

Components for Wind Energy Plants

KRACHT®

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for Coating Plants**

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Company

100 years of experience make us stand out as a reliable partner.

We are a leading manufacturer of transfer pumps and flow meters. 270 employees at the Werdohl site and an additional 85 employees in our subsidiary companies in China, USA and Hungary design, produce and sell products in both standard versions as well as special solutions tailor-made to customer wishes.

These high-quality components are used for gear lubrication, for instance in wind power plants and ships gears, in dosing and mixing plants e.g. for manufacturing PU foams, and in testing technology. The range is supplemented by products for mobile hydraulics and industrial hydraulics which are used, for example, in construction machinery, agricultural machines, in general mechanical engineering and a multitude of stationary applications.

Dependable delivery and high-quality standards are just as important a part of the corporate philosophy as fairness to customers, suppliers and employees alike.

 **Made in Germany**

1911

Registration in the commercial register under the name „Hillebrand & Kracht OHG“

1971

Construction of today's company premises on a total area of over 50,000 square meters

1983... 1993

Sale through the Swedish group BAHCO through Investmentholding Industrierården to the COMAC Group

1992

Purchase of a gear-manufacturer in Hungary, now KRACHT Hidraulik KFT.

1995

First certification according to DIN EN ISO 9001, KRACHT Hidraulik KFT., Budapest according to DIN EN ISO 9002 by Lloyd's Register Quality Company

1996

KRACHT is once again in private ownership

1999

Mr. Peter Zahn becomes 100% proprietor of KRACHT GmbH

2000

First certification according to DIN EN ISO 14001

2002

Mr. Heiko Zahn is appointed as Second Managing Director

2003

Certification based on the ATEX Directive 94/9/EEC (ATEX 95)

2009

In New York, USA the KRACHT Corporation is founded

2009

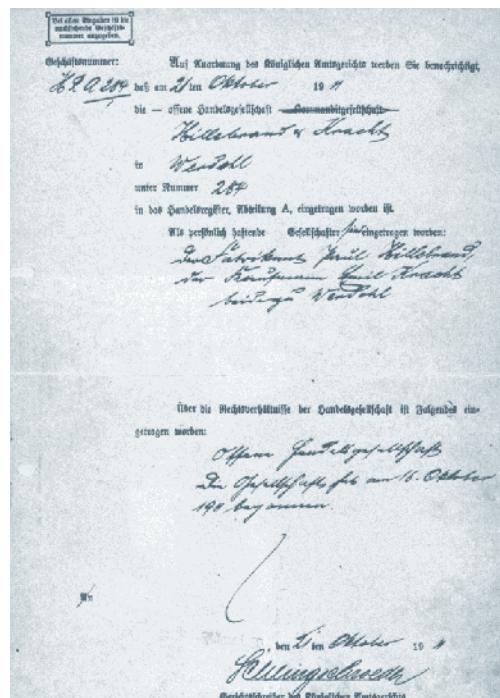
Establishment of the subsidiary in Shanghai, China

2011

Opening of the in-house health center on a area of approximately 270 square meters

October 2011

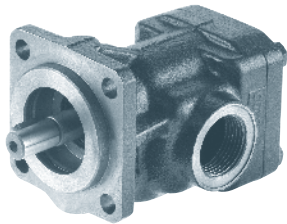
The company KRACHT has existed for 100 years manufacturing robust high quality components



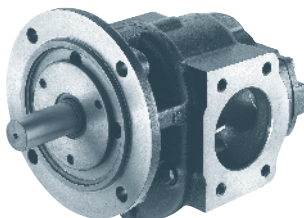
Certificate of incorporation of today's Kracht GmbH

Gear Pumps for Wind Energy Plants

- Maximum reliability in any climate
- Gearbox-drive with flow in one direction, regardless of shaft rotation
- Electrically driven or mechanically driven options
- Over 100.000 units in the field
- More than 10 years of experience



Gear pump
KF 2.5...112



Gear pump
KF 4/125...6/730

Electrically Driven Pumps

Gear pumps

KF 2.5... 112

Displacement	2.5... 112 cm ³ /r
Working pressure	... 25 bar / 363 psi
Speed	... 3000 1/min

Gear pumps

KF 4/125... KF6/730

Displacement	125... 730 cm ³ /r
Working pressure	... 25 bar / 363 psi
Speed	... 2000 1/min

Characteristics

- CCV - cold climate version up to -30°C / -22°F
- special castings
- special low temperature FKM seals
- extended testing due to different gear boxes oil

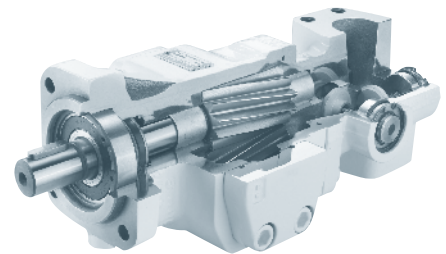
Mechanically Driven Pumps

- outboard bearing always included for gear drive directly - can handle radial forces up to 1.500 N
- cold climate version: -40°C / -40°F over life temperature, starting from -30°C / -22°F possible
- cold climate version includes special low temperature FKM seals exclusively made for KRACHT
- cold climate version includes GJS housing material because standard GG can only be used up to -20°C / -4°F , otherwise risk of cracks
- Pumps with universal valve for idling of turbine, two designs are available (see Fig. 1 and Fig. 2)
- external gear pump can handle high viscosities up to 100.000 cSt - Internal gear pumps however, due to design limitations are not suitable for prolonged use at low temperatures
- working pressure 25 bar / 363 psi permanently

Mechanically Driven Pumps

with Universal Valve U2

Materials	Housing: Grey cast iron EN-GJL-250 (GG 25) or Spheroidal cast iron EN-GJS-400-15 (GGG 40)
	Valve: Spheroidal cast iron EN-GJS-400-15 (GGG 40)
Displacement	32 ... 112 cm ³ /r NEW 100 / 112 cm ³ /r
Working pressure	... 25 bar / 363 psi
Media temperature	-30°C ... 150°C / -22°F ... 302°F
Viscosity	12 ... 100 000 cSt



Gear pump
KF with universal valve U2

Universal valves

Gear pump
KF
with universal valve U1

Application

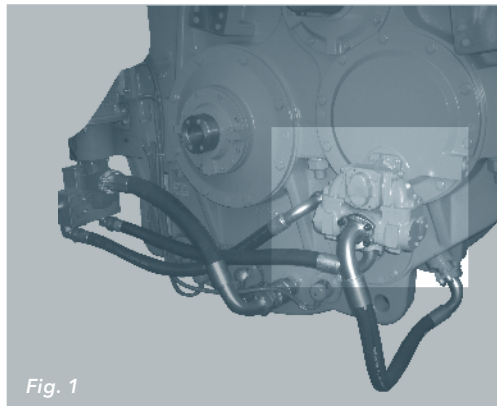
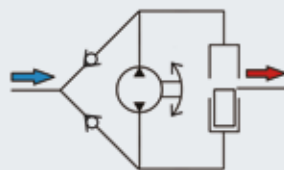


Fig. 1



Gear pump
KF
with universal valve U2

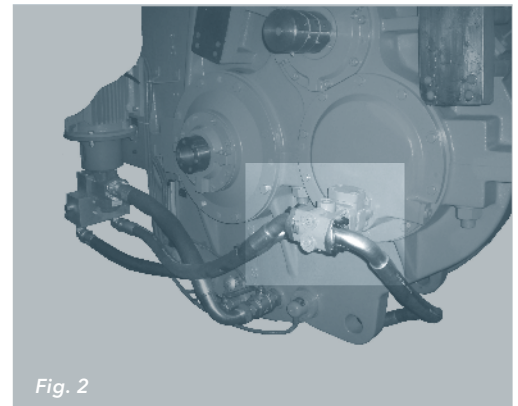
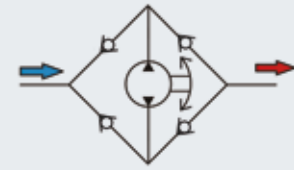


Fig. 2

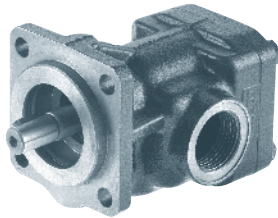


Gear Pumps and Flow Measurement for Coating Plants

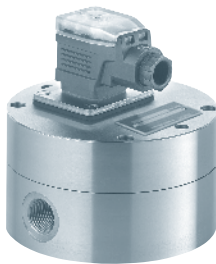
Transfer Gear Pumps KF
Gear Type Flow Meters VC
Screw Type Flow Meters SVC

Used as

- flow meters for dosing in mixings plants for coating of blades
- coated pumps with magnetic coupling



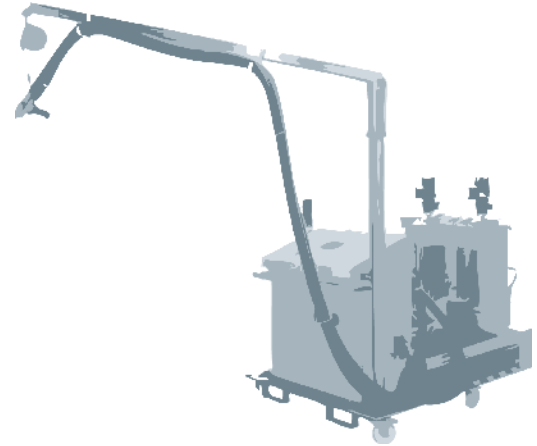
Gear pump
KF



Gear type flow meter
VC



Screw type flow meter
SVC



Gear pumps

KF

Displacement	0.5 ... 730 cm ³ /r
Working pressure	... 25 bar / 363 psi
Speed	... 3000 1/min

Gear type flow meters

VC

Measuring range	0.008 ... 700 l/min / 0.002 ... 185 gal/min
Turndown ratio	1 : 300
Working pressure	... 400 bar / 5802 psi

Screw type flow meters

SVC

Measuring range	1.0 ... 1500 l/min / 0.26 ... 396 gal/min
Turndown ratio	1 : 150
Working pressure	... 250 bar / 3626 psi

Quality Assurance at KRACHT

All products are put through a 100% pre-delivery inspection. Along with the functions, all working parameters are set on the testbench.

KRACHT GmbH, Werdohl
according to DIN EN ISO 9001
according to DIN EN ISO 14001
according to ATEX 94/9/EEC
(ATEX 95)

KRACHT Hidraulik Kft, Budapest
according to DIN EN ISO 9002



Machinery

Our focus is on the latest production machinery acquisitions, and we have significantly improved the age distribution of our machines within our plants.

The current average machine age is 2 years, which allows faster processing with higher finish accuracies. With that, we are achieving substantial quality increases in our products



Customer Service

Fair, reliable and competent

We have been developing, designing and manufacturing high-quality products for 100 years. Special solutions are implemented in close cooperation with our customers. On schedule performance and full comprehensive service are our top priorities.



Sales

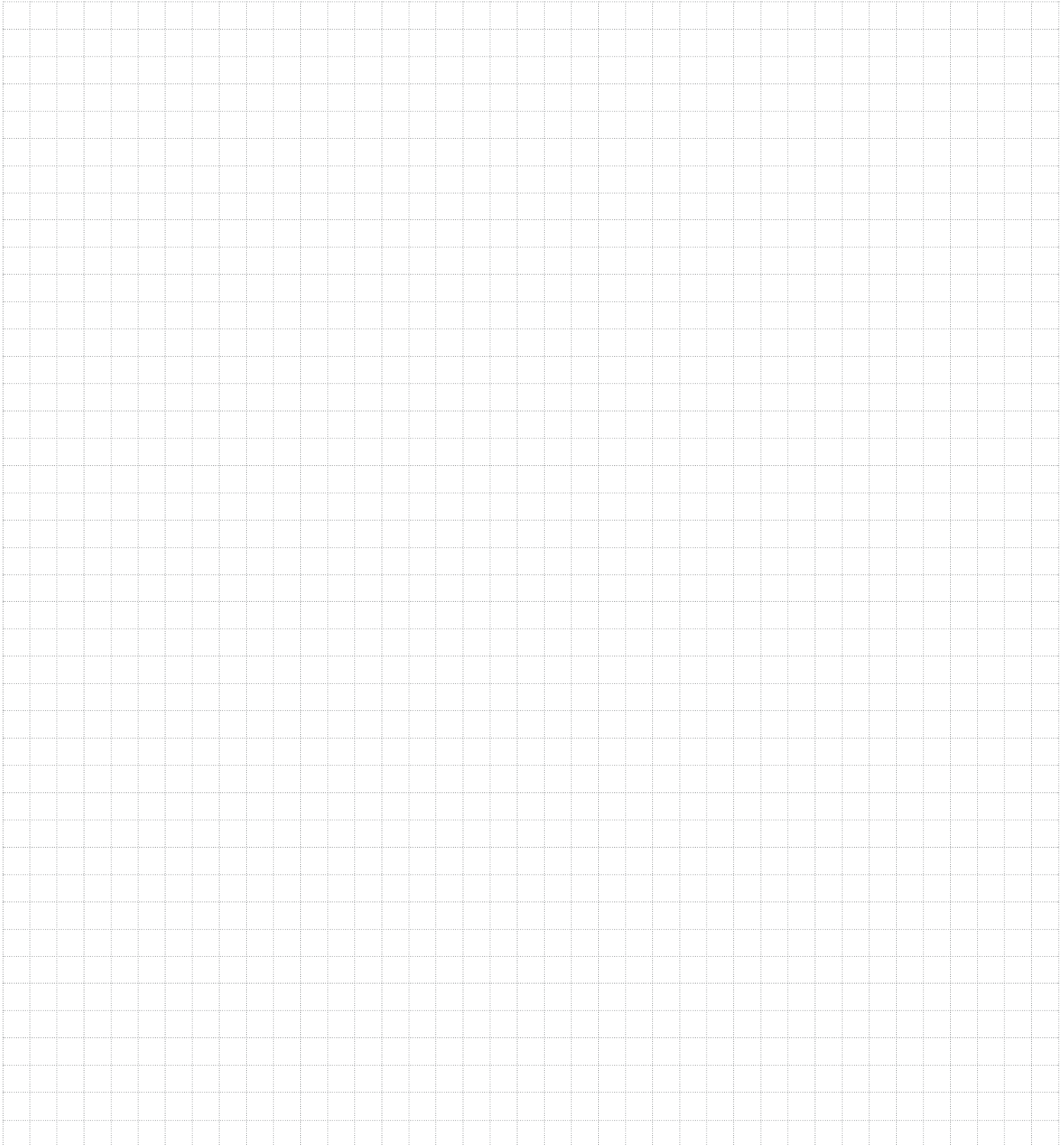
International

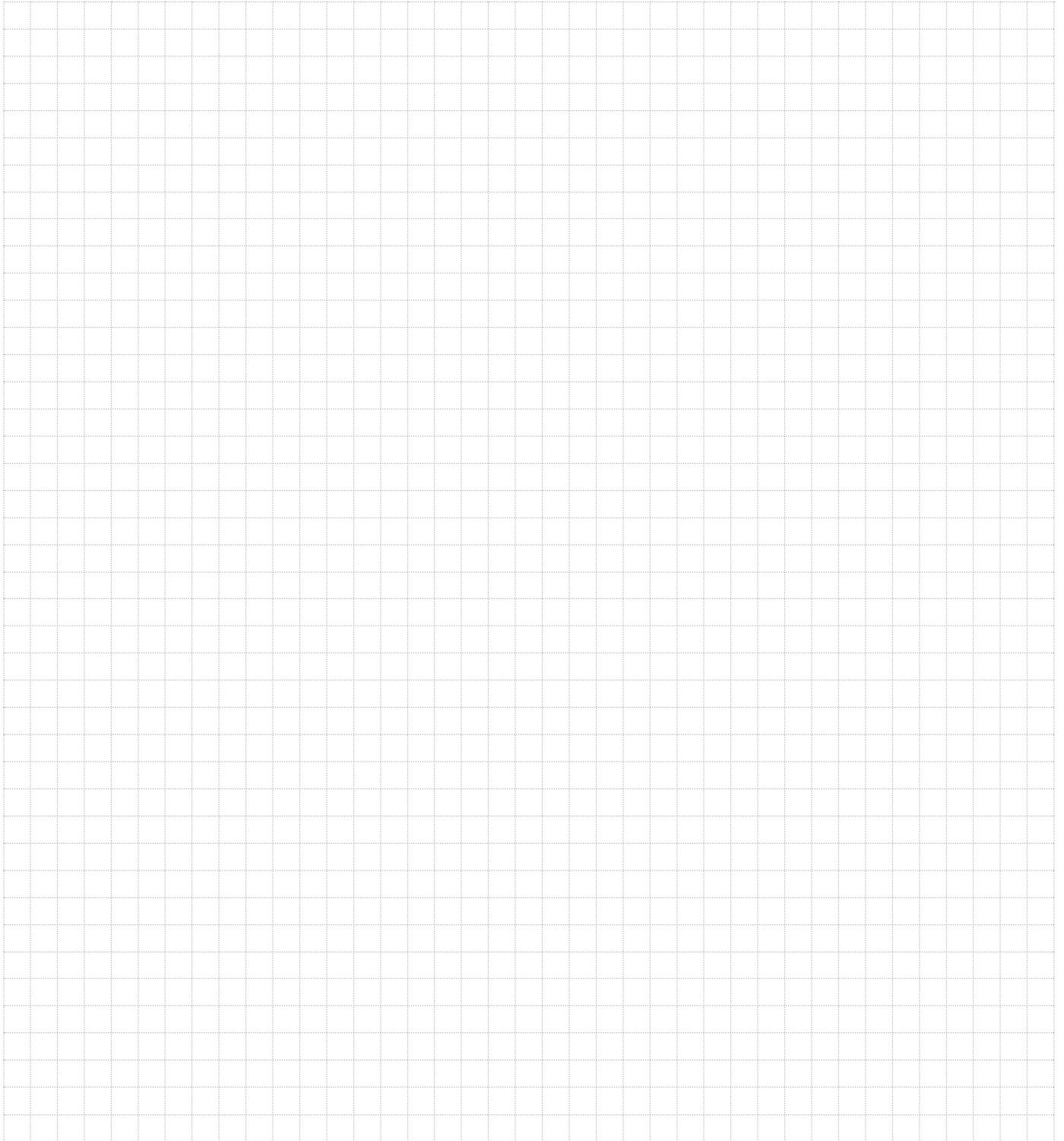


Australia	China	France	Hungary	Luxembourg	Portugal	Spain	United Kingdom
Austria	Czech Republic	Germany	Italy	Norway	Slovakia	Sweden	USA
Belgium	Denmark	Holland	Japan	Philippines	Slovenia	Switzerland	
Canada	Finland	Hong Kong	Korea	Poland	South Africa	Turkey	

We are ready to support you around the world with the professional mastery of specific applications and complete solutions based on our one-hundred years of experience. A closely woven network of sales and customer specialists provide the right tools for national and international consulting and optimal customer service.

Notes





KRACHT®

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