

Pumps that love extreme challenges



Fig. 1 Trinidad (© Yara International ASA 2004).

Utmost safety standards, massive environmental protection conditions: the requirements when it comes to the use of pumps are becoming ever more complex. Whether a highly-efficient power station or the production of fertilisers and chemicals, a problem-free sequence must be guaranteed when it comes to difficult and complex pumping tasks. Day after day and year after year!

Bungartz pumps are used in exactly the locations where con-

ventional pumps reach their limits. Areas of application of these pumps (see Fig 1–3) include the

- *fertiliser,*
- *chemical and petrochemical industry,*
- *the field of geothermal energy, power stations or even*
- *salt mines.*

Main areas of application of horizontal and vertical pumps are:

- *Boiling liquids*
- *Liquids with solid content*
- *Gas content*

- *Fluctuating amounts*
- *Toxic substances*
- *Residual discharge*
- *Tanker discharge*
- *Toxic substances*
- *Atex Zone 0 (vertical design, complete container discharge)*

The specialist provider of dry running centrifugal pumps offers innovative solutions combined with over 70 years of experience. Tailor-made to the respective application, the team consults, develops and

manufactures the special pumps. In doing so, customers appreciate the high level of flexibility, operating safety and reliability. The core of this success are the three pillars that have made Bungartz famous as a real problem solver.

Efficient, innovative, reliable

“Whether having to deal with poor feed conditions or problematic pumping media, we have made a

name for ourselves as a specialist for difficult areas of application” says Dipl.-Ing. Frank Bungartz (Fig 4). “For example, in the chemical industry when it comes to the pumping of toxic media and solid or gas containing pumping liquids. The MPCH-DryRun chemical centrifugal pump demonstrates its capability here. By the magnetic drive that is dry running and relieved of pressure on one hand. In addition, by a ceramic annular-gap cup that makes a magnetic field transfer that is free from eddy currents possible. This also leads to

significant energy savings.” Use in the field of tanker discharge is also economical and efficient. The complete container discharge was a prerequisite for the pump application for one particular customer who is a processing company in the chemical industry. Centrifugal pumps with normal suction characteristics quickly reach their limits here.

Bungartz, the special pump manufacturer offers a safe as well as a tried and trusted solution in the form of the V-AN pump: The self-regulation of the V-AN pump indepen-



Fig. 4 Frank Bungartz, who is the third generation of his family to run the company with an MPCH_{DryRun} model.

Fig. 2 (© BP Europa)



Fig. 3 (© H. P. Merten for BP)



dently adapts to the incoming feed rate. Advantage: Due to pressure reduction without cavitation, the discharge of liquid gases is unproblematic - even up to boiling point.

All pumps from the V-AN range are safe to run dry, reliable, self-ventilating and have a low NPSH value (<0.1 m).

A further selection criterion when selecting pumps is the saving of plant costs as a result of the reduction in construction height. The pumps from the V-AN range are able to score here; they are also suitable for use when dealing with fluctuating feed rates, media at boiling point or gas containing media. These pumps are in worldwide demand as problem solvers when it comes to the residual discharge of vessels, the pumping and collection

of condensates on vacuum filters, centrifuges, distillation columns, evaporation plants or on waste containers. As is the case with the MPATAN design that is also ATEX-compliant and can be used in Zone 0. Therefore, this pump is often

used in refinery waste tanks or in all places where petrols or solid-laden hydrocarbon compounds at boiling point or media at high temperatures are pumped. Furthermore, the V-AN range is excellent in terms of energy efficiency, long service intervals and

an extremely long service life that means that pumps pay for themselves in the long term.

- www.bungartz.de
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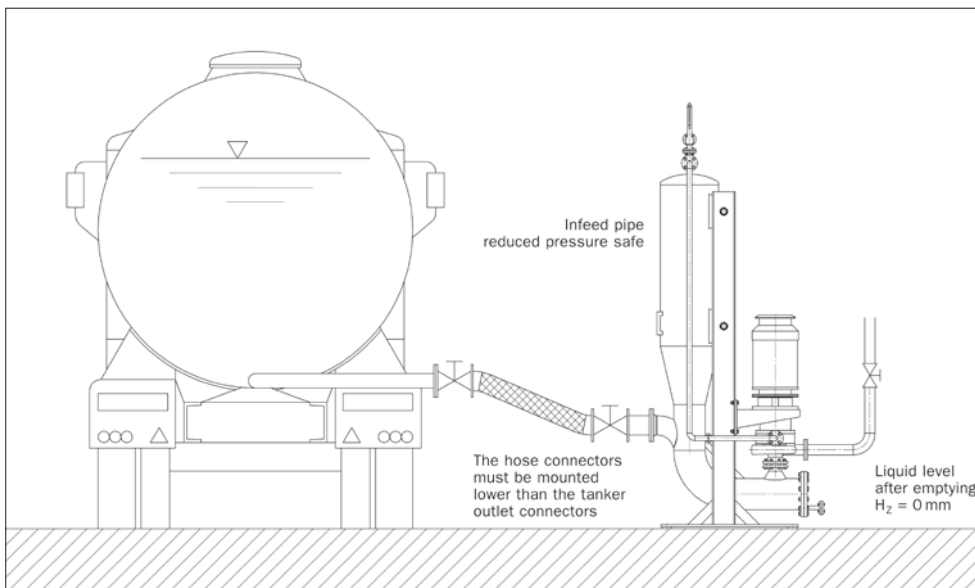


Fig. 5 Complete tanker discharge from below

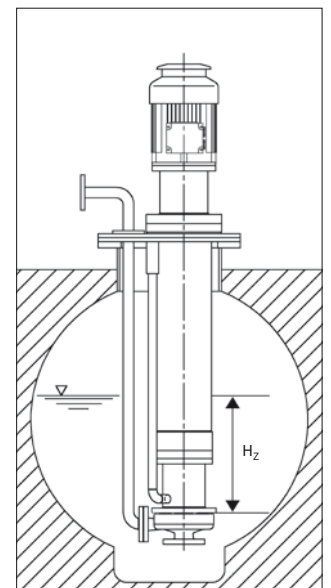


Fig. 6 The correct pump choice for waste tanks discharge: MPAT-AN

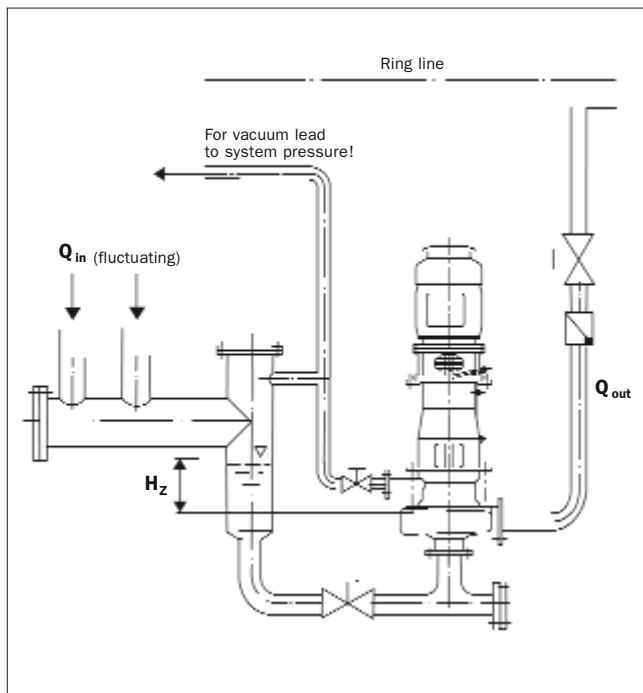


Fig. 7 The correct pump choice for the pumping and collection of condensates on vacuum filters: V-AN

The three pillars of success:

1. Sealing technology

Almost all Bungartz pumps combine the hydrodynamic shaft seal as a primary seal with a downstream secondary sealing (packed gland, mechanical seal or magnetic drive).

2. Special physics

Therefore the self-regulating behaviour of the centrifugal pump is named V-AN (AN stands for abnormal). The regulation of the pump independently adapts to the changing feed rates. Your NPSH value is at zero meaning that it works free of cavitation, even if the vapour pressure in the suction container is reached.

3. Materials

The range of materials is almost inexhaustible. It ranges from castable and weldable stainless steel qualities and special alloys such as titanium or zirconium right through to grey cast iron. Even SiC components are used.

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