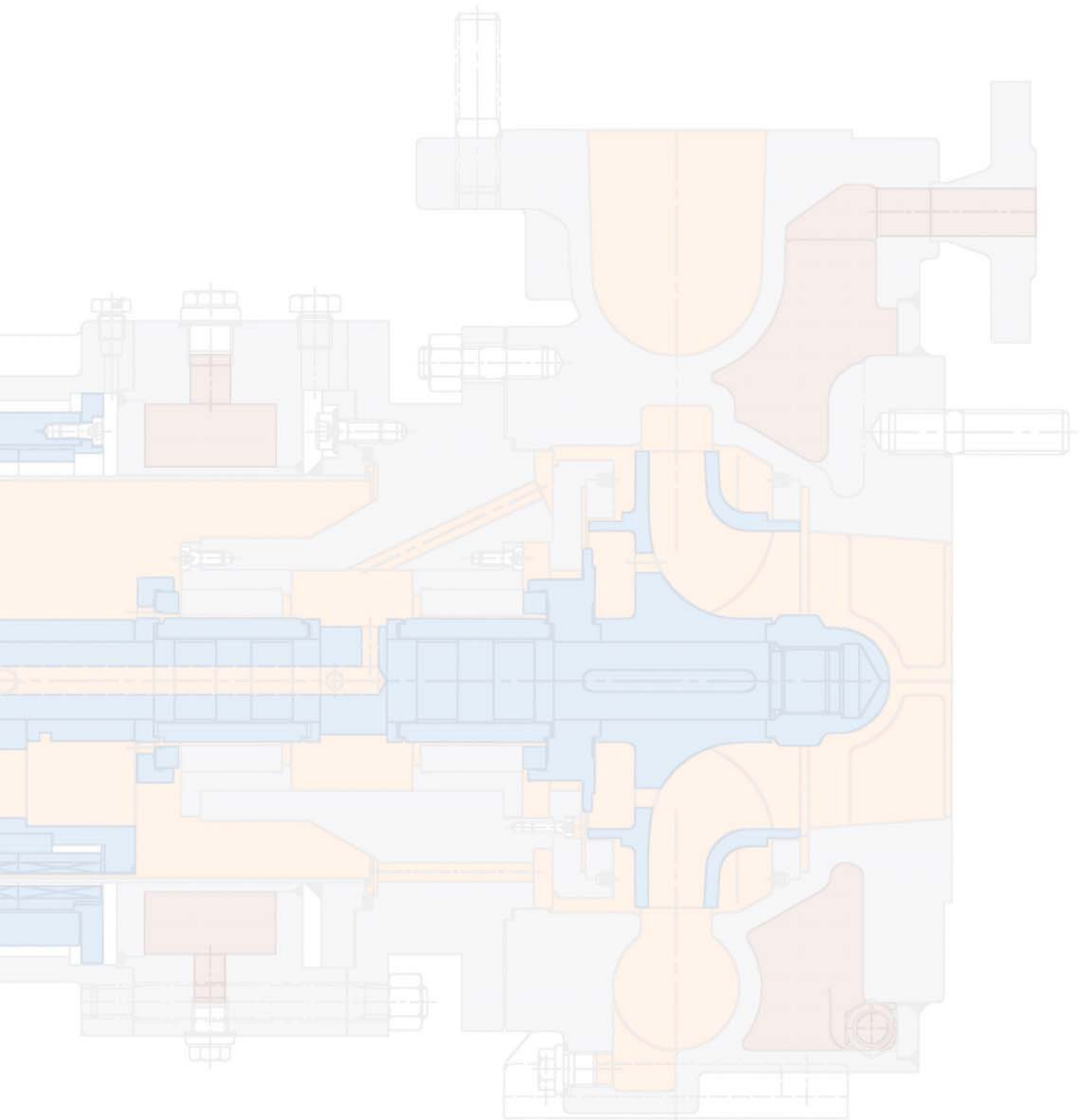




**DICKOW
PUMPEN**



Where innovation is at home...

Historical Sketch 1910 – 1946

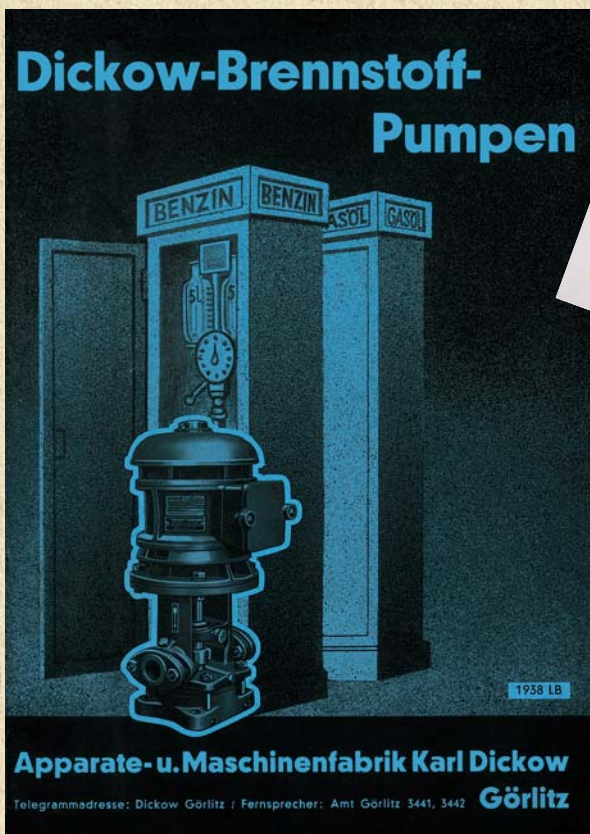


1910 DICKOW was founded in Gablonz in the former Eastern area of Germany, as a company for the manufacture of water pipes and heating plants.

1920 After World War I, the enterprise was moved from Gablonz (now part of the Czech Republic) to the city of Görlitz in the former East Germany, where the manufacture of automatic cattle water basins and self-priming centrifugal pumps (under the designation "Dickow Patent") began.

1930 The founder Karl Dickow died. The enterprise was carried on by his widow Anna Dickow and their three sons Carl, Walter and Wilhelm.

1945 The end of World War II also put an end to the Görlitz factories. The company was expropriated, most of the machinery was removed, except for a small portion which had been saved by relocating it once again.





Starting anew in Waldkraiburg

1946 Carl Dickow started reconstruction and pump manufacture with some of his former employees and the relocated equipment from the Görlitz factories. Carl Dickow died in November 1946. In December 1946, Wilhelm Dickow took over management.

1948 After the German currency reform, Wilhelm Dickow acquired land with existing buildings, today's business premises, and extended the pump production.

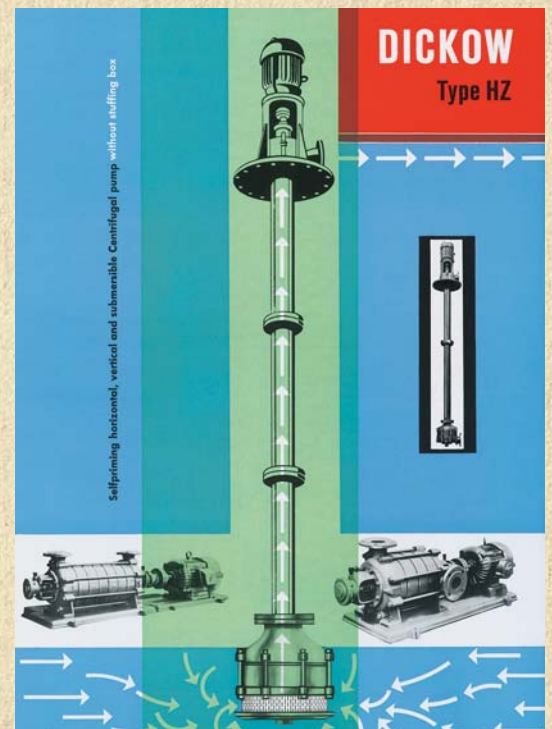
1959 Wilhelm Dickow died with the business being carried on by his wife Anneliese. With the help of Oskar Lehnert, General Manager, and Ing. F. Wilhelm Schmid, Plant Manager, the Company continued making solid progress. New production equipment was acquired and new buildings were erected.

1968 Ulrich Dickow took over executive management. The responsibility for manufacture was under the control of Andreas Dickow, Ing. Harry Schommer was in charge of Engineering, Development, and Sales management.

1994 Quality management system certified acc. to ISO 9001 for the first time.

2003 After the death of Ulrich Dickow and Andreas Dickow, Michaela Dickow is the new CEO.

2014 Building of a new hall for extension of pump production and final assembly with integrated automated storage system.



Product-History

from 1910 heating systems and water pipes

approx. from 1925 automatically, patented cattle drinking pools and self-priming, patented centrifugal pumps

approx. from 1930 extensive expansion of the production range through:

- volute casing pumps
- multistage horizontal centrifugal pumps
- multistage vertical submersible centrifugal pumps
- metal bellows mechanical seals

from 1946 after end of war and relocation the production range had to be built up completely new again

from 1968 chemical standard pumps

from 1981 process pumps acc. to API 610

1983 delivery of the first chemical standard pumps and side channel pumps with magnet coupling

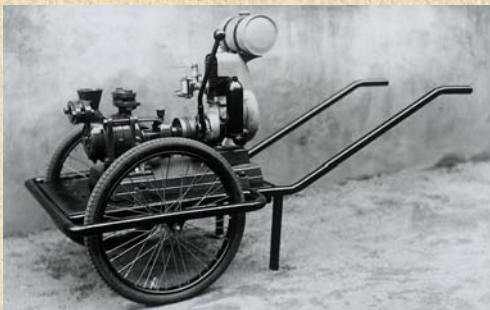
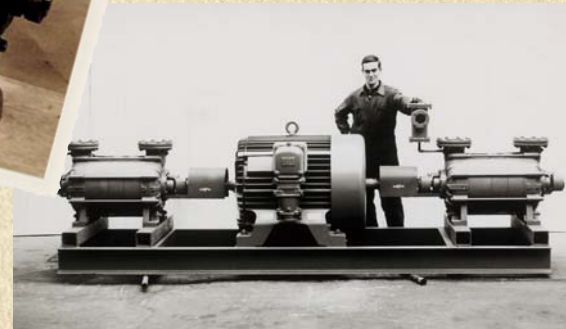
from 1985 extension of the magnetic coupled production range to multistage and vertical pumps

1996 patent for "mag-safe" magnetic coupled pump monitoring

from 2000 process pumps acc. to API 685

from 2004 process pumps acc. to API 610 with mechanical seals acc. to API 682

2015 introduction of the magnetic coupled pump monitoring systems "shell-safe" and "double-safe"

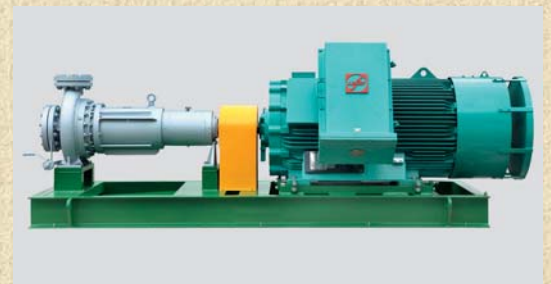


Customer References

Aalborg Industries, Actemium, ADPO, AK Cool Sorption, Aker, Akzo Nobel, ALSTOM, ASTRA, Aviatechnology, BASF, Bayer, Bayernoil, Bertrams Heatec, BfB, Borealis, BP, Brenntag, Cargill, Cavotec, Chang Chun, Chemtex, Chi Mei, Clariant, Coca Cola, Coperion, CTCL Corp., Daimler, Daelim Eng., DEA, Degussa, Dow Chemical, Drew Marine, DSM, Du Pont, EADS, Eastman Chemical, ELK, EON, Esso, Esterer, Evonik, Exxon Mobil, FLUOR Eng., Ford, Formosa Union Chemical, Foster Wheeler, FRAMES Process Systems, GEA, General Motors, Göhler, Guinness, Heat 11, Hitachi, HTT, Hyundai, Ineos, Infracore, Jacobs Eng., KarKunz, Klöckner, Kodak, Koppers, Krombacher, Lanxess, Linde, Lufthansa, Lummus, Lurgi, MAN Ferrostaal, Mars, Mobil Oil, MOL, Monsanto, Müller Milch, Nan Ya Plastics, Nestlé, Niro, Nitro, OMV, Pars Oil, Paulaner, PCK, PDVSA, PEMEX, Petro Canada, Petrobras, Petrol Ofisi, PKN Orlen, PTT Tank, Renolit, ROCHEM India, ROHR, RÜTGERS, Sabic, SADARA, Samsung, Sandvik Process Systems, SASA, Sasol, Saudi Aramco, Seico, Shell, SI Group, Siemens, Sinopec, SK, SKC, Solvay, Statoil, Super Active, Taiwan PolySilicon, TEBODIN Eng., Technicas Reunidas, Teijin, Thai Petrochemical, ThyssenKrupp Uhde Eng., Total, TOYO, Toyota, Tüpras, Wacker, WEC Eng., 3M

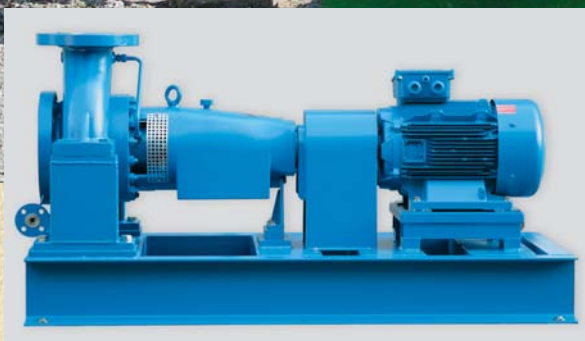
Application Range

Chemical and petrochemical plants; Tank farms / depots for fuels, liquified gases, chemicals etc.; Industrial heat transfer (hot water and heat transfer oil for high and low temperature applications from +400°C to -120°C); Aircraft refuelling in civil and military applications (national and international); Marine applications; Oil and Gas industry (incl. offshore applications / FPSO); Reverse osmosis / sea water desalination; Mercury.



Type PRM with magnetic coupling 275 kW.
Liquid: Chlorosilane 116°C.
Design pressure 35 bar/150°C

Type HZSMAR
with magnetic
coupling for
liquid: Butan,
design pressure
40 bar.



Type NCR
with single mechanical seal
for seawater desalination.
Design pressure 70 bar.



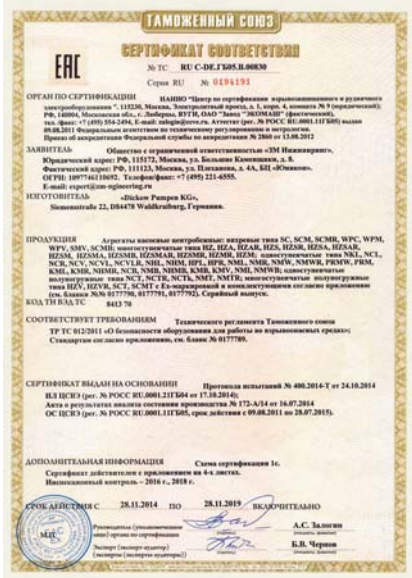
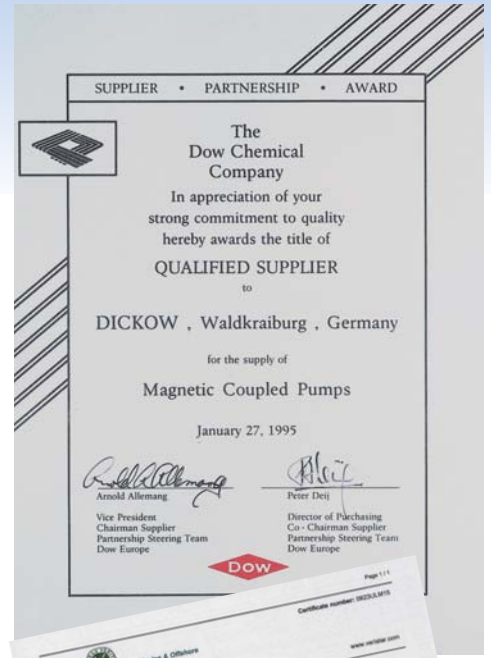
Approved Quality System

All company business and manufacturing processes comply with the requirements of DIN/ISO 9001:2008 EN 29001. The quality system, originally approved by LLOYD'S REGISTER QUALITY ASSURANCE, is subject to bi-annual reviews and recertification. The original Certificate of Approval was issued on May 3, 1994 and has international validity.



In January 1995 DICKOW Pumpen was awarded the highly coveted certification "Qualified Supplier for the Supply of Magnetic Coupled Pumps" by DOW CHEMICAL.

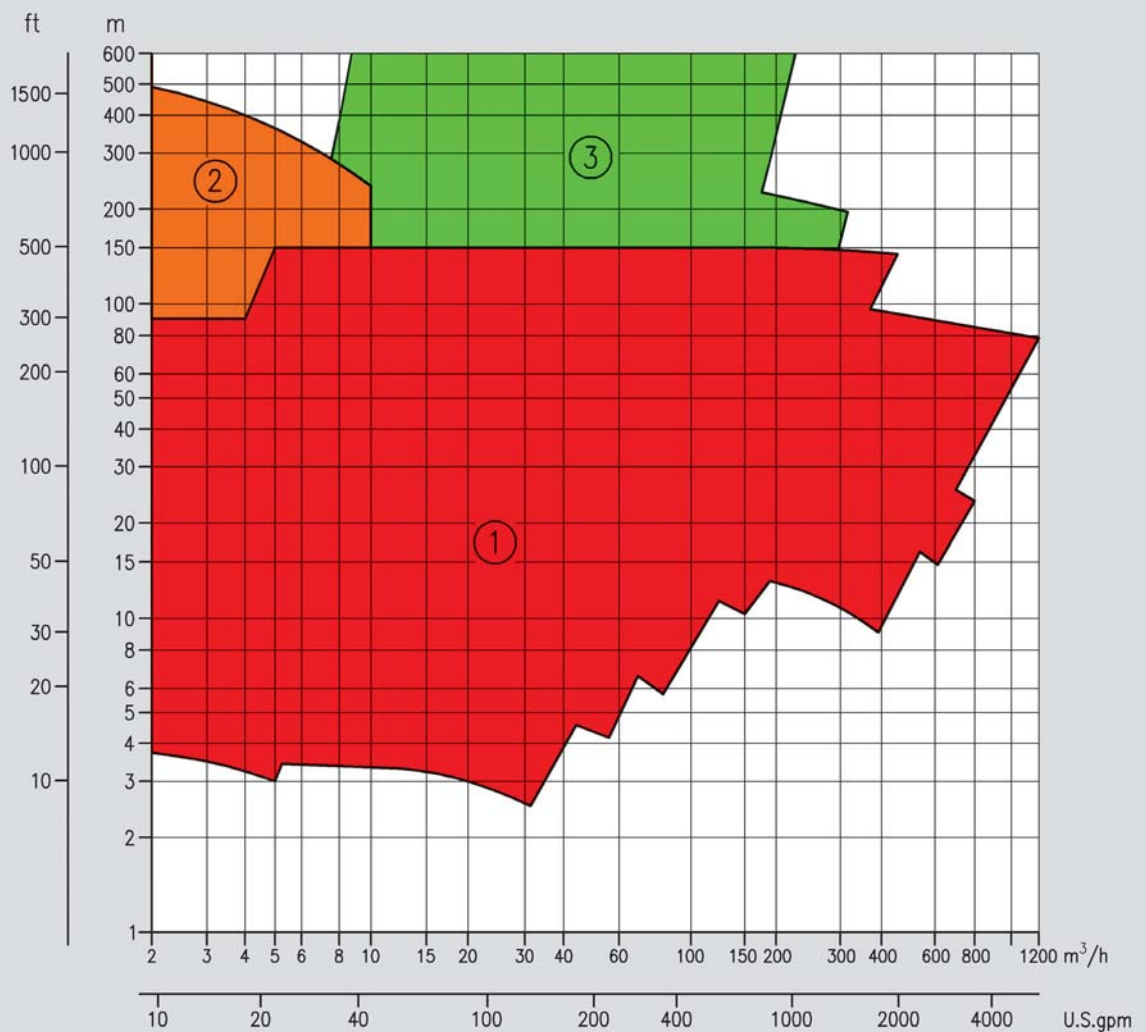
Certificates for Customs Union TR CU 010/2011 TR CU 012/2011



As part of our quality assurance and control, mandatory performance and hydrostatic tests are conducted on all pumps. The tests are performed according to the internationally accepted standards ISO 9906 or alternatively API 610. Additional testing of vibration, noise level, bearing temperature, etc. are performed if required. All test results are recorded and material certificates according to DIN EN 10204 are available on request.

Further certificates

Performance Range – Pump Types



The individual performance curves of the available pump sizes provide detailed hydraulic data. Available on request.

- ① Volute casing pumps, PN 10, 16, 40, 65
- ② Side channel pumps, PN 6, 16, 40
- ③ Multistage centrifugal pumps, PN 16, 40, 65

Materials – Operating limits

Available materials

Pumps are manufactured of metallic materials only. Based on the customer requirements, the following materials are available as standard: (similar USA grades)

Pressurised parts:

Ductile Iron grade EN-GJS-400-18-LT (ASTM A536 60-40-18),
 Carbon Steel grades GP 240 GH (ASTM A216-75 WCB), 1.7706 (HTCS), 1.1138 (LTCS)
 Alloyed Stainless Steel grades 1.4408 (ASTM A351 CF8M), 9.4306 (ASTM A276 304L+Si), 1.4581, 1.4539,
 Duplex Stainless Steel 1.4462 / 1.4517 (UNS S32550), Hastelloy C (ASTM A494 CW-12MW)

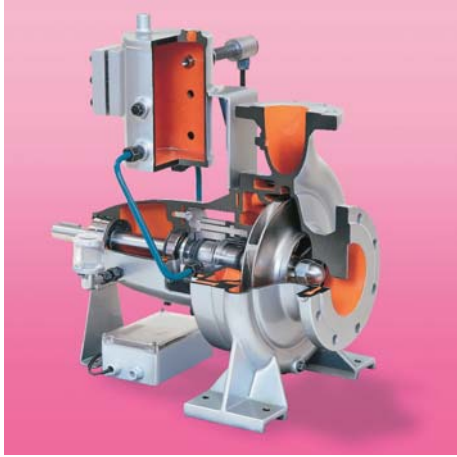
Internal parts:

Cast Iron grade EN-GJL-250 (ASTM A126-73) and Ductile Iron grade EN-GJS-400-18-LT (ASTM A536 60-40-18)
 Alloyed Stainless Steel grades 1.4408 (ASTM A351 CF8M), 1.4571, 1.4539
 Duplex Stainless Steel 1.4462 / 1.4517 (UNS S32550), Hastelloy C (ASTM A494 CW-12MW)

Operating limits

- Capacities and differential heads according to performance range.
- Temperature range from -120 to +400°C (752°F)
- Operating pressure up to 100 bar (special design)

Pump Types



Volute casing pump type NCL (EN 22858)
with Tandem-mechanical seal N9.



Volute casing pump type NCR acc. to API 610
with single mechanical seal acc. to API 682.



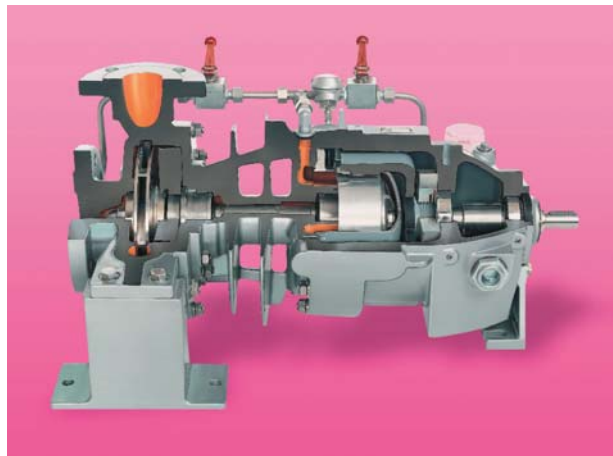
Volute casing pump – Hot oil design type NKX
with single mechanical seal
for heat transfer oil up to 350°C (662°F).



Volute casing pump type PRM acc. to API 685
with hermetically sealed magnetic coupling,
centerline mounted.



Volute casing pump type NML (EN 22858)
with hermetically sealed magnetic coupling.



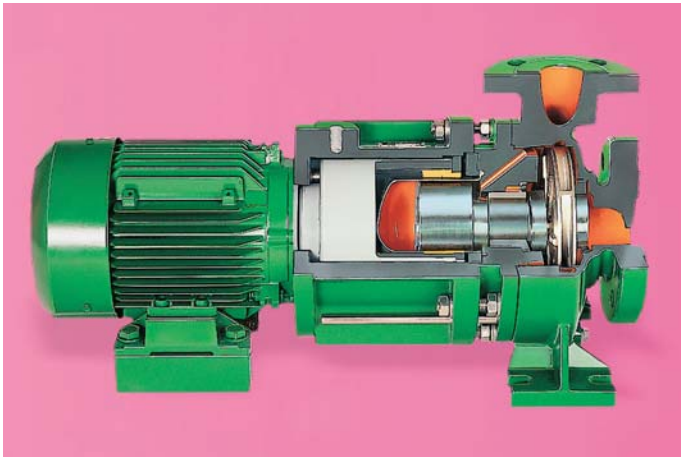
Volute casing pump – Hot oil design type NMWR
with hermetically sealed magnetic coupling,
centerline mounted.



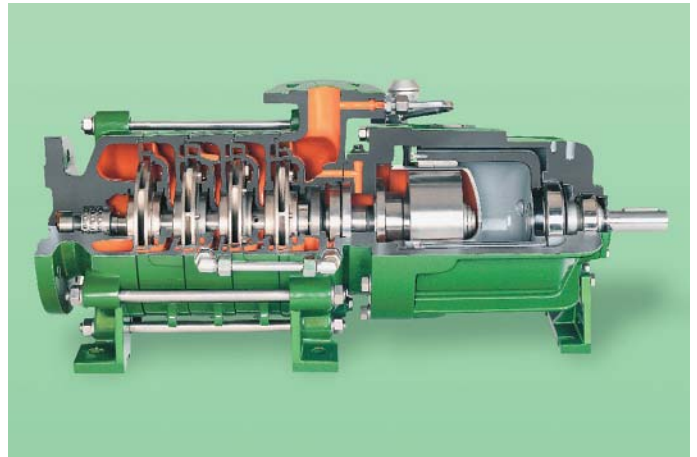
Inline-volute casing pump type KMV
with hermetically sealed magnetic coupling.
Capacity up to 60 m³/h (300 USgpm),
differential head up to 60 mLC (300 ft).



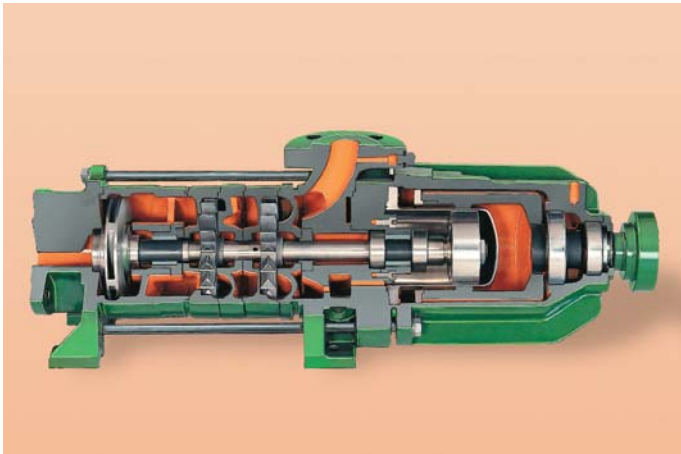
Multistage submersible pump type HZV-Cat.1
(ATEX-type approved)
with safety equipment for use in hazardous areas,
also available as standard design without Cat.1.



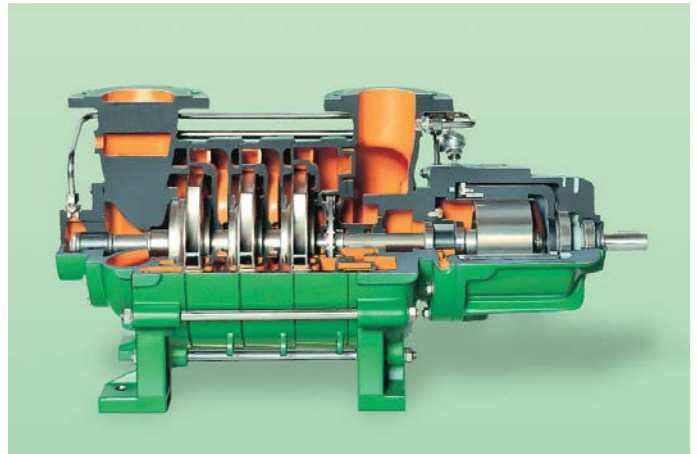
Volute casing pump type KMB
with hermetically sealed magnetic coupling.
Capacity up to 60 m³/h (300 USgpm),
differential head up to 60 mLC (300 ft).



Multistage centrifugal pump type HZSMA
with gas handling stage on discharge side and
hermetically sealed magnetic coupling.



Multistage self-priming side channel pump type SCM
with hermetically sealed magnetic coupling and NPSH-impeller.



Self-priming centrifugal pump type HZSM
with side channel vent stage and
hermetically sealed magnetic coupling.

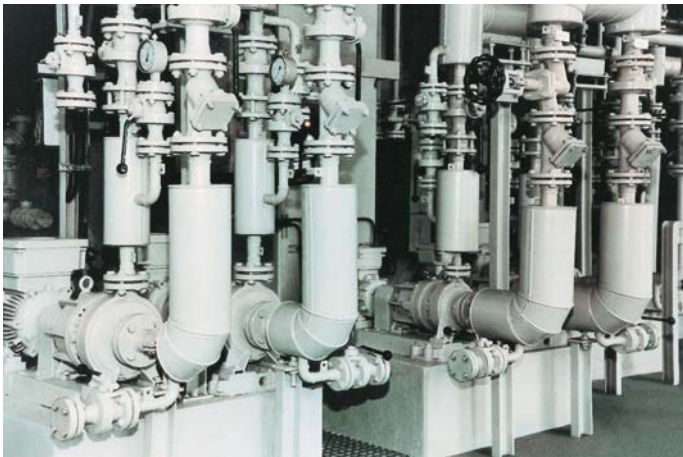
Applications – References



Type NML with magnetic coupling.
Liquid: Methylene Chloride, 40°C (104°F).



Type HZSMA with magnetic coupling.
Liquid: Propane/Butane, 20°C (68°F).



Type NML with magnetic coupling.
Liquid: Acetic acid, 130°C (266°F).



Type HZS with single mechanical seal.
Liquid: Gasoline, Diesel 20°C (68°F).



Type SMV
with magnetic coupling.
Liquid: Chemical Waste Water.



Type NCL
with tandem bellows seal (N9).
Liquid: Thermal oil, 330°C (626°F).



Type NCR acc. to API 610
with double seal system Plan 53B.
Liquid: Hydrocarbon.



Type SCM with magnetic coupling.
Liquid: Acrylonitrile, 45°C (113°F).



Type NMW with magnetic coupling.
Liquid: DOWTHERM-A, 350°C (662°F).



Type HZMR with magnetic coupling.
Liquid: Benzol mixture.



Type NCR acc. to API 610
with single mechanical seal.
Liquid: Aviation fuel JP4.



Type HZSM with magnetic coupling.
Liquid: Solvent, 20°C (68°F).

Where We Are

The city of Waldkraiburg is located approximately 70 km (45 miles) East of the Bavarian capital München (Munich). The new "Franz Joseph Strauß Airport MUC" is approximately one hour away, by car.

Waldkraiburg founded in 1945, is an industrial city and with 25000 inhabitants, the biggest city in the county of Mühldorf. Waldkraiburg is also favourably situated with easy access by public transport.

Located at the northern border of the Chiemsee area with its mountains and lakes, the surrounding area offers a great number of recreational and cultural activities. The cities of Munich and Salzburg are within easy reach by car or public transport.



Waldkraiburg



Manufacturing plant

Where innovation is at home...



DICKOW PUMPEN GmbH & Co.KG
P.O. Box 1254
84465 Waldkraiburg · Germany
Phone ++ 49 86 38 6 02 0
Fax ++ 49 86 38 6 02 200 + 6 02 201
info@dickow.de / export@dickow.de
www.dickow.de

