

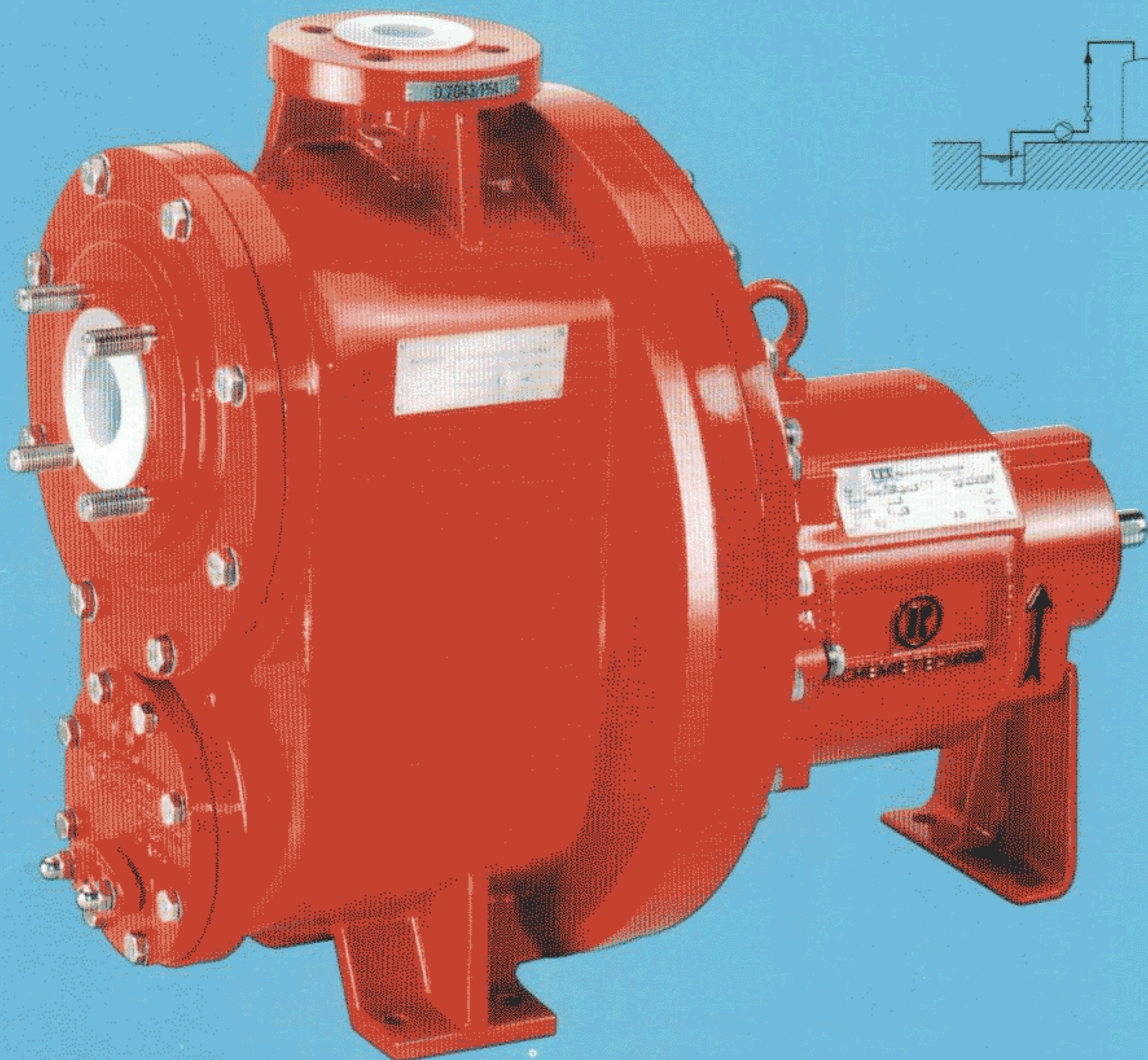
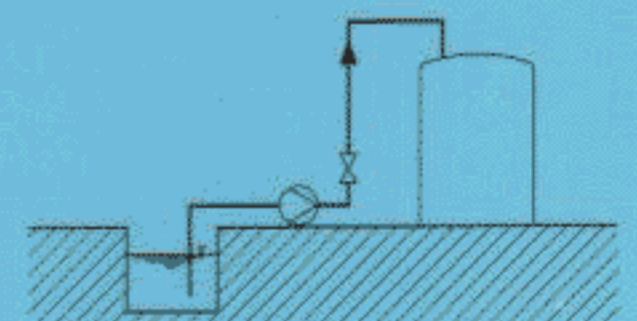
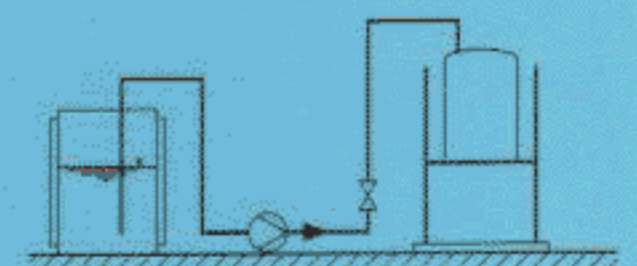
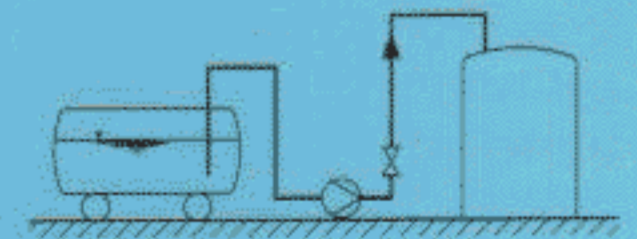
ITT RICHTER CHEMIE-TECHNIK

Self-Priming Chemical Centrifugal Pumps

**The Answer
to Corrosion**

Types
MNK-S, MNK-SB, SCK-S

- For top entry road/rail tankers, storage tanks and sumps
- Primes against 18 m WC back pressure



Materials:
PFA/PTFE



Will prime against 18 m WC back pressure

Pulsation free self-priming pumps for corrosive and hazardous liquids.

Suction lift 6 m at an specific gravity of 1.0 kg/dm³. Delivery capacities of 1-33 m³/h, TDH up to 40 m WC.

The self-priming pump from ITT Richter primes automatically. Feed tanks are not required!

Suction head, delivery head and back pressure govern the performance of a self-priming pump. The Richter self-priming pump permits a much greater application range than was previously possible with lined pumps (see page 4).

Top entry tanks, tankers and sumps can be emptied without risk. Bottom run-off nozzles are not needed. Big, high maintenance submersible and oscillating pumps can now be replaced by a standard pump installation.

Good gas handling characteristic.

Air pockets in the suction line are readily transported through the pump even when liquid is being conveyed.

● Pump housing

- Ductile cast iron 0.7043/ASTM A395 with thick PFA/PTFE lining
- Drain connection as standard feature
- No expansion joints required

● Slide-in "Back Pull-Out" Unit

- of the time-tested magnetic drive pump MNK with eddy-current-free can system and Richter SAFEGLIDE PLUS plain bearings (frame-mounted and close-coupled designs) or
- of the SCK series with internal or external double mechanical seal (standard design)

● Sturdy design

- Bearing pedestal made of ductile cast iron 0.7043/ASTM A395
- Impeller and plain bearing pedestal made of PFA with stable metallic cores

● Optimised-flow separator chamber

- Quick priming
- High efficiency

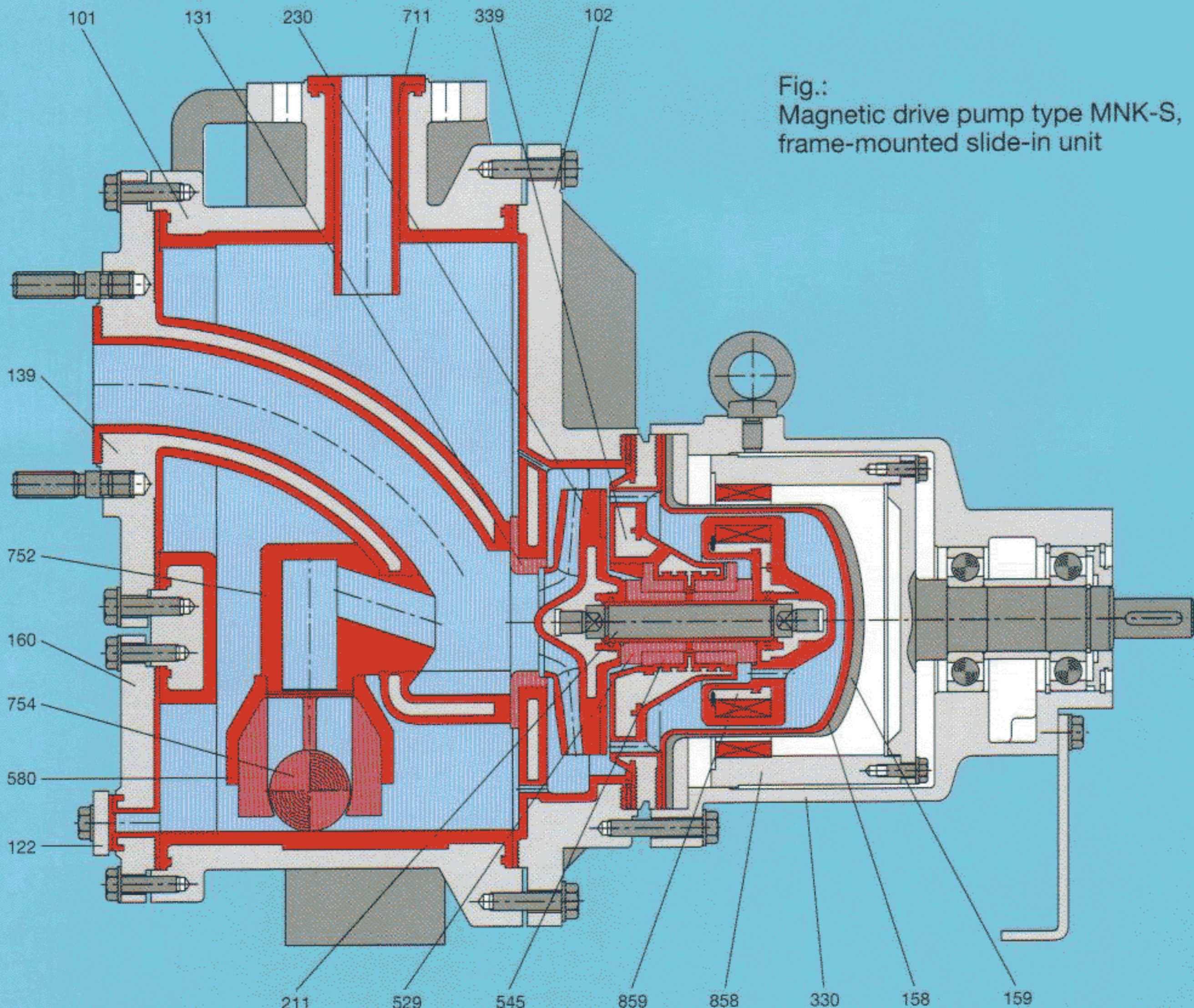
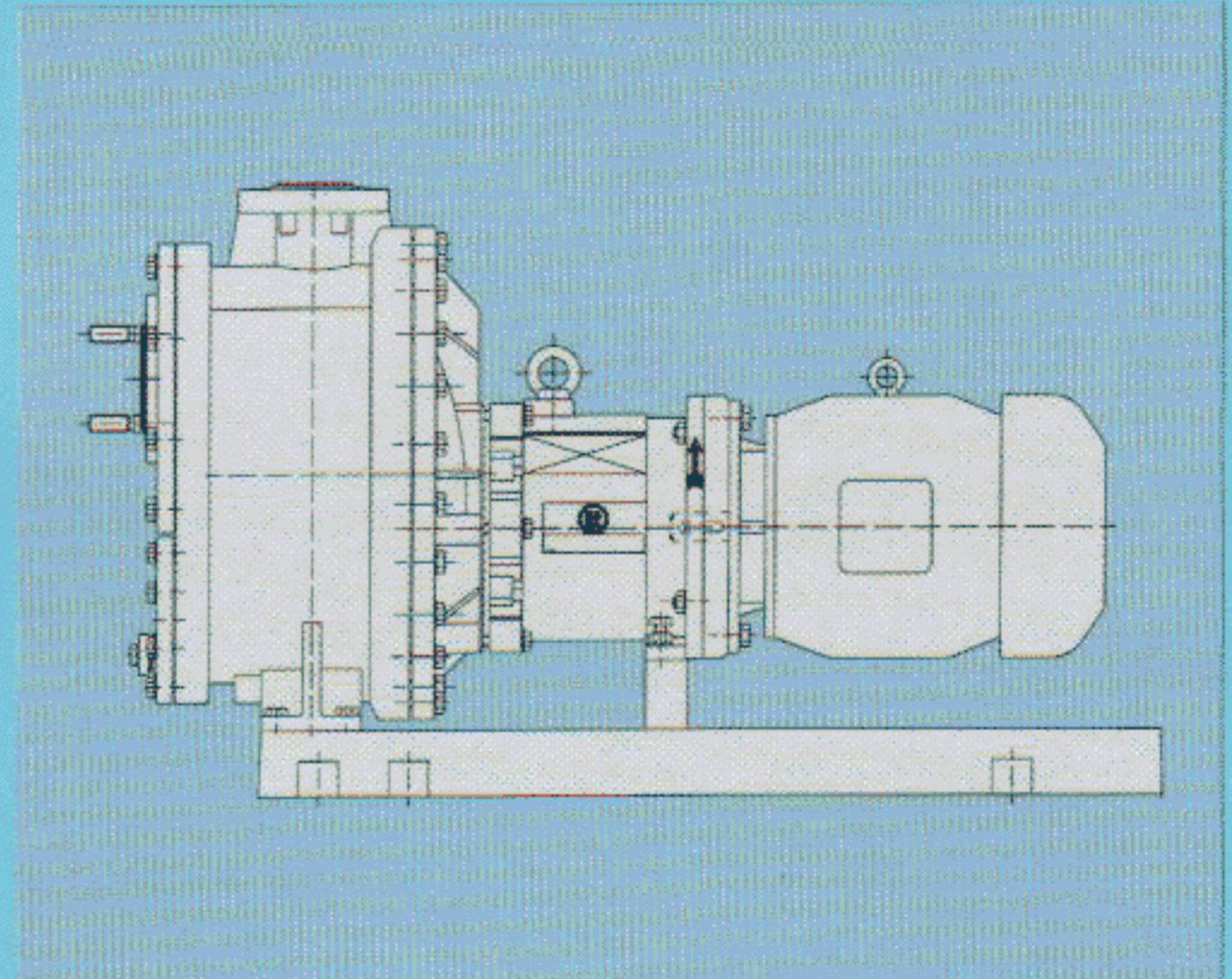
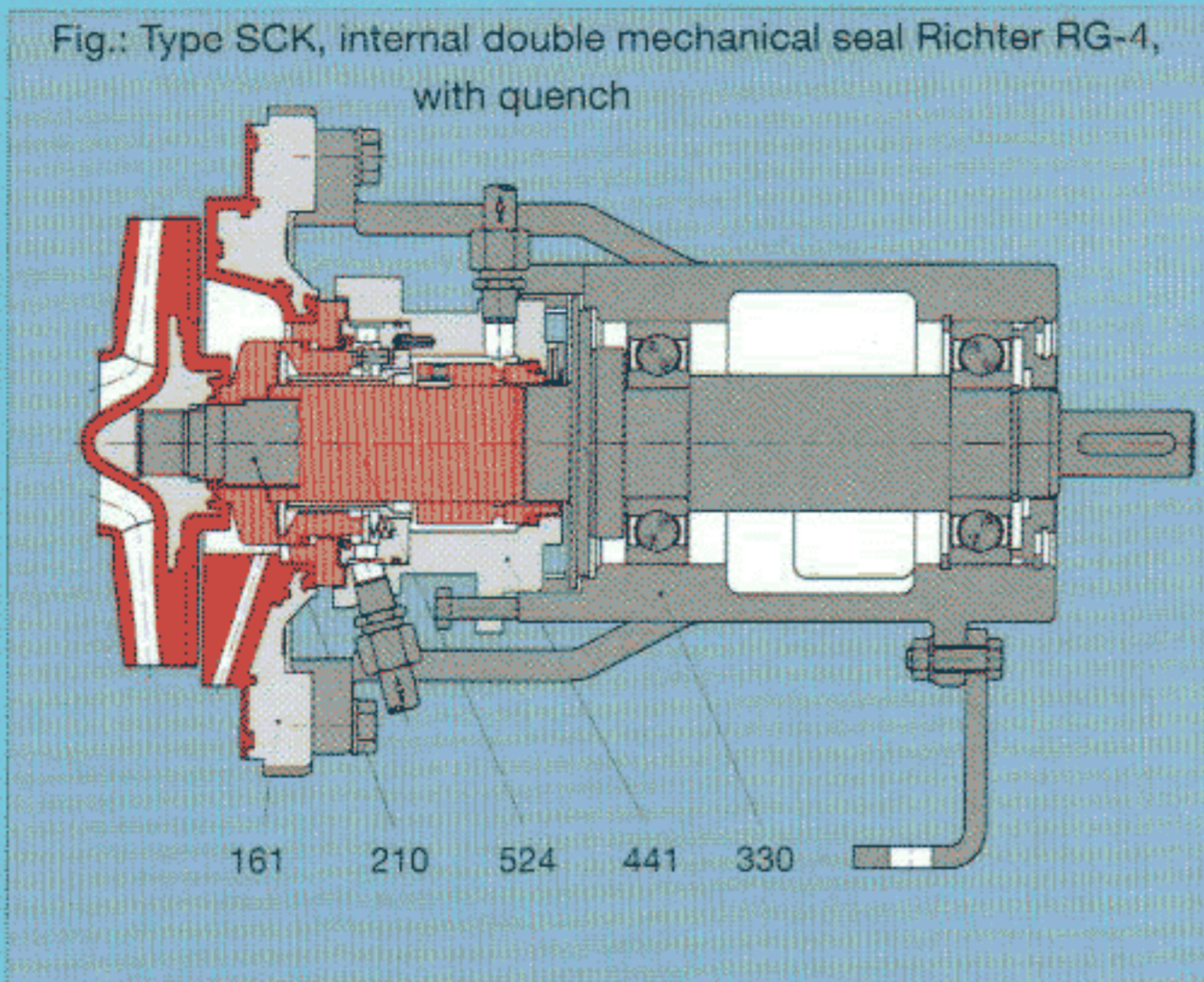


Fig.:
Magnetic drive pump type MNK-S,
frame-mounted slide-in unit

- **Hermetically tight: Magnetic drive or double mechanical seal**
- **Slide-in unit from the time-tested Richter pump range**

Alternatives to the magnetic drive pump MNK-S of frame-mounted design:

- **Mechanical seal pump SCK-S, frame-mounted with internal or external double mechanical seal**
- **Magnetic drive pump MNK-SB of close-coupled design with flanged motor**



- **For detailed sectional drawings and descriptions of the pump, refer to the publications No. 631 (SCK), 645 (MNK) and 671 (MNK-B)**

- **Magnetic drive pumps:**
 - Richter SAFEGLIDE PLUS plain bearings of pure SiC optionally: protection against damage from dry-running
 - Non-metallic, eddy-current-free double cans made of CFRP/PTFE, monitor connection on request
 - Sturdy, heavy-duty design
- **Mechanical seal pumps:**
 - Type SCK-S (heavy-duty design), also for high stresses
 - Shaft protective sleeve Al₂O₃, SiC, Hastelloy etc.
- **Closed impellers:**
 - With large metallic core
 - Protected against unscrewing during start-up in the wrong direction of rotation
 - Hydraulically optimised curved channels
- **Pressure/temperature range:**
 - Oper. temperature: -60 to +150°C (-75 to 300°F)^{***}
 - Operating pressure up to 10 bar (145 psi)
 - Design for elevated vacuum (at pump standstill) on request
- **Solids-containing media:**
Consultation with ITT Richter required

Item	Designation	Standard design
101	Pump housing	Duct. iron 0.7043(A395)/PTFE
102	Volute housing	Duct. iron 0.7043(A395)/PFA
122	Cover flange	Duct. iron 0.7043(A395)
131	Inlet ring	Pure SiC
139	Feed elbow	Duct. iron 0.7043(A395)/PFA
158	Can insert	PTFE*
159	Can	CFRP carbon-fibre comp.
160	Plate	Duct. iron 0.7043(A395)/PFA*
161	Black plate	Duct. iron 0.7043(A395)/PTFE*
210	Pump shaft	Stainless steel
211	Pump shaft	Stainless steel/PFA
230	Impeller	PFA* with ductile iron core
330	Bearing pedestal	Duct. iron 0.7043(A395)
339	Plain bearing pedestal	Duct. iron 0.7043(A395)/PFA
524	Shaft protective sleeve	Al ₂ O ₃ , SiC etc., depending on specification
529	Bearing sleeve	Pure SiC, on request with Richter SAFEGLIDE PLUS
545	Bearing bush	Pure SiC, on request with Richter SAFEGLIDE PLUS
580	Priming valve: cap	PTFE
711	Discharge pipe	PTFE
752	Priming valve: seat	PTFE
754	Priming valve: ball**	PTFE
858	Drive magnet assembly	Steel, permanent magnets
859	Inner magnet assembly	Steel/PFA, perman. magnets

* Other materials on request (for slide-in units lined with PVDF or PP/PE)
 ** Standard design: without ball. Design with ball only required in special cases.
 *** Pump housing is filled with liquid. Note risk of freezing at minus temperatures.

The "self-primer" from Richter: For emptying containers, tank trucks and waste-water sumps without risk.

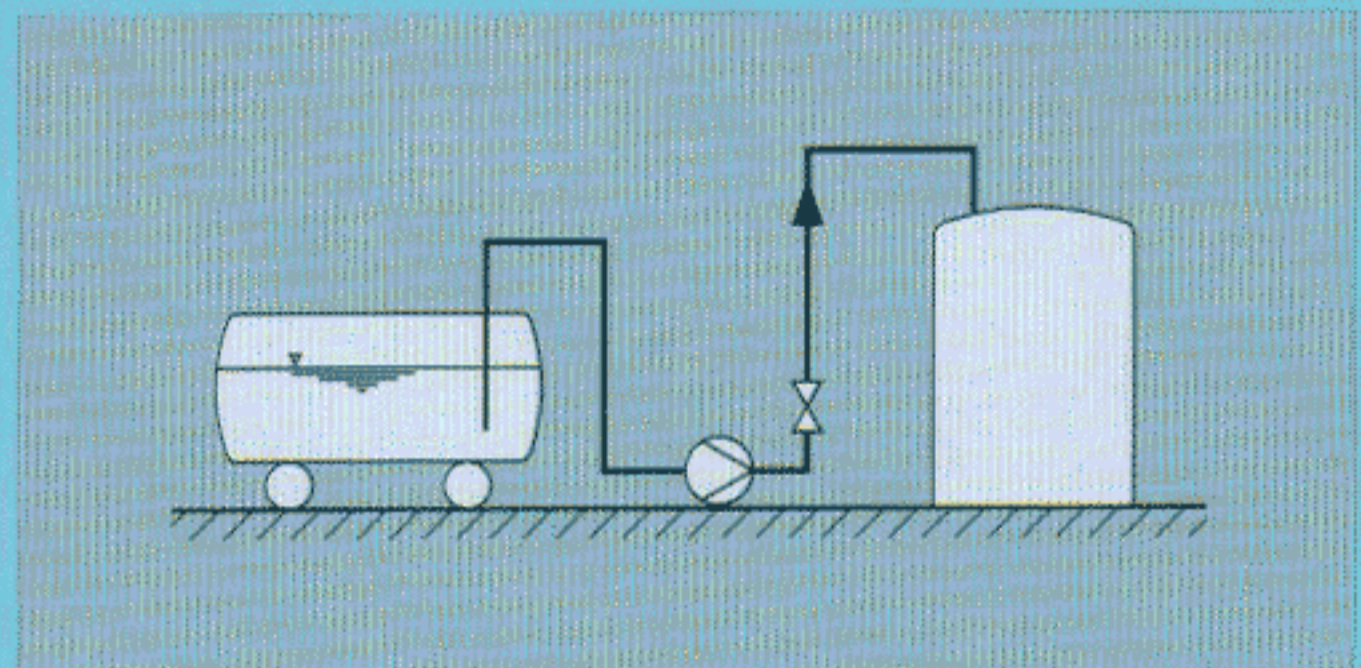
Further technical features:

- **Flanges:**
For connection to DIN 2533/PN 16,
on request for connection to ANSI or BS
- **Rolling bearings:**
Permanent grease lubrication, oil lubrication on
request (for standard design)
- **Type code**
MNK-S/... with magnetic drive, frame-mounted
MNK-SB/... with magnetic drive, close-coupled
SCK-S/... with mechanical seal, frame-mounted
.../F PFA/PTFE lining
- **Weight:**
Approx. 170 kg without motor and base plate

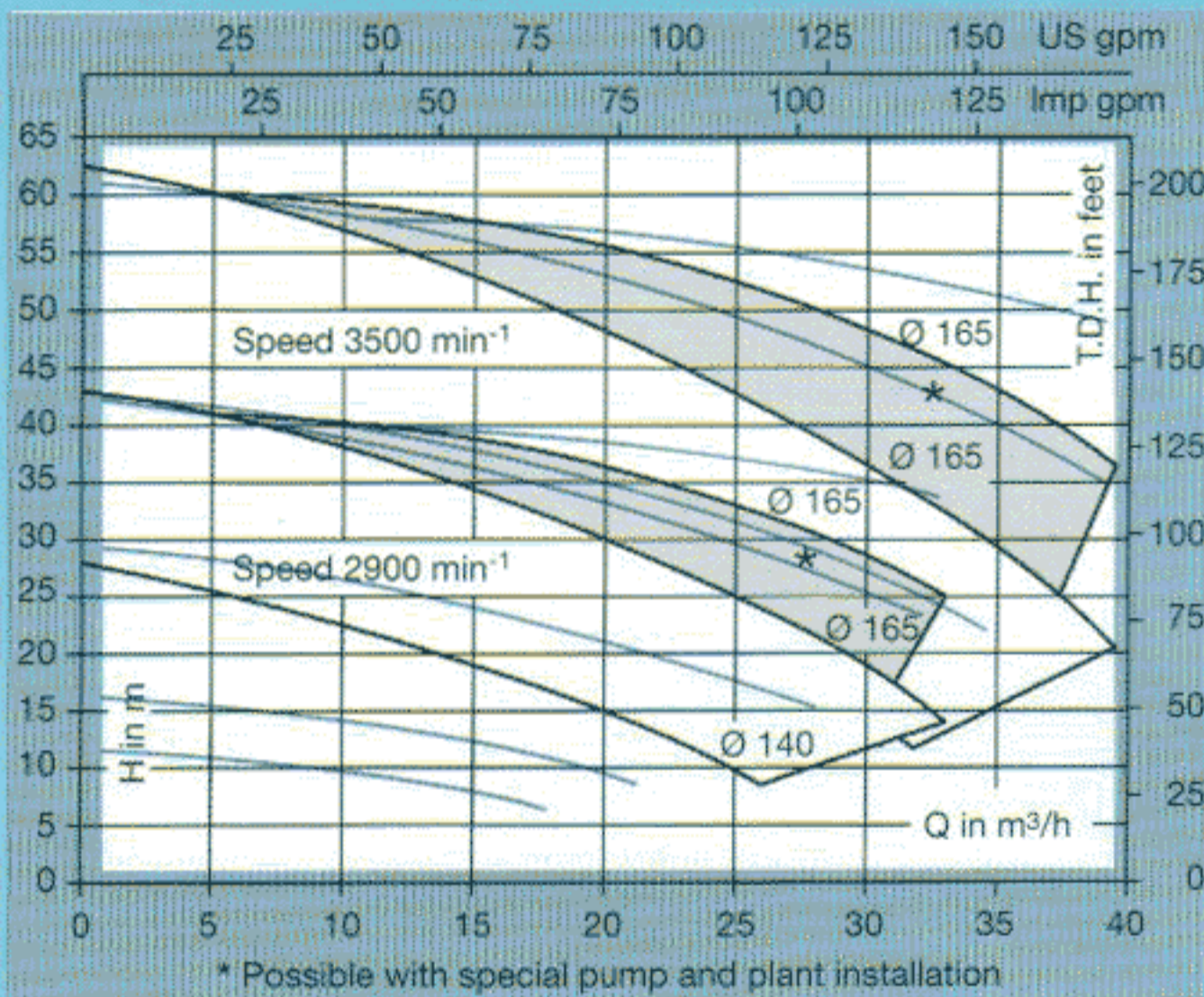
Applications:

- **For conveying**
 - corrosive liquids
 - hazardous liquids
 - liquids with varying composition
(chemical residues, waste water)
 - solids-containing liquids: consultation
with ITT Richter necessary

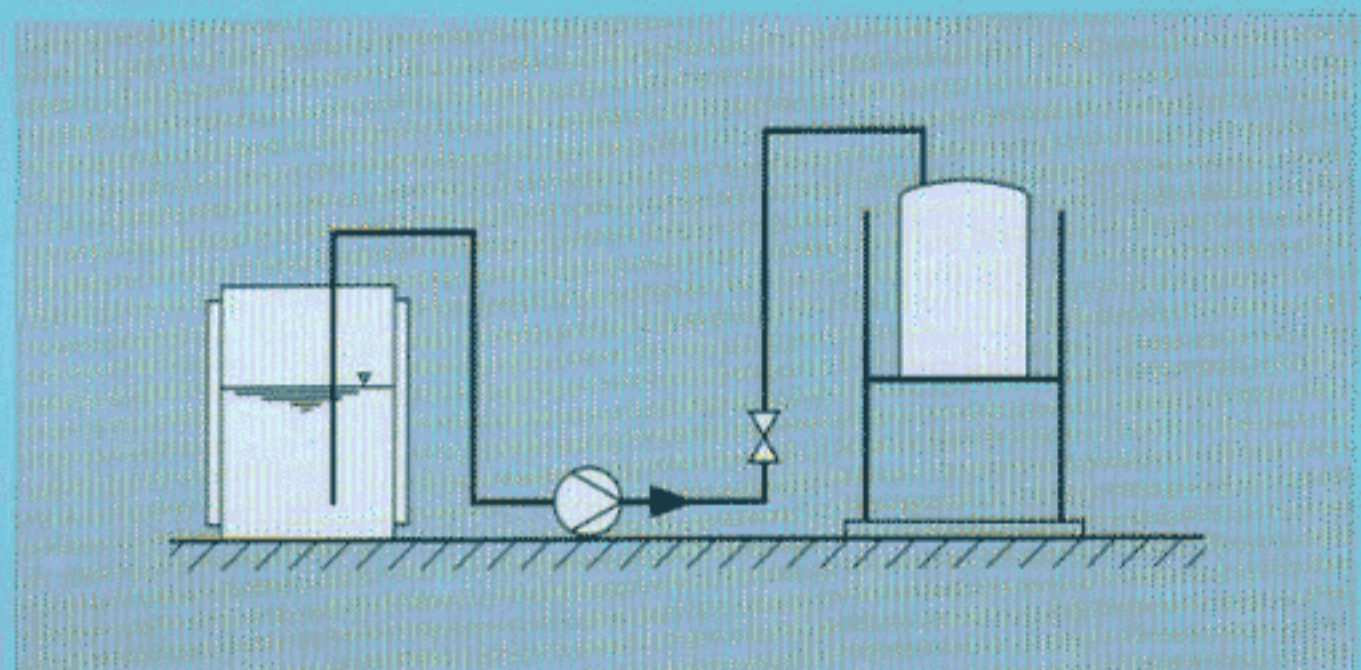
● Emptying tank trucks (road, rail)



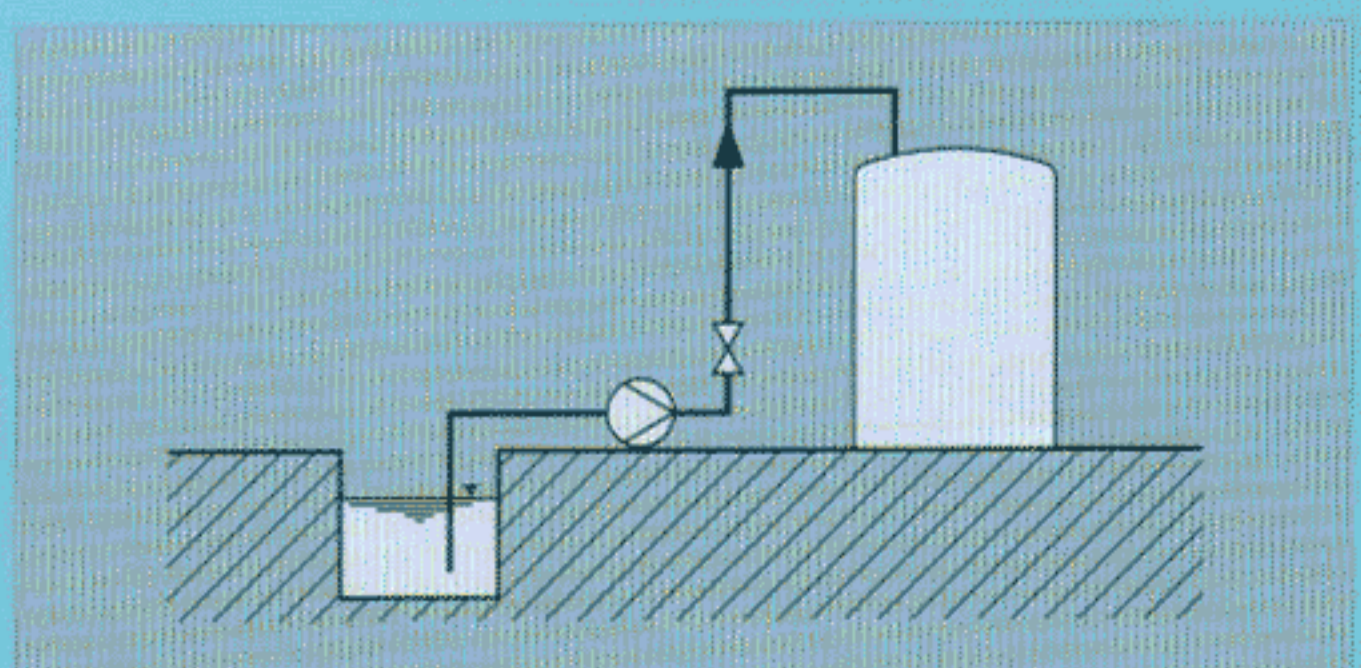
Delivery capacities:



● Emptying containers (chemical production, chemical tank depot)



● Emptying waste-water sumps (waste water collecting sumps)



Suction lift, back pressure compatibility

Speed (rpm)	1450	2900	1750	3500
Max. suction lift (m WC at $\rho=1 \text{ kg/dm}^3$)	4	6	6	6
Back pressure compatibility (m WC at $\rho=1 \text{ kg/dm}^3$)	0-6	0-4	0-18	0-18

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