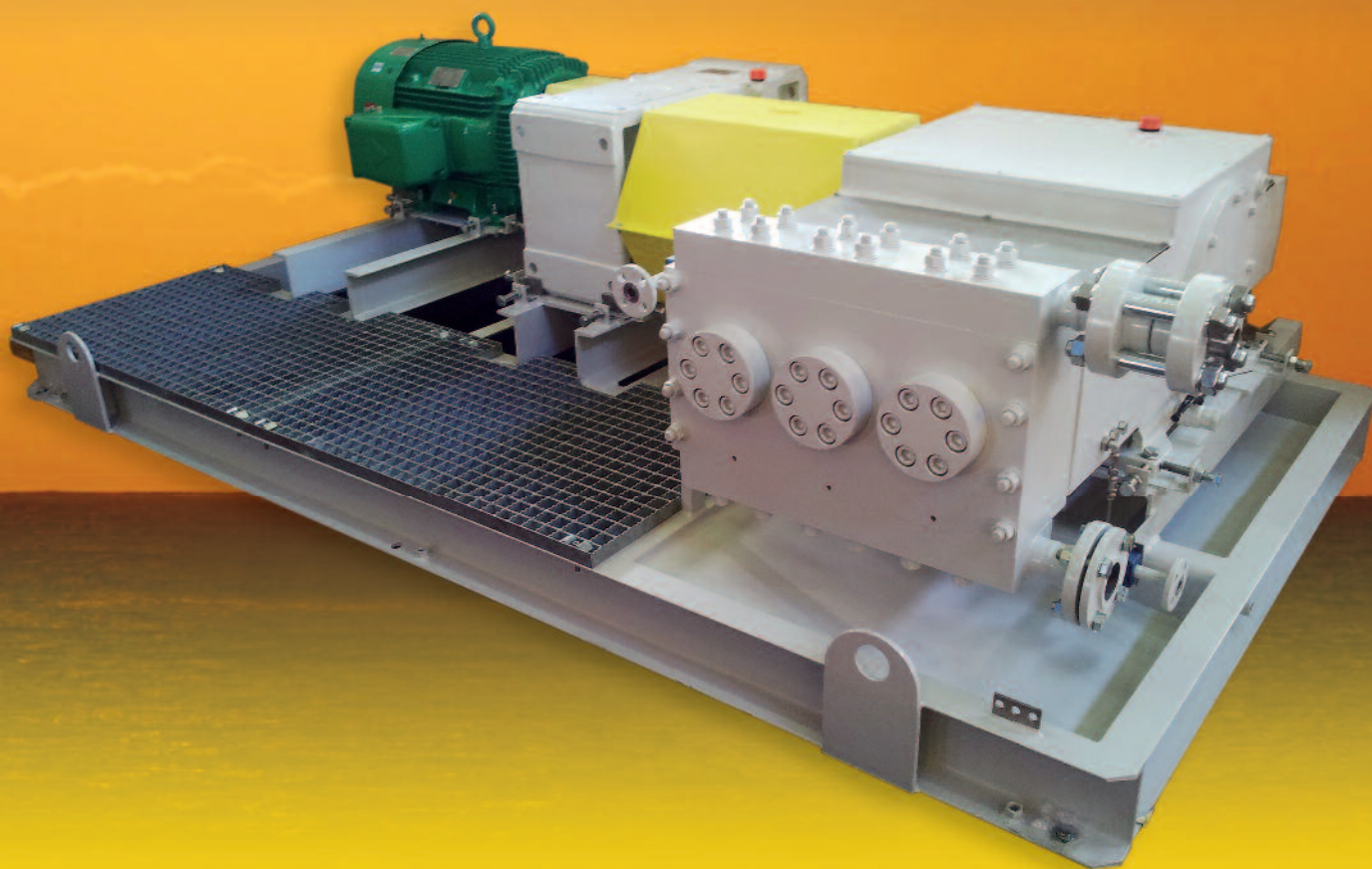
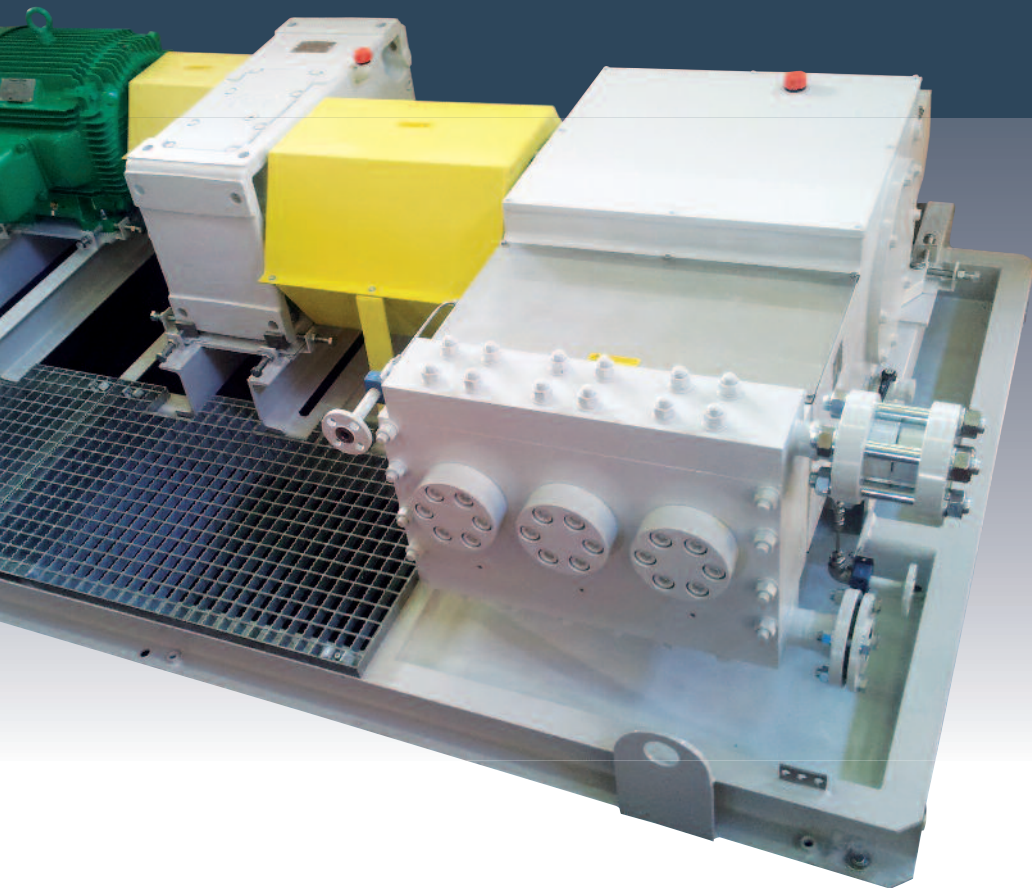


# 3C TRIPLEX Series

THREE PLUNGER RECIPROCATING PUMPS



innovation > technology > future



## 3C Triplex pumps

Designed according to **API 674 Standards**, they are the result of **SEKO's** long experience in applications such as intensive and continuous industrial processes where reliability and durability are essential conditions.

### Seko pumps features

Integral lubrication system  
(no forced lubrication)

Accurate mass balancing & ruggedness

Lower weight-to-performance ratio

Unique head design optimized for simple maintenance operations

### Customers Benefits

- Higher reliability
- Lower cost
- Less maintenance parts
- Small footprint
- Easier installation & commissioning

- Longer MTBF
- Increased availability
- Reduced parts wear

- Lightweight baseframe structure
- Optimized also for offshore topsides installation
- Simpler foundation design

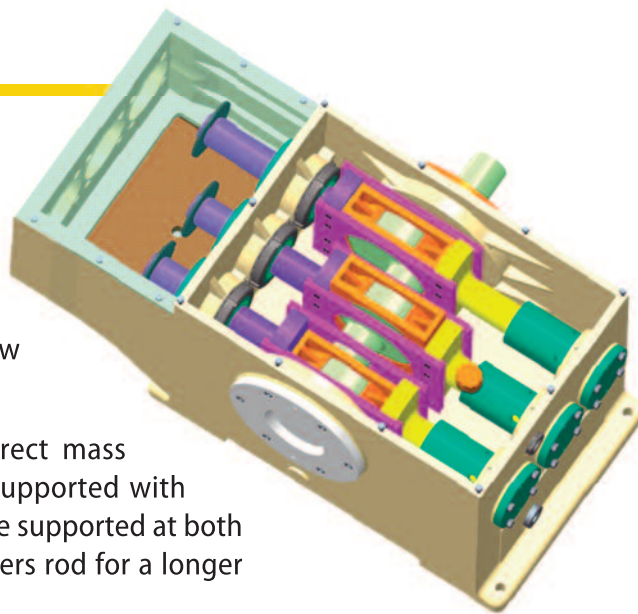
- Extended packing life
- Increased productivity
- Shorter downtime
- Lower maintenance cost

*Seko Triplex Pumps offer the best TCO (Total Cost of Ownership) available on the market paired with worldwide renowned reliability*

# Three plungers reciprocating pumps

## Mechanisms

- The unique design of the mechanism allows the pump to operate at a very low speed without forced lubrication. The "3C" pumps are suitable for applications where a slow plunger motion is required e.g. to avoid cavitation when pumping viscous liquids, hot products or liquids having a low vapor pressure.
- Silent and vibrationless operation due to a correct mass balancing and sizing. The integral crankshaft is supported with roller bearings at both ends; also the crossheads are supported at both ends giving a very precise alignment of the plungers rod for a longer sealing life.
- Compact and robust assembly meaning high performances in limited overall dimensions.
- Low speed design results in high reliability.
- Capacity can be adjusted by electrical motor speed variation with an appropriated frequency converter.

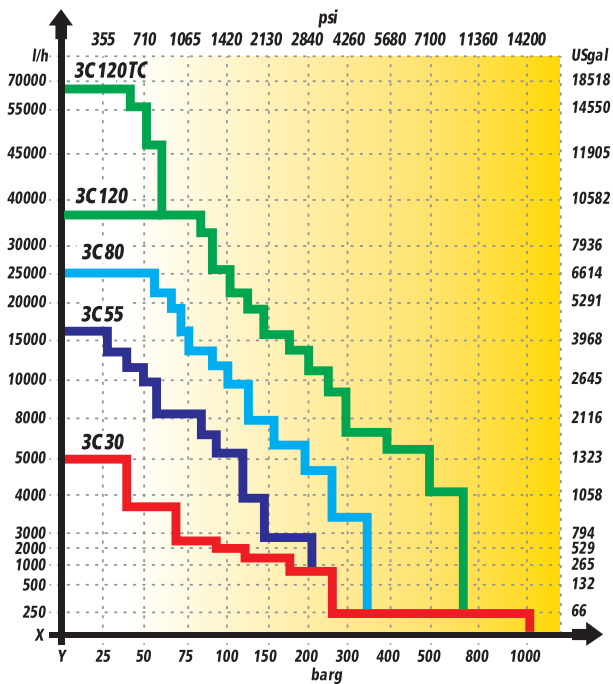


## Pumps Head

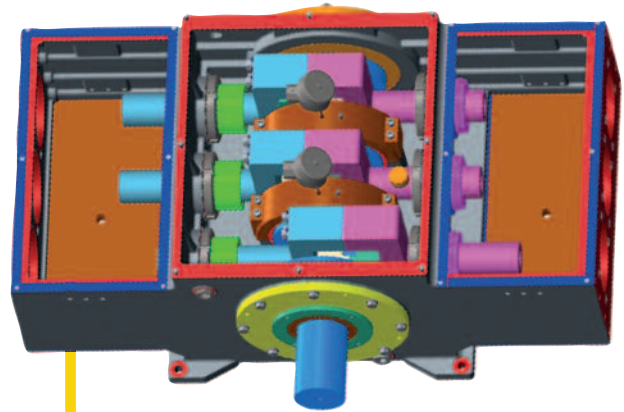
- The three cylinders pump head is horizontally arranged, the plungers are single acting, valves and seats can be selected among different executions depending on the handled medium.
- The low speed of the pump gives some interesting advantages such as: reduced wear of the moving parts in general and specifically reduced wear of the plungers, valves and packing.
- Plungers and packing maintenance is simplified. The replacement of such components for pump sizes other than 3C30 can be done from the front of the pump head or from the stuffing box side without disconnecting the pump from the piping.
- Several options for "leakage return to suction" and flushing of stuffing box, for a longer life of the packing and to avoid the suction of air from outside causing cavitation are available on request.



# Three plungers reciprocating pumps



Selection Table



## 3C120 TC Execution

The peculiar design of this pump allows to fit two pump heads on the same mechanism, therefore the capacities shown on the "Selection Table" for the 3C120 model can be doubled.

## SW3C Hydraulic diaphragm pumps

For transfer of slip and high abrasive slurries.

A complete line of pumps equipped with hydraulic diaphragm pumpheads designed for the transfer of abrasive suspensions, slurries, and dangerous liquids.

**SEKO's** solution to pump and dose liquids with abrasive suspension is a three-headed hydraulic diaphragm pump. The pump has been designed to be remotely or automatically controlled to meet the process' needs; the selection of the contact parts has been made based on **SEKO's** long experience in the application, to reduce as much as possible the maintenance costs.

Last but not least, the design of the pump permits to save up to 60% of the energy costs when compared with the traditional pumping systems. Based on hydraulic Power Systems.



SW3C90



SW3C90

## Accessories for a correct installation

A trouble-free operation of a pump mainly depends on an installation analysis specific for the required duty; the choice of the suitable accessories and their sizing are very important for a correct performance in a reliable system.

### Safety valves

Safety valves are installed to protect the pump and the pipeline in the case of an unexpected overpressure. Reciprocating pumps can reach high pressures in one single stroke, therefore they need to be protected against possible clogging of the pipes provoked by sedimentation or accidental closure of a valve. Hydraulic diaphragm pumps are protected with a limiting pressure valve built in the hydraulic circuit; the pipeline should be protected by an in-line pressure safety valve.

### Pulsation dampers

The reciprocating movement of the piston generates pulsations: during each stroke the liquid contained in the suction and discharge lines is accelerated from zero to the maximum speed and then decelerated to zero again. Pulsation dampers are the accessories suggested to reduce high and not permissible pressure fluctuations or to obtain a linearity of the flow.



## Applications

- **Oil and Gas:** glycol for gas dehydration; methanol injection; well stimulation & service; hydrocarbon condensate
- **Iron, steel and metal industry:** in metallurgical plants for descaling.
- **Chemical industry:** fatty acids pumping, for glycerine production, raw material production for surface-active, stearine production.
- **Ceramic industry:** spray dryer, abrasive suspensions.
- **Water Treatment:** feeding of factory wastes to the wet oxidation treatment plant, reverse osmosis plants
- **Desalination:** feeding of the reverse osmosis plants
- **Food industry:** feeding of fruit puree to the heat exchanger in the pasteurization process, transfer of tomato concentrate, homogenizers feeding.



# Three plungers reciprocating pumps

## Products Line

- Liquid end: SS 316 L, 304 SS or C.S., different material (on request)
- Double head execution for 3C120
- Flow-rate adjustment: by Frequency Converter
- Compliance with International Standards/ Approvals as API 674, ASME, GOST-R



## TRIPLEX 3C30

### Flow rate

from 40 to 5000 l/h

### Pressure

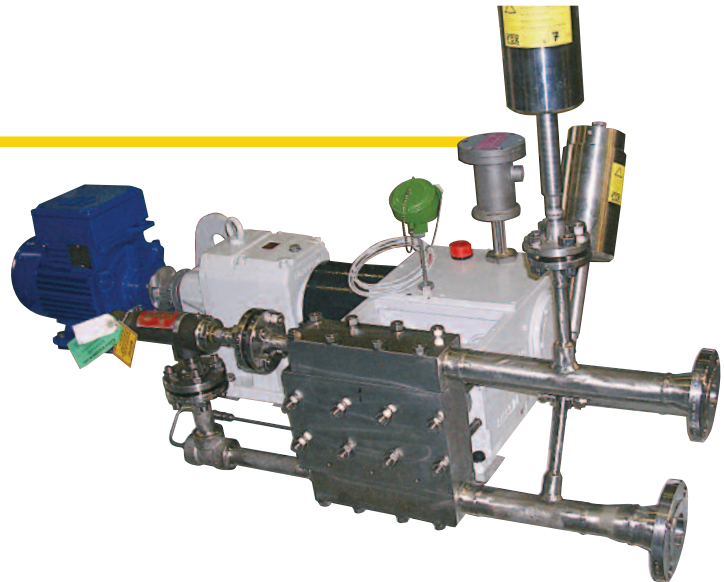
from 1150 to 70 barg

### Piston diameter

from 10 to 40 mm

### Motor Power

2,2 • 3 • 4 • 5,5 • 7,5 • 9,2 • 10 • 15 kW



## TRIPLEX 3C55

### Flow rate

from 664 to 16.000 l/h

### Pressure

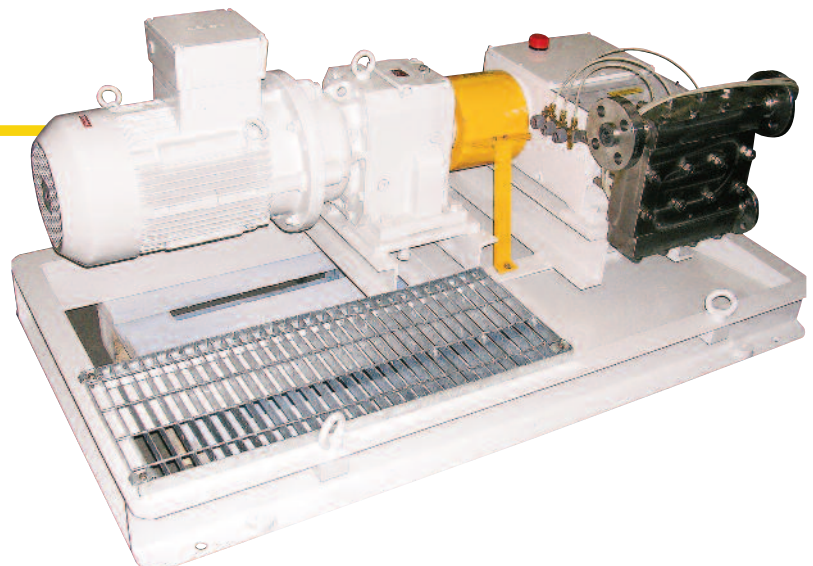
from 214 to 39 barg

### Piston diameter

from 10 to 40 mm

### Motor Power

5,5 • 7,5 • 9,2 • 15 • 18,5 • 22 • 30 kW



## TRIPLEX 3C80

### Flow rate

from 966 to 25.429 l/h

### Pressure

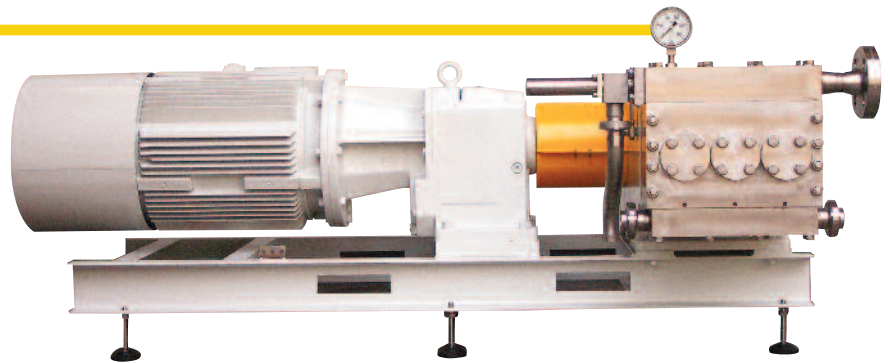
from 370 to 52 barg

### Piston diameter

from 30 to 80 mm

### Motor Power

9,2 • 15 • 18,5 • 22 • 30 • 37 • 45 • 55 kW



## TRIPLEX 3C120

### Flow rate

from 1450 to 35.000 l/h

### Pressure

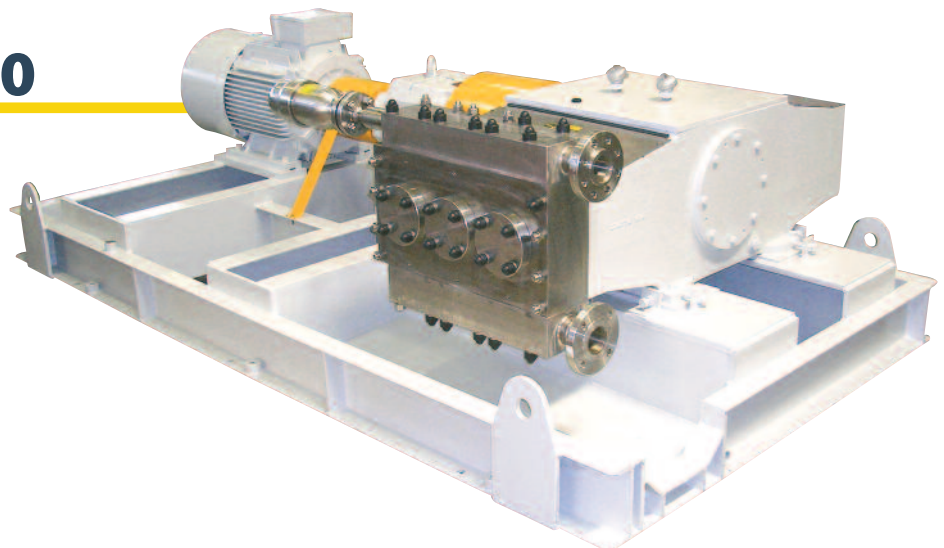
from 728 to 80 barg

### Piston diameter

from 30 to 90 mm

### Motor Power

37 • 45 • 55 • 75 • 90 • 110 kW



## TRIPLEX 3C120TC

### Flow rate

from 2.900 to 65.000 l/h

### Pressure

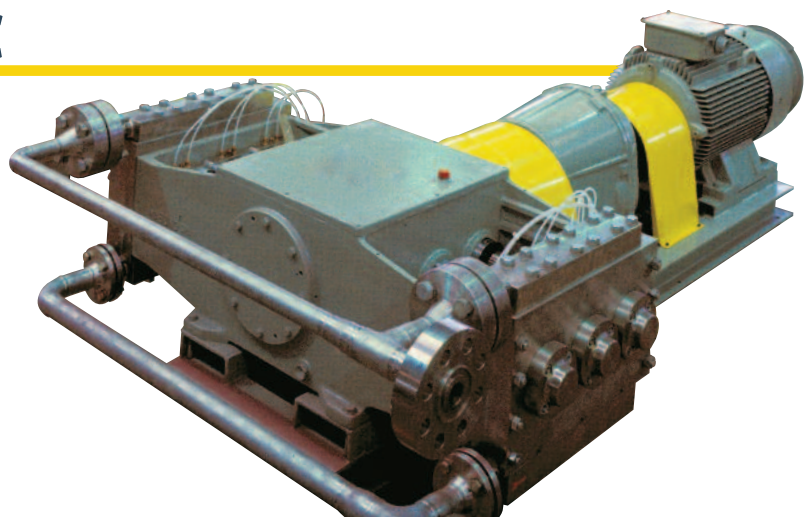
from 570 to 62 barg

### Piston diameter

from 30 to 90 mm

### Motor Power

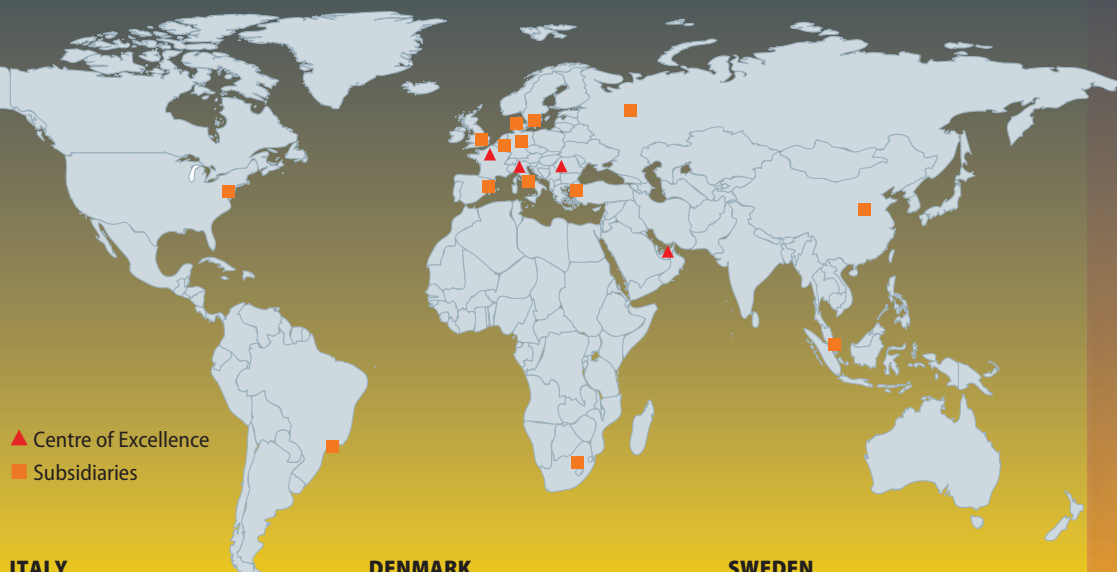
37 • 45 • 55 • 75 • 90 • 110 kW



# A Worldwide Group at your service

**seko** has been a significant manufacturer of metering pumps and dosing systems for over 40 years. This long activity allowed seko to acquire a vast experience in diversified applications and to confirm its international success in many industrial fields through the supply of reliable solutions for the dosing, injection and transfer of liquids.

Today **seko** is an International Group, developing, manufacturing and delivering its products in more than 50 countries, through its 16 subsidiaries and an extended network of distributors, agents and authorized dealers.



- ▲ Centre of Excellence
- Subsidiaries

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