



**P O P C O**  
POWER FROM SURPLUS  
P R E S S U R E

REGENERATIVE POWER FROM  
PRESSURE MANAGEMENT  
IN DRINKING WATER NETWORKS

2 0 1 8

[www.sea-lix.com](http://www.sea-lix.com)

# POPCO

P O W E R I N G  
Smart Water  
N e t w o r k s

E N E R G Y F R O M  
P R E S S U R E M A N A G E M E N T

**POPCO is a regenerative pressure control turbine – a little like an electric vehicles regenerative brakes, only we generate power from surplus pressure – not from surplus speed!**

Conventional pressure reduction in process systems are applied by the use of pressure reduction valves *or energy killers!* Vast amounts of renewable energy represented in installations such as water purification facilities, water towers and pressure control stations goes to waste.

**POPCO** provide the desired down stream pressure whilst utilizing the available surplus pressure to generate electricity. This can be used at the facility or sold to the network.

The **POPCO** may be applied at locations representing marginal power potentials as well as at locations receiving large amounts ow water with a considerable pressure reduction requirement. The unit is available for capacities from 6 kW to above 1 MW.

## What is POPCO

- ▶ Fully automated continuous pressure management. Can be remotely controlled
- ▶ Regenerate surplus pressure to usable electricity
- ▶ Generated power may be applied locally or sold to electric grid
- ▶ POPCO comes complete and ready for action; Plug'n Play
- ▶ Compliant with all relevant standards

---

+47 22 69 75 00  
[sales@sea-lix.com](mailto:sales@sea-lix.com)  
[www.sea-lix.com](http://www.sea-lix.com)

Sea-Lix AS  
Kristian Augusts gate 7 A  
0164 Oslo  
Norway

---



# E X A M P L E

## POPCO IN A WATER TREATMENT FACILITY

### DATA RECEIVED FROM THE FACILITY

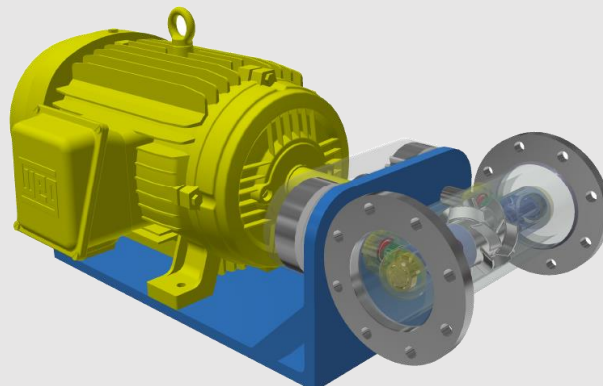
Parameter		Unit
Minimum flow	218	l/s
Average flow	276	l/s
Maximum flow	376	l/s
Pressure inlet	6,67	bar g
Pressure at discharge	0,0	bar g
Available surplus pressure	6,67	bar g

### PROPOSED SEA-LIX POPCO INSRTALLATION

Parameter		Unit
Diameter turbine rotor	227,85	mm
Rotor speed	890 - 3810	RPM
Gear ratio	1:1	
Average velocity	890 - 3810	RPM
Power, turbine at 276 l/s	151,5	kW
Turbine power at 376 l/s	165,4	kW
Generator power at 276 l/s	136,3	kW
Generator power at 376 l/	148,9	kW
Generator size (installed)	200	kW

## RESULTING ANNUAL PRODUCTION EXCEEDS ONEMILLIONONEHUNDREDANDFIFTYTHOUSAND KWH

This specific facility consume approximately 750.000 kWh annually. Regenerating electricity from surplus pressure cover its entire power requirement. An additional 400.000 kWh are generated which may be sold on. Return on investment in less than 4 years.



# POPCO



**Sea-Lix AS** • Company number: 997 615 506 • VAT number: NO 997 615 506 MVA.  
**Tel:** +4722697500 • [post@sea-lix.com](mailto:post@sea-lix.com) • [www.sea-lix.com](http://www.sea-lix.com)  
**Office:** Kristian Augusts Gate 7 A • 0164 Oslo • Norway  
**Post:** PO Box 9 • 2005 Rælingen • Norway