1 Sample deliveries

The first supplies provided take the form of a sample delivery, which is subject to an initial verification report.

The sample delivery is evaluated by the Quality Assurance or Testing departments for compliance with the drawings provided. A definitive approval notice is then issued by the Design department. Following satisfactory delivery the product is then approved for batch supply.

7.4.3.2 Complaints

Where faults are identified in products delivered, Purchasing must be notified immediately by the Quality Assurance department or by the specific department which has procured the goods. Purchasing will then issue a complaint notice to the supplier and request a response to the fault report.

7.5 Production and service procedures

7.5.1 General

Appropriate quality assurance measures are in place to ensure that every job and testing stage throughout the entire manufacturing process is conducted in the correct manner. This begins with the selection of materials required from storage up to the point of delivery or return to storage.

Production documentation is based on the drawings and technical data sheets prepared by the Design department and by the technical instructions covering subsequent processing. The Materials Control department prepares the production plans containing the sequence of job and testing steps.

7.5.2 Sequence of processes

The core specification for production and assembly is the Job Order, which defines the sequence of tasks and testing to be completed with reference where necessary to additional product-specific assembly, testing and packaging instructions.

7.5.3 Provision of materials

Job order materials are picked in relation to each order for assembly/production. The removal of components from storage is immediately recorded in stock records.

7.5.4 Identification and tracking

All products supplied are uniquely identifiable by type and specific model. Products and consignments are marked throughout every stage of the production process from the point of receipt to final delivery.

7.5.5 Handling, packaging, storage, preservation and delivery

Only labelled, checked and approved products may be taken into storage. Stock records involve both computerised and manual entries. Regular inventories are carried out.

Warehouse facilities are designed to allow for the appropriate storage and smooth selection of materials with regard to organisation, labelling and packaging.

Materials may only be forwarded where a production or testing job has been completed and this is confirmed in the accompanying documentation. This applies to the receipt of goods, production and delivery. Correct packaging ensures that the quality of the product is not affected during transport. Padding is collected from goods received and re-used for delivery. Suitable packaging is provided for overseas transport. Special customer instructions (e.g. packing lists for international delivery) are attached to the

corresponding packaging units. The Delivery department is also responsible for selecting and preparing customer deliveries.

Only goods that have been checked and labelled may be released for delivery. The relevant delivery and transport procedures may be commenced once all the necessary shipping documentation has been received.

7.5.6 Process monitoring

Machine downtime is minimised by means of regular documented servicing and repairs. The production process is monitored by the use of fault codes and process capability analysis (statistics, Cp capability index). Specific instructions are issued by technical managers whenever new materials, procedures or systems are introduced.

7.6 Control of non-conforming products

7.6.1 General

Appropriate measures are in place to prevent the further processing or delivery of non-compliant products.

7.6.2 Fault checking and handling

All staff in the Goods Inward, Production, Warehouse, Assembly, Delivery and Quality Assurance departments are required to mark any defective products and any products that cannot be uniquely identified by labelling them with a “Gesperrt” (Blocked) status card. A fault report is then passed on to the relevant office for further action. After consultation with the departments concerned, a decision may be taken to:

- release the goods by special order
- undertake internal/external remedial work
- return the goods
- reject / scrap the item.

If it is not possible to decide immediately on the action to be taken, the faulty products must be kept in the holding store pending clarification.

EBRO ARMATUREN® Quality Management	
Blocked	
Quantity	<input type="text"/> Pcs.
Reasons:	
<input type="text"/>	
<input type="text"/>	
Date:	Inspected by:

7.7 Customer support

Customer support covers:

1. Customer service

Where requested, the company will make relevant product information available to the customer following delivery. Should the customer wish, we can also prepare separate testing and approval certificates for the products ordered.

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Product installation and repair can also be carried out on site by our own technical service staff at the request of the customer.

We also offer training on the operation of products. The Sales department and Technical Support service can be contacted by telephone in the case of technical queries.

2. Complaints

Customer complaints must be forwarded directly to Sales. Sales will conduct a fault analysis to identify whether the fault lies in the product itself or in its incorrect handling (faulty installation, incorrect medium, wear or excessive temperatures).

Sales will negotiate the subsequent action to be taken with the customer (e.g. replacement, repair under warranty or paid for by the customer). Where required a customer support technician may be sent to the customer's premises.

Where the fault is due to inferior quality of the product, the details are forwarded to the Quality Assurance manager, who will then devise and implement remedial action with the relevant departments (Design, Production).

Sales will conduct a specific product and fault assessment for all complaints received. The results of this analysis must be presented to senior management and the Quality Assurance manager on a monthly basis.

3. Repair (Customer support)

Defective products may be repaired on site or at the factory. Repair orders are generated by Sales and forwarded to the Repairs department, where staff will coordinate the repair independently and draw up a job report for Sales. The job report is then assessed by the Customer Support manager.

The assessment is to be prepared and presented to senior management every six months.

4. Obtaining substitute parts

Orders for substitute parts follow the same procedure as that used for standard orders.

8 Measuring, analysis and improvement

8.1 General

Each department has its own statistical methods for the collation, analysis, improvement and documentation of figures, data and facts. The results are used as terms of reference for the Management Review. The respective process owners are responsible for the correct preparation of statistical reports.

8.2 Measuring

8.2.1 Measuring system performance

Measuring and analysis procedures are in place to determine the effectiveness of the Quality Management system (QM system). This includes:

- setting quality targets
- analysing results
- conducting reviews on the effectiveness of the QM system.

Customer satisfaction is also included as a measure of the effectiveness of the QM system.

8.2.1.1 Measuring customer satisfaction

The Sales department conducts regular customer satisfaction assessments with a view to implementing appropriate measures and setting specific targets.

8.2.1.2 Internal quality audit

Internal quality audits are carried out to evaluate the effectiveness of the Quality Management system. The aim is to identify weak points in the system, propose improvements, monitor the effectiveness of these measures and assure that the customer's quality requirements are met.

The CEO is responsible for the installation and maintenance of quality audits. Tasks relating to the planning, execution and evaluation of quality audits are delegated to the QMR. Process managers can be used as internal auditors. The QMR will draw up an audit plan for the scheduling of regular audits. This audit plan must be presented to and approved by the CEO. To ensure that the results of the audit are objective, the member of staff responsible for the audit must not have other duties in the area being audited.

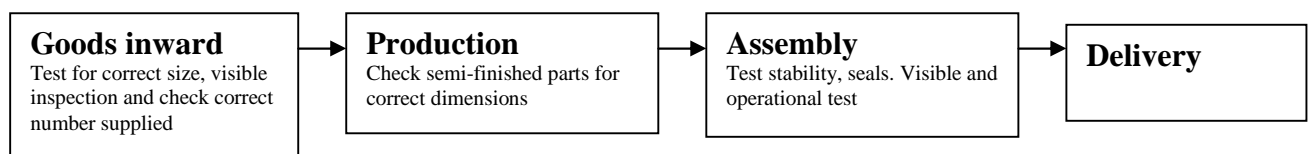
The overall results of the audit are recorded in an audit report on the basis of the audit plan and checklists. At the end of the audit this report is distributed to the departments which have been audited, to all team members and to senior management.

8.2.2 Measuring quality processes

Process owners are required to define a set of indicators in order to derive information on specific processes. These indicators are used for process analysis and optimisation. See 5.7 Management Review.

8.2.3 Measuring product characteristics

A range of quality assurance tests have been specified for all products covering every stage from the receipt of materials to production. Test planning is intended to ensure that the characteristics and functions of individual products match their specifications. Approval is then recorded in the corresponding documentation. Faulty products are blocked and are therefore not forwarded to the next production stage.



8.2.4 Monitoring testing equipment

In order to ensure that only properly calibrated testing equipment is used, all instruments involved in the testing of bought-in parts and company products must be inspected and serviced in accordance with established written procedures.

All testing equipment delivered is subject to an initial inspection before its first use. The results are recorded in a Test Equipment file (IT). The file contains the date and measuring results of the last inspection and the date for the next inspection.

Each item of testing equipment is given a unique reference number, which is recorded in the test equipment file (IT). This number also serves as the identification number for that item.

Correctly functioning test equipment bears an inspection label indicating the period for which its use is authorised.

Only test equipment bearing a valid inspection label may be used. If the validity date has expired, the user has a duty to bring the test instrument to the inspection laboratory for inspection.

8.3

8.4 Data analysis

Relevant data must be collected and evaluated in order to analyse and improve the Quality Management system. This includes the evaluation of:

- internal audits
- remedial and preventive action
- non-compliant products
- customer complaints

8.5 Improvement

8.5.1 Remedial action

Specific targeted action and planned systematic measures are taken to tackle the causes underlying reported faults and to prevent further quality problems.

These measures cover bought-in materials, finished components and products and procedures and processes.

Following analysis of a fault, the Quality Assurance manager will liaise with the affected departments to decide whether it is necessary or practical, in the case of serious defects, to carry out remedial action.

To help identify systematic faults and prevent new ones arising, the Quality Assurance manager will conduct a regular evaluation of quality records, check procedures and processes and examine complaints and comments.

Should remedial action be necessary, it will be ordered by the Quality Assurance manager in consultation with the affected departments. The departments concerned are responsible for the correct execution of any remedial measures and for notifying the Quality Assurance manager or senior management in the event of any difficulties in their application.

The Quality Management representative (QMR) is responsible for monitoring the implementation and checking the effectiveness of any remedial action.

In the case of remedial action involving suppliers (bought-in parts), the Purchasing department will contact the supplier concerned.

The supplier or sub-supplier will be sent a written notice requesting that remedial action be taken. The effectiveness of this action will be monitored for a limited period by means of stricter controls at the point of receipt (increased number of samples, additional tests).

8.5.2 Preventive measures

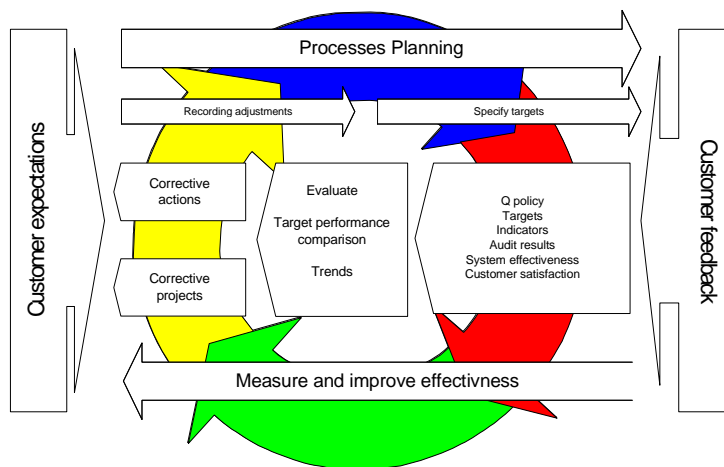
The purpose of the criteria described in section 7.6 is not only to identify faults where they exist but also to identify the potential sources of faults. This should feed into the

introduction of preventive measures, which are then carried out and monitored as per 8.4.1.

8.5.3 Improvement processes

A range of continuous improvement procedures are in place based on company policy, quality targets, internal audit results, data analysis, remedial and preventive action. The following measures are also applicable to the concept of continuous improvement:

- Problem-solving / improvement projects
- Process improvement
- Adoption of an internal customer-supplier chain approach
- Changes in management style



9 Annex

9.1 Descriptions of processes and procedures

The processes and procedure descriptions listed below cover ISO 9001 requirements

Category	Document	Process manager	Ref. no.	Revision
Management Processes				
Management responsibility	Process overview	CEO	PÜ_5_00	0
QM evaluation	Procedure description	CEO	VB_5_01	0
Quality policy	Procedure description	CEO	VB_5_02	0
Resource planning	Procedure description	CEO	VB_5_03	0
Management Review	Procedure description	CEO	VB_5_04	0
QM system	Process overview	QMR	PÜ_5.5_00	0
Publication of and modifications to QMH	Procedure description	QMR	VB_5.5_01	0
Produce PDs, POs	Procedure description	QMR	VB_5.5_02	0
Organisational structure chart	Procedure description	CEO	VB_5.5_03	0



Legend	Procedure description	QMR	VB_5.5_04	0
Document administration	Procedure description	QMR	VB_5.5.6_01	0
QM documents	Procedure description	QMR	VB_5.5.6_02	0
Revision status	Procedure description	QMR	VB_5.5.6_03	0
Category	Document	Process manager	Ref. No.	Revision
<i>Core processes</i>				
Sales	Process overview	Sales manager	PÜ_7.2_00	0
Detailed enquiry	Procedure description	Sales manager	VB_7.2_01	0
Special enquiry	Procedure description	Sales manager	VB_7.2_02	0
Quotation follow-up	Procedure description	Sales manager	VB_7.2_03	0
Order	Procedure description	Sales manager	VB_7.2_04	0
Amendments / cancellation	Procedure description	Sales manager	VB_7.2_05	0
Order feedback	Procedure description	Sales manager	VB_7.2_06	0
Objection	Procedure description	Sales manager	VB_7.2_07	0
Control of products supplied by the customer	Procedure description	Sales manager	VB_7.2.4_00	0
Design control	Process overview	Design manager	PÜ_7.3_00	0
Design enquiry	Procedure description	Design manager	VB_7.3_01	0
Design order	Procedure description	Design manager	VB_7.3_02	0
Project handling	Procedure description	Design manager	VB_7.3_03	0
Drawing inspection	Procedure description	Design manager	VB_7.3_04	0
Drawing exchange	Procedure description	Design manager	VB_7.3_05	0
Drawing modification	Procedure description	Design manager	VB_7.3_06	0
Documentation	Procedure description	Design manager	VB_7.3_07	0
Purchasing	Process overview	Purchasing manager	PÜ_7.4_00	0
Enquiries	Procedure description	Purchasing manager	VB_7.4_01	0
Quotation processing	Procedure description	Purchasing manager	VB_7.4_02	0
Quotation follow-up	Procedure description	Purchasing manager	VB_7.4_03	0
Order	Procedure description	Purchasing manager	VB_7.4_04	0
Monitor deadline	Procedure description	Purchasing manager	VB_7.4_05	0

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Compare order confirmation	Procedure description	Purchasing manager	VB_7.4_06	0
Approve / Block supplier	Procedure description	Purchasing manager	VB_7.4_07	0
Evaluate supplier	Procedure description	Purchasing manager	VB_7.4_08	0
Approval certificate from Produktie (NL)	Procedure description	Purchasing manager	VB_7.4_09	0
Planning	Process overview	Inventory control manager	PÜ_7.5_P1	0
Internal materials procurement	Procedure description	Inventory control manager	VB_7.5_P1	0
Production	Process overview	Production manager	PÜ_7.5_03	0
Production of internal orders	Procedure description	Production manager	VB_7.5_F1	0
Assembly	Process overview	Assembly manager	PÜ_7.5_04	0
Serial assembly/Heavy equipment assembly	Procedure description	Assembly manager	VB_7.5_M1	0
Category	Document	Process manager	Ref. No.	Revision
Core processes				
Final assembly	Procedure description	Assembly manager	VB_7.5_M2	0
Silicone-free assembly	Procedure description	Assembly manager	VB_7.5_M3	0
Control	Process overview	Inventory control manager	PÜ_7.5_02	0
Coordinate material flow/ production dates	Procedure description	Inventory control manager	VB_7.5_S1	0
Respond to deadline request	Procedure description	Inventory control manager	VB_7.5_S2	0
Update master file	Procedure description	Inventory control manager	VB_7.5_S3	0
Storage	Process overview	Warehouse manager	PÜ_7.5_05	0
Order picking using job card	Procedure description	Warehouse manager	VB_7.5_L1	0
Internal orders Customer-specific	Procedure description	Warehouse manager	VB_7.5_L2	0
Bought-in parts	Procedure description	Warehouse manager	VB_7.5_L3	0
In-house components	Procedure description	Warehouse manager	VB_7.5_L4	0
Actuator assembly	Procedure description	Electrical assembly manager	VB_7.5_E1	0
Support processes				
Testing/inspection	Process overview	QA manager	PÜ_8.2.3_00	0
Product identification and tracking	Procedure description	QMR	VB_7.5.4_00	0
General operational functions	Procedure description	QA manager	VB_8.2.3_01	0
Goods inward checking	Procedure description	Goods Inward manager	VB_8.2.3_02	0

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CNC – interim production testing	Procedure description	QA manager	VB_8.2.3_03	0
Testing stability and seals	Procedure description	Assembly manager	VB_8.2.3_04	0
Final testing	Procedure description	QA manager	VB_8.2.3_05	0
Sample	Procedure description	QA manager	VB_8.2.3_06	0
Independent approval GL	Procedure description	QA manager	VB_8.2.3_07	0
Test equipment monitoring	Procedure description	QA manager	PÜ_8.2.4_00	0
Fault control	Procedure description	QA manager	VB_7.6_00	0
Plan remedial and preventive action	Procedure description	QMR	VB_8.4.1_01	0
Internal quality audit	Process overview	QMR	PÜ_8.2.1.2_00	0
Plan quality audit	Procedure description	QMR	VB_8.2.1.2_01	0
Quality audit	Procedure description	QMR	VB_8.2.1.2_02	0

Category	Document	Process manager	Ref. No.	Revision
Support processes				
Training	Process overview	CEO	PÜ_6.2.2_00	0
Determine training requirements	Procedure description	CEO	VB_6.2.2_01	0
Hold training courses	Procedure description	CEO	VB_6.2.2_02	0
Introduction of new staff	Procedure description	CEO	VB_6.2.2_03	0
Customer service	Process overview	Customer support manager	PÜ_7.7_00	0
Repairs	Procedure description	Customer support manager	VB_7.7_01	0
Returns	Procedure description	Customer support manager	VB_7.7_02	0
Customer support	Procedure description	Customer support manager	VB_7.7_03	0
IT	Process overview	IT manager	PÜ_6.3.2_00	0
IT responsibilities	Procedure description	IT manager	VB_6.3.2_01	0
IT topology	Procedure description	IT manager	VB_6.3.2_02	0
IT security planning	Procedure description	IT manager	VB_6.3.2_03	0
IT user access rights	Procedure description	IT manager	VB_6.3.2_04	0
IT software and licences	Procedure description	IT manager	VB_6.3.2_05	0
IT operating systems	Procedure description	IT manager	VB_6.2.3_06	0
QA data security	Procedure description	QA manager	VB_5.5.6_04	0

9.2 Abbreviations

DVGW	Deutscher Verein des Gas- und Wasserfaches e.V.
Vd TÜV	Verband der Technischen Überwachungs-Vereine e.V.
LROS	Lloyd's Register of Shipping
BV	Bureau Veritas
GL	Germanischer Lloyd
DNV	Det Norske Veritas