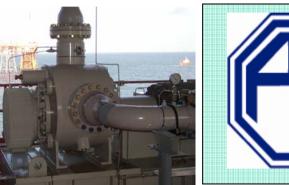
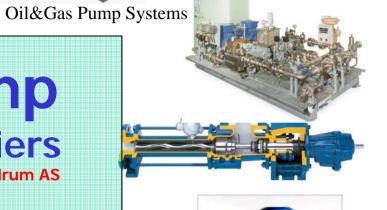
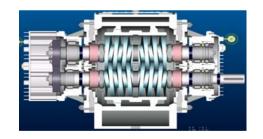


Marine Pumps







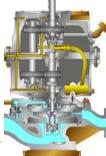


















# **PG Main Suppliers & Partners**

				PG-
Main Pump Suppliers &			Applicable	Supplier
Partners	Country of Origin	PumpTypes/ Equipment Description	Standards	Since
BEHRENS	Germany, Bremen	Ship Pumps	Marine Standards	1982
BORNEMANN	Germany, Obernkirchen	Multiphase-Twin Screw Pumps	API 676	1985
DOMINATOR	Sweden/ USA	Diaphragm Pumps (air driven), Membrane		
HMD Sundyne	UK	Sealless, Magnetic Driven Centrifugal Pumps	API 685	1986
ITT FLYGT	Sweden	Electrical Mud Agitators		1999
KRAL	Austria, Lustenau	Three Spindel Screw Pumps	API 676/ DIN	1984
PROMINENT/ ORLITA	Germany, Giessen	Dosing Pumps, Membrane	API 674/ API 675	1991
PG	Germany	Agitators, Hydraulic Mud Agitators		
		Cargo & Ballast Pumps, Pump room systems		
SHINKO IND. LTD	Japan, Hiroshima	for crude carriers		2000
SEEPEX	Germany, Botrop	Eccentric Screw Pumps	API 676	1984
SONDEX	Denmark, Kolding	Plate, Heat Exchangers & Generators		
SPECK PUMPEN	Germany, Hilpolstein	Centrifugal Pumps (single & multistage)	Norm/EN/ ISO/ANSI	1982
SPECK ROTH	Germany, Roth	Centrifugal Pumps	Norm/EN/ ISO/ANSI	1982
SPECK TRIPLEX	Germany, Geretsried	Triplex Plunger pumps	Norm/EN/ ISO/ANSI	1982
	France Dilen	High Speed Contributed Dumps 9		
SUNDYNE	France, Dijon,	High Speed Centrifugal Pumps &	API 610/ 614/ 616	1986
SUNDINE	Arvada, Colorado, USA	Compressors, Compact Design	API 010/ 014/ 010	1900
RUHRPUMPEN	Germany, Witten	Heavy Duty Centrifugal Pumps - Full Range	API 610	1999
	7			
VATEC MASCHINENBAU	Germany	Ejectors		
WEPUKO HYDRAULIC	Germany, Metzingen	Triplex Plunger Pumps (API 674)	API 674	1991
WOMA APPARATEBAU	Germany, Duisburg	High Pressure Water Jet technique		1990
PG CONSTRUCTION	Norway, Drammen	Mechanical Workshop and Manufacturing	NORSOK	2007
PG HYDRAULICS	Norway, Ålesund	Hydraulic Systems Eng. & Manufacturing	NORSOK	2007
Vacon	Norway, Holmestrand	Electric motors and VSD		2006
SIEMENS	Norway	Electric motors and VSD		2007
ABB	Norway	Electric motors and VSD		2008
	•			

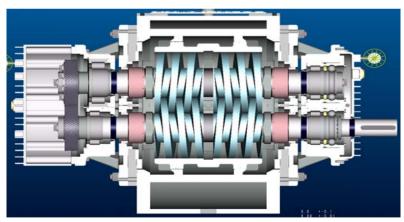


### **World leading manufacturer of:**

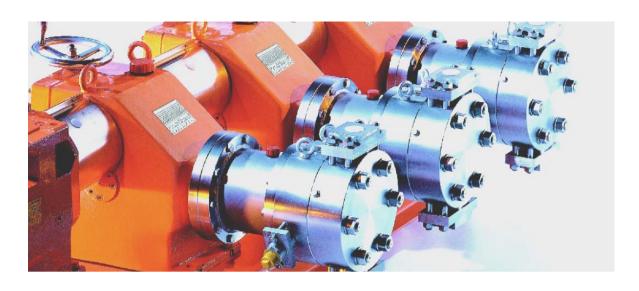
- Twin screw pumps (API 676)
- Multiphase Topside and Subsea twin screw pumps
- Self-priming, rotary positive displacement pumps
- Wide range of applications for most media and fluids
- Operates pulsation- and turbulence-free
- Pumped capacity is proportional to speed
- Constant flow on varying pressures
- Very good suction performance up to NPSH 1 1,5 m/3 (Selfpriming)
- Low noise level
- Dry running possible
- Compact construction
- Easy maintenance







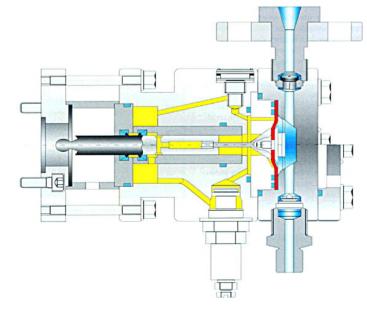






### **ProMinent** -Leading Manufacturer of Chemical Injection Pumps

- High pressure diaphragm pumps
- DR Pump for high viscosities
- Pressures up to 700 bar
- API 675 (API 674)







### **World leading manufacturer of process pumps:**

- API 610 (Horizontal/Vertical)
- Non API (Horizontal/Vertical)
- Single, multistage, submerged etc.
- Applications for pumping;
  - Hydrocarbons
  - Chemical solutions
  - Inorganic or organic acids
  - Produced Water
  - Propane
  - Caustic solutions
  - Condensate
  - Sea Water, Fresh Water etc.



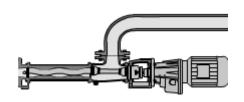


Vertical, single stage mixed flow pump, type TR for pumping cooling water /sea water lift for petrochemical plants

Crude Oil Booster Pumps, API 610 Centrifugal, vertical inline

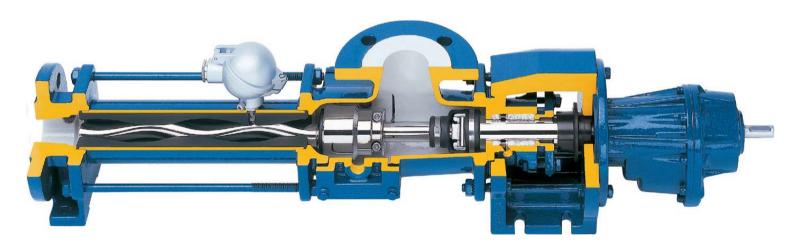






#### **Progressive Cavity Pumps**

- Worldwide leading manufacturer of progressive cavity pumps (PCP), API 676
- Production facilities in Germany, USA and China
- Multiphase Pumps, also for Mud and Drill cuttings
- Handle any kind of liquids
- Selfpriming
- Reversible
- Versatile use in all industries





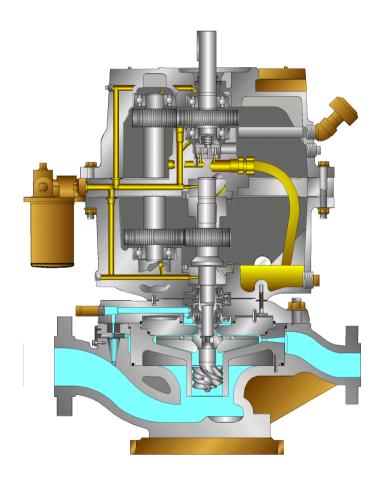


### World leading manufacturer of process pumps:

- Direct drive, API 610 (Horizontal/Vertical in-line)
- High speed drive, API 610 (Horizontal/Vertical in-line)
- High speed DIN/ISO pumps

### Advantages:

- Heavy duty wet-end
- Compact, lightweight
- Low capacity very high head
- Suitable for low NPSHa applications
- Modular concept, easy maintenance







### World leading manufacturer of process gas compressors:

- LMC Single stage integrally geared vertical in-line
- Pinnacles: Horizontal multistage integrally geared API614/617
- Vapour Recovery
- Regeneration
- Recycle
- Fuel Gas, Nitrogen, CO2, Ammonia, Chloride etc











### Magnetic driven pumps (API 610/685)

- Almost no unplanned maintenance for low cost operation
- Uses standard electric motors to reduce initial / replacement costs
- No leakage possible Environmentally safe
- High pressures and hot oil capabilities without 'backup' systems for versatility
- All specifications available ISO 2858, DIN, EN22858: 1993, ANSI B73.1M, B73.3M and API 610 / 685
- Non metallic versions are available to suit your application.
- Can be serviced on site to reduce cost and downtime
- No cooling required





# SPECK - PUMPEN Daniel Speck & Söhne GmbH & Co. KG Lohbachstr. 6 - D-91161 Hilpoltstein SPECK

- All type of Centrifugal pumps for process and utility applications
- Standard DIN/ANSI/Norm pumps
- Vertical
- Horizontal
- Inline version
- Canned version
- Multistage
- Submerged





# Wepu hydraulik

- Triplex Piston Pumps API 674
  - DP-400 Series
  - DP-212 Series'

High capacity – high pressures

- Process injection for
  - Produced Water
  - Chemicals
  - MEG / Methanol
  - Diesel etc.





Methanol injection Snorre B platform



Ing. Per Gjerdrum AS

www.pergjerdrum.no



# Three Spindle Screw Pumps - API 676

- Three Spindle Screw Pumps API 676.
  - KRAL pumps are tailor-made solutions for pumping fuels, oils, and other non aggressive liquids.
  - Screw pumps offers a high flow rate while occupying minimal space compared to other types of pumps



- Leak-free no collection of residues.
- No wear-and-tear no maintenance, no wearing out.
- Hermetically sealed prevents contact of heavy fuel oil with oxygen.
- Temperature resistant up to 250 °C.
- High liquid capacities for all engine sizes.





## World of Plate Heat Exchangers and Freshwater Distillers

- Gasketed Plate
- Brazed Plates
- Semi Welded Plates
- Free Flow Plates
- Sonder Safe Plates
- Plate and Shell Heat Exchanger
- Materials: SS316, Hastelloy, Titanium

http://www.sondex.dk/









### Lead supplier of air operated diaphragm pumps









**Dominator Pump AB** | Grossistgatan 3, SE-553 02 Jönköping, Sweden Phone 0046 (0)36-18 11 60 | Fax 0046 (0)36-18 11 69 info@dominatorpump.com | www.dominatorpump.com





# **Construction AS**

- Manufacturer of marine and offshore constructions and products
  - Manufacturing of Pump packages/ pumping systems
- Design and engineered in close cooperation with our Clients
- Fabrication Facility
  - Total Manufacturing 2100m2 + offices
  - Crane capacity: 3 Ton and 12 ton(Height 5,5m)
  - New Facility for Assembly mounting testing Total 1800m2
  - Crane capacity 50 ton (Height 8m)
  - Inconel cladding of flanges and hubs for Offshore/ Subsea
  - 1 x 1.2 x 2,6 meter rotary fizzle-drill machine
  - 1250 mm milling capasity
  - Co-operation with Teknisk Produksjon AS (CNC machinery)
  - Welding WPQR in Mild steel-stainless steel-copper-Duplex
- 28 employees
- www.pg-construction.com

# Fab.facility in Lier, Drammen 30 min west of Oslo









# **Hydraulics AS**

- Product range
  - Complete hydraulic systems engineering
  - Building of Hydraulic Power Packs
  - Distribution of hydraulic components and solutions
  - Production of hydraulic hoses in acc. with Customer specifications
  - Commissioning and Service
- New Facilities, 2008
  - Eggesbønes, Fosnavåg
  - Total 1400 m2
  - Workshop 1000 m2
  - Offices 400 m<sup>2</sup>
- Crane capacity
  - 2 cranes of 2 x 10 t (40 tons total)
  - Lifting height 7 m
- PG-Hydraulics AS
  - Owned by PG and Ulstein Marine Technology as
  - 12 employees





