



Our screw pumps are volumetric self-priming pumps suited to handle oils and liquids with a minimum lubricating quality. The simplicity of the design makes these pumps intrinsically reliable and efficient. Three screws rotate inside a casing with close tolerances, thus forming sealed chambers and provoking the axial displacement of the fluid. The idler spindles rotate without contact with the driving spindle because of the fluid itself, thus being free from radial forces.



The accurate hydraulic balance and the special profile of the screw thread guarantee a continuous flow with minimum pulsations and turbulence, thus enabling extremely low noise levels even at high rotational speed.

The screws epicycloidal profiling is developed through a complex computerized calculation which not only perfectly defines their shape, but also controls the production with continuous monitoring of the machining process, consequently assuring a high degree of repeatable quality.

The high quality level is guaranteed by a final testing on 100% of the manufactured products.

We place the highest value on quality and we certify it

All Seim products are manufactured and tested in accordance with our ISO 9001 Quality Standard. Our products are 100% tested either to Seim standards or customer requirements. Certification is available on request.

Installation and maintenance manuals along with spare parts lists are available in multilingual format.



Seim Industrial Division Manufacturing Program features:

- **Screw pumps:** std according to API 676, for mineral and lubricating oils also fluids with low lubricating properties (water+oil, HFC, LFO, HFO). Flows up to 5,000 litres per minute and pressure upto 130 bar (200 bar peak).
- **Motor pump sets:** close coupled, AC or DC electric motors.
- **Pre-assembled systems:** with bell-housing and coupling arrangements.
- **Skid mounted pumps:** with or without motor but suitable for horizontal or vertical mounting.
- **High efficiency Air/Oil Heat Exchangers:** upto 14,000 kCal/h (16kW)
- **Relief valves:** Flow rate from 50 to 1,200 litres per minute and pressure up to 40 bar

Lubrication Applications

- Lubricating system for: speed variators, turbines, gearboxes, papermill machines, hot forming machines
- Lubrication system for the petrochemical, iron and steel, and mining industries as well as shipbuilding.

Driving Applications

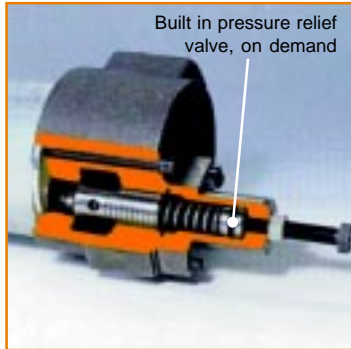
- Machine tools, bed traversing
- Hydraulic presses
- Hydraulic units for elevators
- Hydraulic supporting
- Rolling mills
- Test benches
- Sheet metal machines
- Plastic molding machines
- Medical Units

Recirculation and Filtering Applications

- **COOLING LUBRICATION:** deep hole drilling, pipe boring, chip conveyors.
- **FILTERING:** mobile filtering systems, off-line filtering systems for process machines and machine tools, hydraulic presses, textile machines, grinding machines
- **HEAT EXCHANGING:** injectors heating for plastic molding machines, heat exchangers.
- **FLUSHING AND BOOSTING:** piping systems washing, hydraulic systems flushing, boost circuits.

Fluids to be pumped

- Hydraulic oils
- Lubricating oils
- Diathermic oils
- Oil-in-water emulsions (min. oil percentage 5%)
- Light and heavy fuel oils
- Phosphoric esters



Built in pressure relief valve, on demand

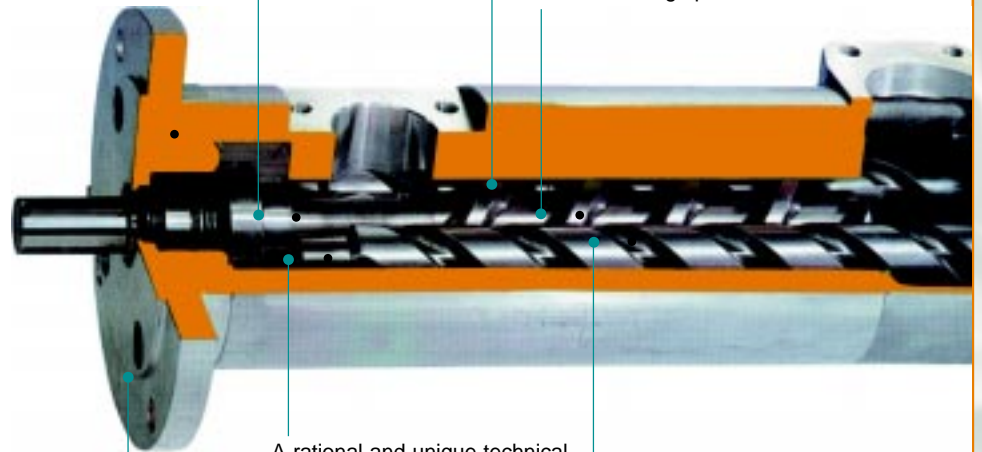


Maintenance-free unbalanced mechanical seal, constantly maintained at inlet pressure.

Groove ball bearing, lubricated by the fluid to be pumped (internal pump design).

Close manufacturing tolerances guarantee high volumetric efficiency and low noise.

Epicycloidal profile hydraulically balanced driving spindle.



A rational and unique technical solution. Thermal compensation and hydraulic sealing insert.

Coupling flange (ISO flange in the standard version).

Hypocycloidal profile idler spindles hydraulically driven by the fluid to be pumped.

Characteristics

- Compatible with a wide range of viscosities from 1 to 12,000 cSt and above.
- Efficiently working also at very low temperatures (-20°C).
- High self-priming capacity.
- High rotation rates = minimizing the size and cost of the pump.
- Steady flow rate = maximum efficiency in heat exchange applications.
- Special design for systems with entrained air in the lubricant = minimizing the vibrations and noise caused by air.
- Minimum sensitivity to particle pollution = longest life of the pump and circuit.
- Continuous operating pressures up to 130 bar, peak 200 bar.
- Pulsation-free = maximum efficiency of filtering applications.
- Extremely quiet.

VISCOSITY CHART

cSt	°E	SSU	SR1
5	1,39	42	37
10	1,83	58	51
20	2,87	97	85
30	4,07	141	123
40	5,33	185	163
50	6,62	230	203
75	9,89	343	304
100	13,17	456	405
150	19,74	683	608
200	26,3	910	810
250	32,9	1.137	1.012
300	39,4	1.364	1.215
400	52,6	1.819	1.620
500	65,8	2.273	2.024
600	78,9	2.727	2.429
800	105,3	3.637	3.239
1.000	131,6	4.546	4.049
1.250	164,5	5.682	5.061
1.500	197,4	6.818	6.073
2.200	290	10.000	8.460
4.400	590	20.000	16.920