

Centrifugal pumps

Company profile



Mechanical engineering | Process engineering | Environmental engineering | Swimming pool

schmalenberger
strömungstechnologie



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Verband deutscher Maschinen- und
Anlagenbau e.V. (VDMA)
www.vdma.de



European Waterpark Association e.V.
www.waterpark.de



Bundesfachverband Öffentliche Bäder (BöB)
www.boeb.de



Internationale Akademie für Bäder,
Sport- und Freizeitbauten e.V. (IAB)
www.iab-ev.de



Firmen im Gas- und Wasserfach
www.figawa.de



www.bsw-web.de

System or individual solutions

Life cycle costs

Hi-tech materials

Environmental compatibility



Product philosophy

Over 50 years experience and know-how.

Pump technology since 1954: from standard pump to electronically-monitored pump system, we have experienced continually growing development. Innovation, progress and growth have made us one of the leading providers of centrifugal pumps today for the entire coolant supply and disposal cycle in the metal machining industry. Our tank installation and

dry installation pump ranges provide users with a comprehensive selection of lifting and delivery pumps. In addition to close-coupled and cantilever designs, the manufacturing and supply programme encompasses single-stage and multi-stage pumps. Our customers have a sophisticated range of products. This is why we not only consid-

er ourselves as purely a product supplier, but a know-how and technology partner supplying decisive impulses for product and cost optimising of your development and production departments.

Our customer and product philosophy rests on three pillars:

Hi-tech materials:

We are well known on the market as a trend setter with numerous patents and creative innovations. CAD design and our own prototype construction are as much a part of our company as the use of new technologies and materials. Our organisation enables us to react extremely successfully, rapidly and flexibly to continuously-changing market requirements.

System or engineered solutions:

Our standardised series offer you the advantages of rapid availability and enable you to react quickly and effectively to your customers' needs. We maintain stocks of numerous components to meet your requirements. Our engineered solutions enable us to design and produce tailored pump solutions which exactly meet your needs (e.g. with abrasion-resistant surface finishing, special motors, optimised levels of efficiency and compact designs).

Environmental compatibility and LCC:

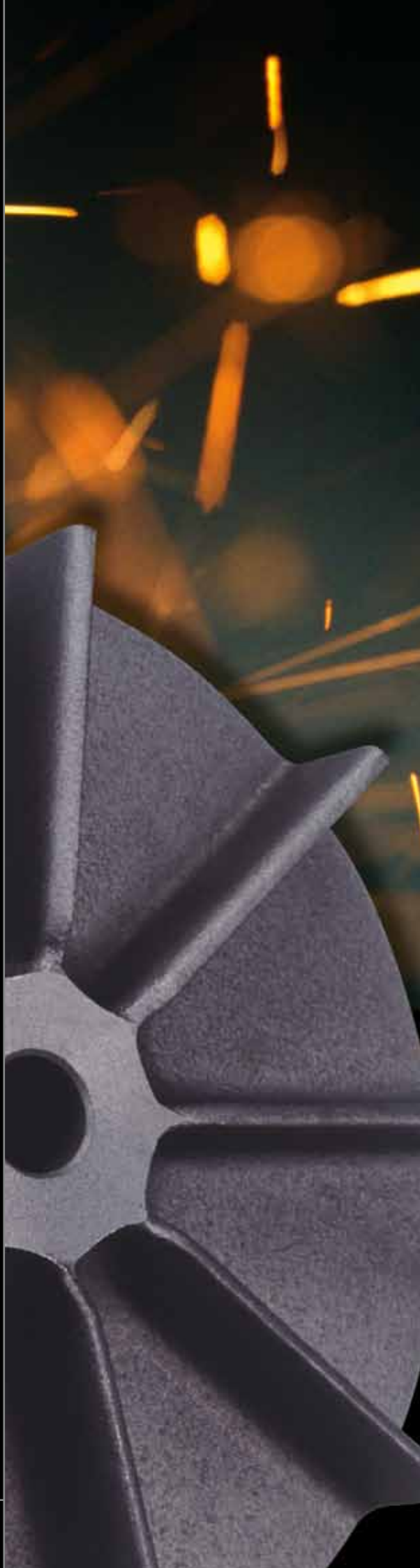
Our products and services are designed to meet long-term requirements. Procurement costs are not decisive in this context, but rather running costs generated by our products during their life cycle. We would be delighted to draw up a cost comparison for you.

QUALITÄTSMANAGEMENTSYSTEM



DQS zertifiziert nach
DIN EN ISO 9001 : 2000 Reg. Nr. 062927 QM

New materials
Rapid prototyping
PSpro+ pump selection program
Research cooperation



Product development

Research and new materials.

Pump components are subject to a high degree of complex thermal, mechanical and corrosive stress. We therefore not only continuously strive to utilise only the best materials in our modules, but also achieve maximum efficiency for defined installation situations.

Many of our pump series can be assembled with a variety of selected materials. This enables precise adaptation to the conveyed medium and ensures reliable and efficient operation. Our engineers cooperate with research institutes to develop coatings which provide a high degree of tribological and anti-corrosive

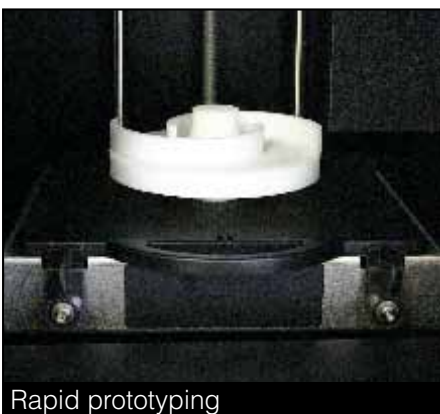
protection, ideally utilising inexpensive basic materials which are easy to process.

Impellers and pump components are manufactured with the support of special software programmes, which optimise impeller geometries and flow characteristics in pumps, and our own rapid prototyping machines. These are subject to comprehensive performance tests on our computer-supported test station and prepared for serial production approval.

Many of our centrifugal pumps can be equipped with PumpControl. This electronic error and status monitoring

system protects your pump against dry running. Other parameters contribute to smooth operation of our pumps in your process chain.

We also provide you with PSpro+, a user-friendly pump selection program which allows you to choose pumps in our range. This tool enables you to select the individual pump best suited to your needs. You can also input your individual parameters, and the program will assemble your individual Schmalenberger pump.



Rapid prototyping



Pump housing optimised for installation



PumpControl III

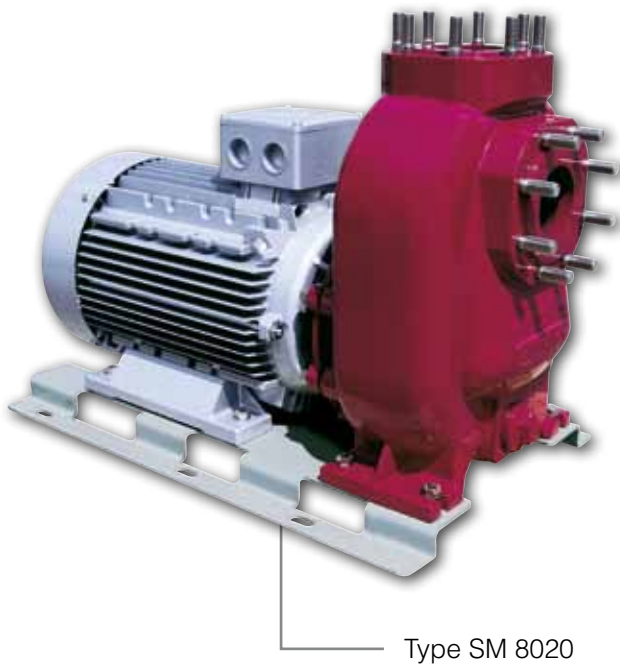
Areas of application
Machine tools
Grinding machines
Water jet cutting systems
Recirculation systems

Areas of use
Delivery of media with a high level of air inclusions and solid admixes, coarse and strongly-abrasive media, suitable for lyes, solvents, cooling emulsions, steel chips, grinding sludge



Mechanical engineering

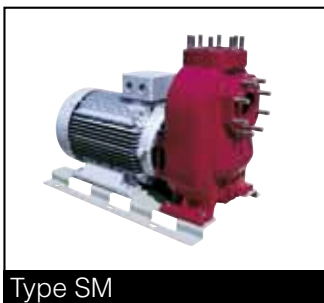
Uncompromising, strong, reliable.



Chips, cooling emulsions or oil: delivery of lightly to severely-contaminated abrasive media with high levels of air inclusions makes severe demands on the design and materials selected for a centrifugal pump.

Our SM series is our answer to the complex challenges faced in our customers' process chain: delivery without mechanical comminution, no complex lifting equipment, self-priming where even zero levels and severely foaming fluids are involved, selectively available with a sealing chamber to protect the mechanical seal, as a dry installation or Type SZ for tank installation, space-saving and compact installation. An extremely varied model range has made the SM and SZ extremely successful favourites in mechanical engineering.

A variety of uses are possible: from small machine tools to heavy metal machining, from production involving metal machining to grinding, water jet cutting to recirculation pumps - the SM and SZ are a match for all these challenges.



Type SM



Type FB



Type NB



Type SZ



Type THK



Type FZ

Areas of application:

Process engineering machines and equipment

Surface technology

Cleaning/Degreasing systems

Filtration technology

Painting systems

Areas of use:

Delivery of degreasing, pickling, passivating and rinsing media, suitable for fully-demineralised water, water-based paint and paint sludge



Process engineering

Resistant, robust and powerful.



Type ZHS

The demands of process engineering are varied and extreme: corrosive media with differing viscosities and temperatures adversely affect the housing, impeller, seal and shaft. A multitude of components is available for these extreme applications: a stainless steel, plastic or grey cast iron housing can be selected, depending on the pump type involved. Single-stage or multi-stage pumps can be considered for pressure and delivery capacity design. Units designed for dry and tank installations are available. ATEX standard: Schmalenberger can supply pumps on request with an explosion-protected AC motor and/or ATEX certificate.



Type ZHB



Type WP



Type S



Type NV



Type Z

Areas of application

Liquid treatment and recycling
Disposal purification plants for industrial
waste water
Reverse osmosis
Ultrafiltration
Mobile use

Areas of use

Delivery of media with high levels of solid
admixes, coarse and strongly-abrasive
media, suitable for lyes, acids, solvents,
etc.



Environmental engineering

Versatile applications and a long service life.



Type THinox

We provide a broad range of pump units to suit the continuously-growing environmental engineering market. Whether dry or tank installations are involved, you can utilise our pumps in a variety of areas: for recycling of liquids, disposal of industrial waste water or general applications involving the delivery of media in process engineering. Our pumps are also suitable for laboratory and test applications. They can be utilised for reverse osmosis and ultrafiltration. Pump selection is determined by the composition of the conveyed medium and the installation situation. We have the ideal pump for numerous individual cases. Our SMmobile can be utilised for mobile applications both indoors and outdoors: sturdy and mobile, self-priming with a high delivery rate, with remote control using PumpControl available on request.



Type SMmobile



Type FB



Type S



Type Z

Areas of application

Hotel swimming pools
Private swimming pools
Public swimming pools
Saline and seawater pools
Fun parks

Areas of use

Filter systems for swimming pool water
Attraction pumps



Pool features

Power that really impresses.



optimo-F

Our F and NB series are classics on the market. Schmalenberger pumps for swimming pools are sold under the registered **fluvio®** brand. Depending on the design and area of application, they are utilised for swimming pool attractions in public swimming pools, but also in hotel and private pools. In addition to recirculation tasks, our pumps are used for operating massage jets, counter current units and water curtain systems which are also produced by our company. We place a particular emphasis on an optimum combination of materials for the pump body, impeller and shaft when selecting a pump. Here, in conjunction with the composition of the pool water, the durability of a pump will be put to the test. Chlorine, salt, sea-water and chemical additives – water composition is varied and has a corrosive impact.



Type ZHB



Type WK



Type NB



Type F

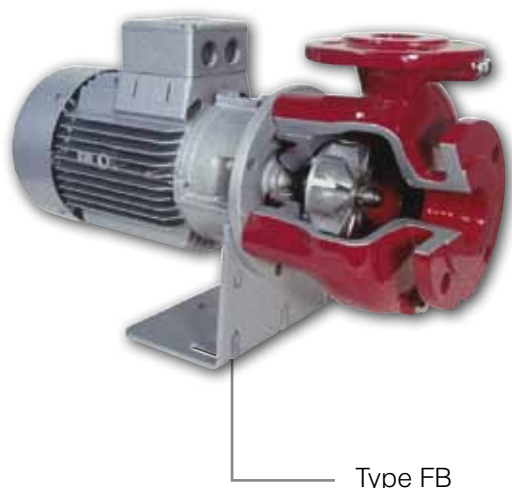
Areas of application
General industrial applications
Environmental engineering
Filter technology
Coolant supply

Areas of use
Pressure increase
Conveying
Dry installation
Tank installation
Mobile, variable use



Standard pumps

Standardised to a high quality level.



Type FB

Our standard range covers a large number of areas of use. Our experience shows that many of our customers can meet their normal requirements with a standard pump. Important aspects for our customers in this respect are flexibility, time-saving and low utility costs. Our standard range is distinguished by a high level of delivery service and broad spectrum. Many standard models can be equipped with special features, enabling their adaptation to specific application characteristics. These include: class eff1 energy-saving motors and premium efficiency, specially-hardened impellers for abrasive media, our PumpControl system, dry running protection option or mounting of a standard motor. Individual, but still “off the peg” – this is how we define our serial products. Powerful, durable units that are guaranteed to reduce costs throughout the production cycle.



Type FB



Type SM



Type NB



Type SZ



Type ZHT

Areas of application
Specialised machine construction
Specialised conveyor technology
Special series
Chemical industry

Areas of use
Conveying
Recirculation
Pressure increase



Individual solutions

A challenge for the best on the market.



Propeller pump

Are you a machine and system constructor looking for an unusual solution? A solution that will save your customers money throughout the service life of the product? Are you looking for the decisive product advantage in conveyor technology? Then our designers are the people to turn to. We know the challenges faced on the market. These include in particular sophisticated conveying tasks, aggressive and abrasive media, extreme installation situations or above-average durability. Our motto is purely and simply: where consulting and development ceases with others, we invest our know-how and manufacturing expertise for your benefit. We develop a tailored design to suit your special requirements which is optimised right down to the finest details. This type of development is more complex – but the investment pays off over the service life of your system. In addition to the pump capacity, the durability and energy efficiency of your plant is decisively improved and production costs reduced. Breakdown and shutdown periods are reduced to a minimum as a result.



Booster pump



Individual housing



Rubber-coated housing



Composite coating

Product range & overview.

The following provides an overview of the most common products and their applications. Please contact our Development Department if your application is not included

	FZ	FB	WP	ZHB	ZHS	WKN	S	F	optimo f	NB	SZ	SM	SM mobile	Z	NV	ZHT	THK	FV
Plant construction	•	•	•	•	•		•			•	•			•	•	•	•	•
Chemical cleaning			•	•			•											
Filter technology	•	•			•						•	•		•	•	•	•	•
Air conditioning		•		•	•													
Coolant treatment	•	•			•						•	•		•		•	•	•
Coolant supply	•	•		•	•						•	•		•	•	•	•	•
Laboratory technology			•	•	•	•												
Agriculture						•					•							
Metal machining	•	•									•	•	•	•	•			•
Swimming pool water				•		•		•	•	•								
Paint spraying booths	•		•							•	•	•	•					
Textile industry		•					•											
Environmental engineering		•					•					•		•				•
Water treatment						•		•	•	•							•	•
Water jet cutting		•									•	•						
Water supply						•				•								

Special designs

Abrasive media	•	•									•	•	•	•				•
Aggressive media				•		•										•	•	
Hot media							•											
Bilge pumping	•										•	•	•	•				
Sealing chamber		•	•							•		•	•	•				•
Dry running protection	•	•								•		•	•					

Self-priming pumps

Type SM



Delivery head: 1 – 60 m
Delivery rate: 1 – 120 m³/h

Type SM mobile



Delivery head: 1 – 52 m
Delivery rate: 1 – 60 m³/h

Suction pumps for tank installation

Type SZ



Delivery head: 1 – 40 m
Delivery rate: 1 – 90 m³/h

Centrifugal pumps for tank installation

single-stage

Type Z



Delivery head: 1 – 60 m
Delivery rate: 1 – 100 m³/h

Type NZ



Delivery head: 1 – 105 m
Delivery rate: 1 – 500 m³/h

Type NV



Delivery head: 1 – 105 m
Delivery rate: 1 – 600 m³/h

multi-stage

Type ZHT



Delivery head: 1 – 260 m
Delivery rate: 1 – 42 m³/h

Type THK



Delivery head: 1 – 110 m
Delivery rate: 1 – 12 m³/h

Torque flow centrifugal pumps

Type FZ



Delivery head: 1 – 55 m
Delivery rate: 1 – 200 m³/h

Type FB



Delivery head: 1 – 60 m
Delivery rate: 1 – 140 m³/h

Type FV



Delivery head: 1 – 55 m
Delivery rate: 1 – 150 m³/h

Centrifugal pumps for dry installation

single-stage

Type NB



Delivery head: 1 – 100 m
Delivery rate: 1 – 600 m³/h

Type WP



Delivery head: 1 – 18 m
Delivery rate: 1 – 110 m³/h

multi-stage

Type ZHB



Delivery head: 1 – 280 m
Delivery rate: 1 – 42 m³/h

Type ZHS



Delivery head: 1 – 260 m
Delivery rate: 1 – 42 m³/h

Type S



Delivery head: 1 – 26 m
Delivery rate: 1 – 60 m³/h

Pool water recirculation pumps

optimo-F



Delivery head: 1 – 100 m
Delivery rate: 1 – 600 m³/h

Type F



Delivery head: 1 – 100 m
Delivery rate: 1 – 600 m³/h

Type NB



Delivery head: 1 – 100 m
Delivery rate: 1 – 600 m³/h

Type WKN



Delivery head: 1 – 20 m
Delivery rate: 1 – 96 m³/h

Service worldwide.



We provide a successful service and sales network in many countries for our customers. We are particularly present on-site in the growing Asian markets to ensure our customers enjoy a maximum level of after-sales-service. We regard service as not only the provision of replacement components, but also cooperation with the customer and the drafting of an exact error analysis.

Your contact partners.

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