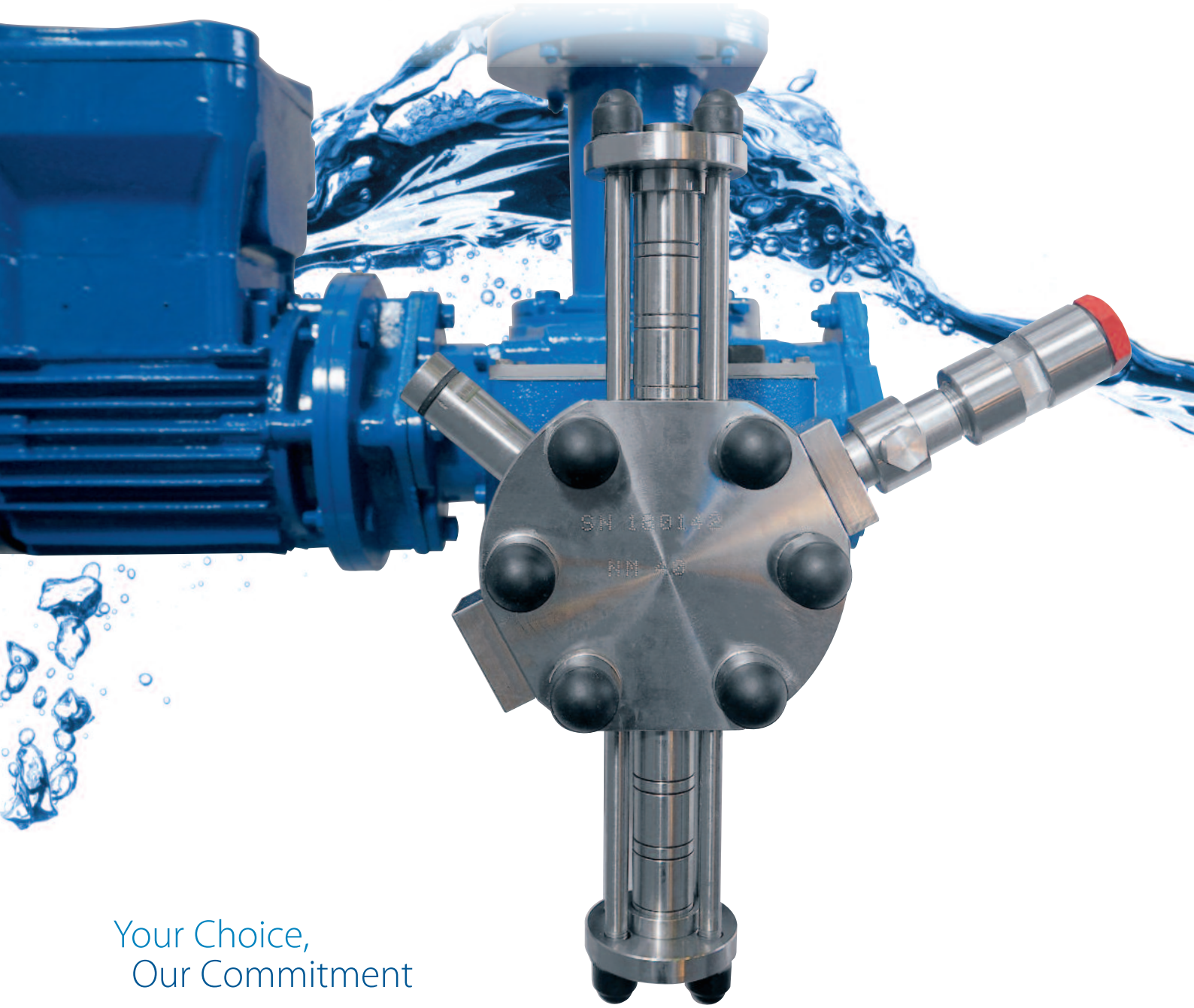
seko

Nexa Series

Chemical Injection Pumps
for Heavy Duty Process Applications



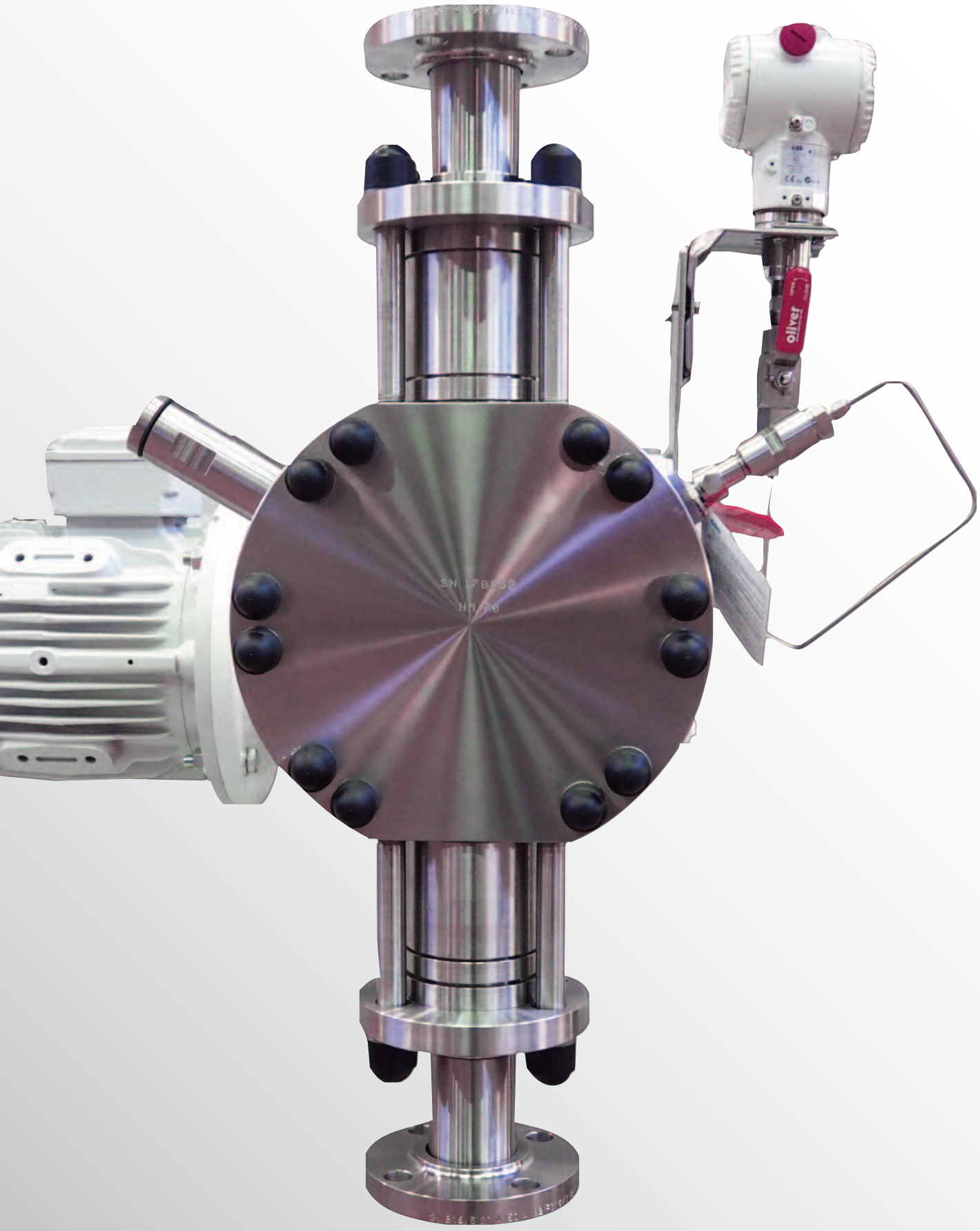
Your Choice,
Our Commitment

Engineered pumps

Pumps used in industrial processes need to provide operators with the reassurance that the product is fit for purpose, regardless of the application.

SEKO prides itself on being able to tailor its pumps to meet every operational requirement, whilst matching any specific or international standard.

- Beyond standard MOC's (SS 316L, PVDF and PP), SEKO is able to supply specialist materials such as AISI 317L, Hastelloy © C-276, Incoloy 825, Titanium, Duplex and Superduplex amongst others
- SEKO can supply any brand and type of electrical motor (IEC, Nema, AC, DC etc) or electrical actuators including our own AKTUA model
- SEKO can tailor the painting process for the pump to ensure application compatibility as well as providing all the necessary product and test documentation to fully qualify the product
- Compliance with Norsok M-501 & M-630, NACE 0175, ATEX94/9/CE, TR CU 004-010-020-012/2011, Shell DEP (various), API 675 3rd
- SEKO can supply pumps that operate consistently in low and high pumping temperatures, with extremely low NPIP and high working pressures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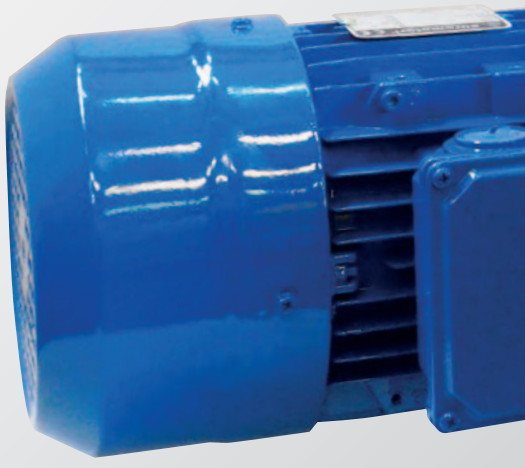
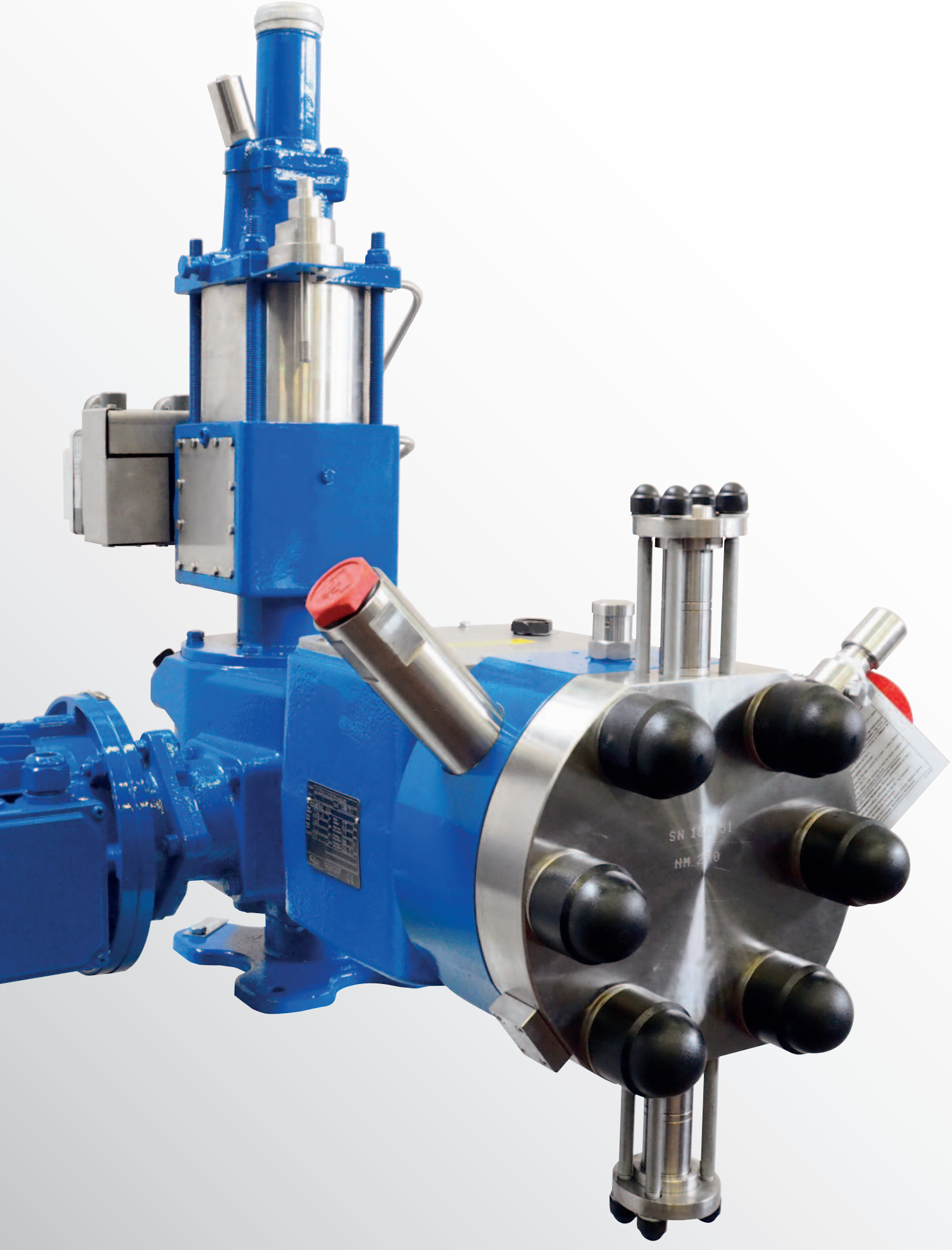
Nexa Series

For over 50 years and thanks to the acquisition and integration of Bono Exacta, SEKO has been designing and manufacturing process reciprocating pumps.

- The Nexa Series of metering pumps benefit from long term and extensive experience in heavy duty industrial process applications
- These pumps thanks to their reliability, operational safety and low total cost of ownership are being used for a number of applications. Ranging from industrial water treatment, through chemical processes, to the most demanding of duties, such as offshore upstream chemical injection
- Nexa pumps not only meet but exceed API 675 3rd Edition design standard and have a full motion mechanism with either packed plunger or double hydraulic diaphragm pump head





Flexibility, reliability and robustness

Nexa series is available in plunger and double diaphragm head versions.

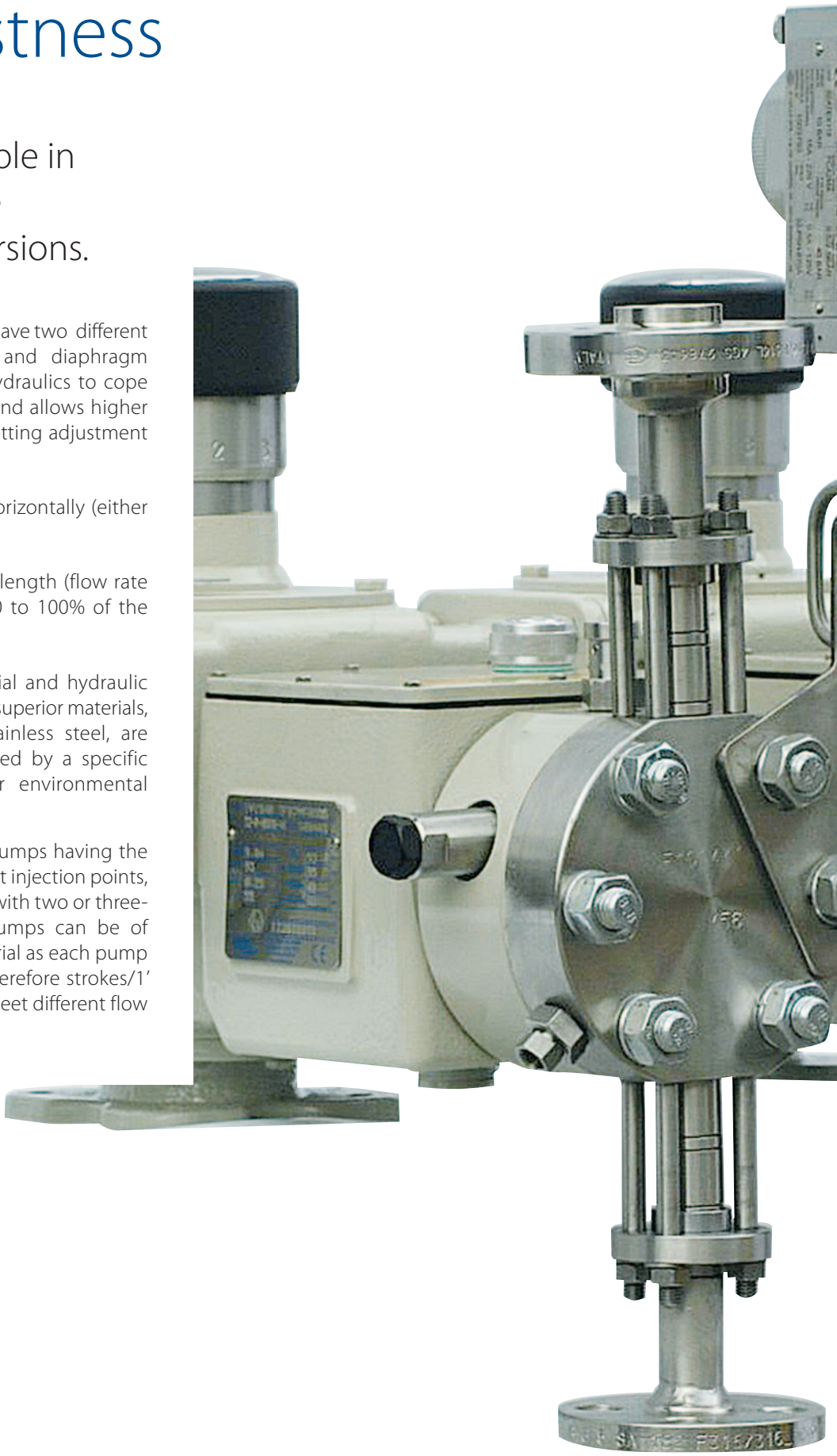
Nexa hydraulic diaphragm pumps have two different oils for mechanism lubrication and diaphragm displacement. This enables the hydraulics to cope with wide ranging temperatures and allows higher reliability, dosing accuracy, finer setting adjustment and application flexibility.

The driving motor can be fitted horizontally (either side) or vertically.

Nexa pumps have variable stroke length (flow rate variation is by adjustment from 0 to 100% of the plunger stroke length).

As a minimum, the casing material and hydraulic chamber, is made of grey cast iron (superior materials, such as nodular cast iron or stainless steel, are available on demand or if required by a specific project/international standard or environmental conditions).

It is possible to couple together pumps having the same or different tasks with different injection points, or to obtain a higher smooth flow with two or three-headed pumps and manifold. Pumps can be of different sizes, flow rates and material as each pump has its own reduction gear and therefore strokes/1' can be independently chosen to meet different flow rate requirements.



Technical features

Pressure

up to 660 bar

Flow rate

up to 7500 l/h with a single head

Fluid temperature

-10 °C – 90 °C

Upon request: -40 °C – 150 °C

Wetted parts

SS 316L ; PP ; PVDF ; PTFE ; Other exotic materials available upon request

Mechanism sizes

Size	Stroke length (mm)	Thrust (kN)
N0	10	2
N1	25	5
N2	35	8
N3	50	18
N4	70	30

Plunger head pressures

Max. Allowable Working Pressure (bar)	Pump head code
40	P
200	K
Higher on demand (up to 660)	K plus

Hydraulic head pressures

Max Allowable Working Pressure (bar)	Pump head code
40	Y
120	T
200	H
350	B
Higher on demand (up to 450)	B plus

Features

Diaphragm Rupture Detector

SEKO double diaphragm hydraulic pumps can be offered with a vast array of options:

- SEKO standard local visual
- Local visual via pressure gauge
- Pressure switch (any make, model or case material and signal type: analog 4 – 20 mA, digital, HART protocol)
- Pressure transmitter (any make, case material and signal type: analog 4 – 20 mA, digital, HART protocol)

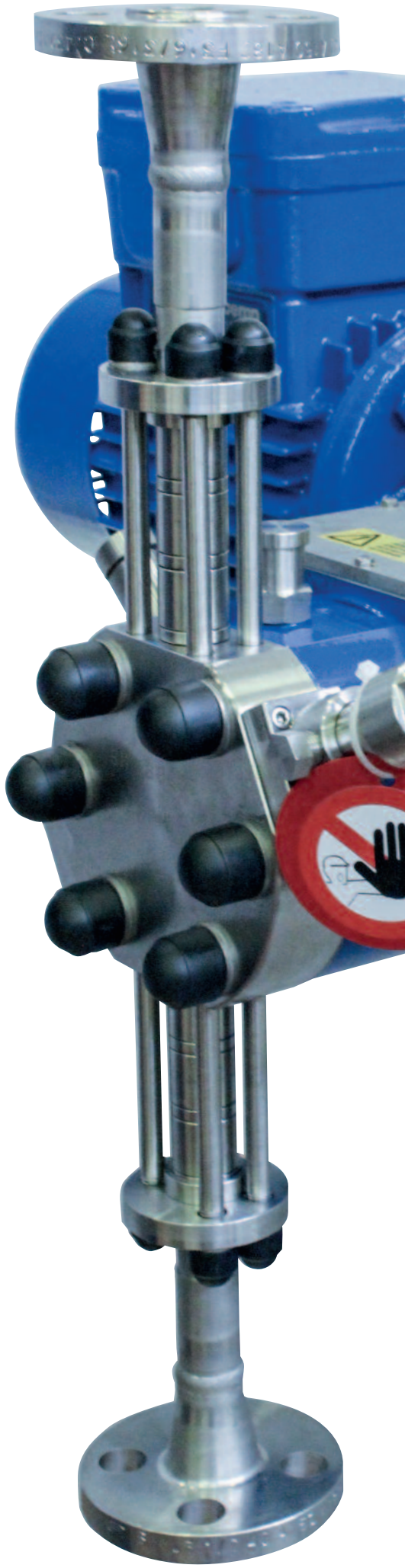
Pressure switches and pressure transmitters can be supplied with various connection systems: direct connection, block valve, block and bleed or separator for example.

Manual adjustments

- Manual adjustment is smooth, easy reading and step-less
- Manual adjustment, comes with a locking device as per API 675 requirements

Automatic adjustments

- Pneumatic adjustment both for safe and hazardous areas (Air Supply 4 – 7 bar / 3 – 15 psi)
- Pneumatic adjustment with I/P converter (Air Supply 4 – 7 bar / signal 4 – 20 mA, HART) for hazardous areas
- SEKO in-house designed and manufactured electrical actuator (single phase multi voltage and 50/60 Hz power supply and 4 – 20 mA signal and feedback). This actuator is available for safe and hazardous areas (ATEX II 2 G Exd IIB + H2 T6)
- We can provide various pilot signals and makes of electrical actuator suitable for low temperature, manual adjustment with feedback for example
- SEKO pumps can be supplied with variable speed drive motors (PTCs, forced ventilation etc.) and on demand with relevant inverters and filters



Accessories

SEKO is able to select, procure and supply, together with its pumps, a vast selection of accessories that are required for correct pump operation:

- Pulsation dampers for both suction and discharge (any type, wetted parts, certification and process connection, ASME IX, U-Stamp, PED ATEX)
- Pressure relief valves (API 520 or 526, any type, wetted parts, certification and process connection - ASME IX, UV-Stamp, PED, ATEX)
- Y filters
- Back pressure valves
- Calibration pots any type, wetted parts, and process connection

A wide range of applications

Suitable for a wide range of applications within water treatment but also outside of this arena, NEXA can effectively be used in any of the following applications: **Oil & Gas – Petrochemical – Power Generation – Chemical – Water & Wastewater – Food & Beverages – Pharmaceutical – Paper – Textile**




Special pumps for difficult applications

Driven by customers' requirements SEKO has adapted the Nexa Series for a number of critical applications:

Extreme chemical temperatures

Requirement

Processing of hydrocarbons in some chemical reactions requires the feedstock or the by-product to be kept at temperatures as low as -30 °C or above 100 °C.

SEKO solutions

Special hydraulic oil and hydraulic chamber design adaptation enables chemicals to be pumped at temperatures as low as -40°C.

Special hydraulic oil and hydraulic chamber design enables pumping at temperatures up to 135°C on a continuous basis and up to 150°C design temperature.

Difficult suction conditions

Requirement

In chemical applications with high fluid temperature or up or downstream Oil & Gas applications, due to chemical vapor pressure and/or arrangement of suction line. The available NPIP could be extremely low, in some cases as low as 0.8 barg.

SEKO solutions

SEKO is able to supply hydraulic diaphragm pumps with very low NPIP r even with very low rated flows.



Dangerous, toxic, flammable, pyrophoric chemicals

Requirement

Double diaphragm design is nowadays widely required for almost any application. However there are few specific demands for 100% chemical tightness and operational safety

SEKO solutions

SEKO has supplied double diaphragm pumps since the 80's and now Nexa's state-of-the-art double diaphragm offers significantly improved performance with 100% chemical security without using intermediate fluids and low permeability PTFE diaphragms.

Requirement

Manufacturing of high density and low linear density PE and PP requires the injection of a catalyst: Triethylaluminium (TEAL) at high pressure. TEAL and similar chemicals are highly pyrophoric, igniting immediately upon exposure to oxygen (air/water).

SEKO solutions

SEKO can supply zero-leakage metering pumps to avoid any form of leakage during normal operation. Special valve versions and constant flushing of nitrogen on the hydraulic chamber prevent any possible leakage to the surrounding area. The double diaphragm design avoids fluid escape in case of one diaphragm rupturing, triggering the pressure transmitter/switch. The pump comes with a nitrogen flushing system to positively remove any trace of pyrophoric chemical before replacing the diaphragms.

Low ambient temperatures

Requirement

In several countries (Russia, Kazakhstan, Canada etc.) ambient temperatures can be as low as -40 °C or lower.

SEKO solutions

SEKO continues to supply nodular cast iron/SS casing hydraulic chambers, using low pour point hydraulic oils, special hydraulic inner chamber components design, special painting, oil heaters etc. to guarantee reliable operation even outdoor without shelter.



Your Choice, Our Commitment

In the modern Globalised world, being a privately owned Company has significant benefits especially for our Customers, our Partners. For over 40 years, SEKO has developed a Global organisation able to take the longer view, manage the pressure of the now, and to plan for the long term, delivering true Partnership for our Customers, with transparency and mutual respect for each other.

Whether it's for our reknown flexibility, our attention to detail, the high-quality products, or just the way we do business, we understand that it's Your Choice to do business with us. It is Our Commitment to fulfill your needs wherever you, our Customers are.

For more information about our portfolio, worldwide locations, approvals, certifications, and local representatives, please visit **www.seko.com**