

# KEEP 30 | 45 | 90

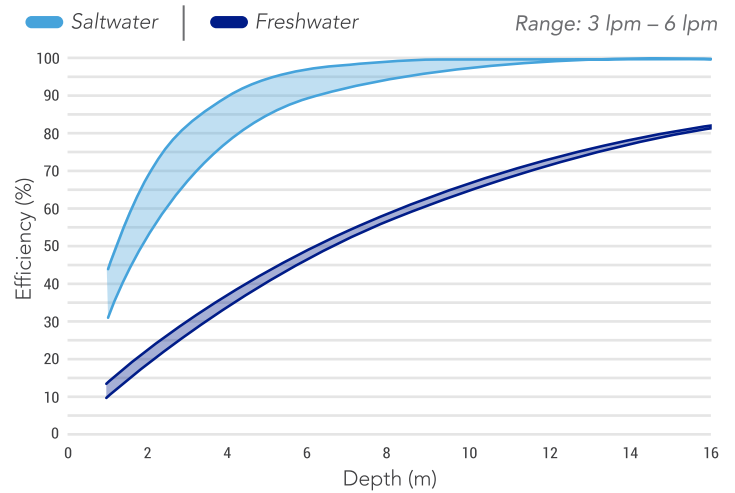
## OXYGEN DIFFUSER



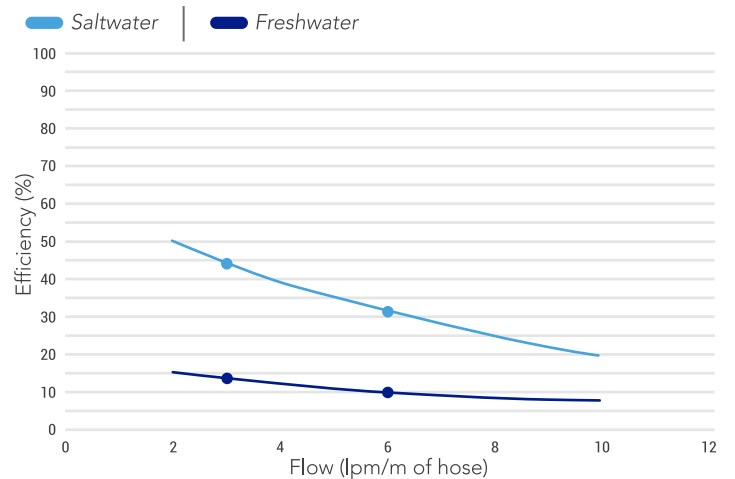
### Main applications:

- » Aquaculture industry
  - Oxygenation of fish in grow-out systems
- » Agricultural and livestock industry
  - Oxygenation of activated sludge and aerated lagoons

### Depth-dependent efficiency

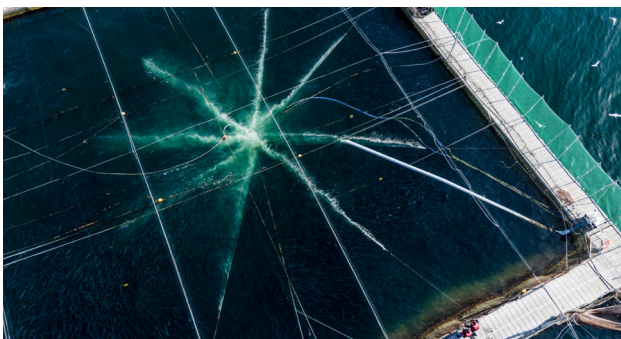


### Efficiency based on flow per linear meter of hose



### Technical Specifications

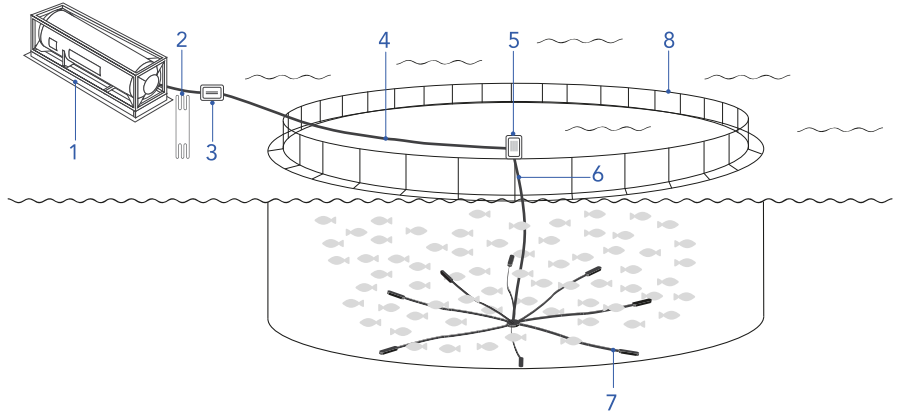
Keep	30	45	90
Hose length	64 m (209 ft)	92 m (302 ft)	184 m (603 ft)
Extended arms diameter	16 m (52 ft)	23 m (75 ft)	23 m (75 ft)
Operating range	1 - 5 bar (14,5 - 72,5 psi)	1 - 5 bar (14,5 - 72,5 psi)	1 - 5 bar (14,5 - 72,5 psi)
Nominal capacity	30 Kg/h @ 1 bar	45 Kg/h @ 1 bar	90 Kg/h @ 1 bar
Maximum capacity	90 Kg/h @ 3 bar	135 Kg/h @ 3 bar	270 Kg/h @ 3 bar





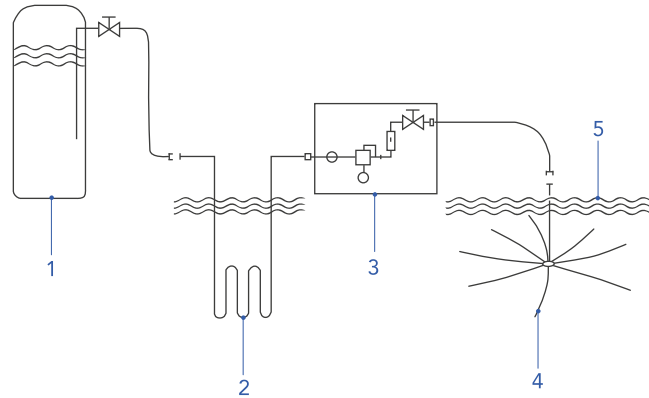
## Diagram of the permanent oxygenation system

- 1 Liquid oxygen tank
- 2 Vaporizer
- 3 Pressure regulation
- 4 Oxygen manifold
- 5 Flow control panel
- 6 Supply hose
- 7 Keep Diffuser 30 | 45 | 90
- 8 Fish cage



## Oxygenation system schematic for fish baths targeting Caligus treatment

- 1 Liquid oxygen
- 2 Submerged vaporizer
- 3 Pressure and flow regulation
- 4 Keep Diffuser 30 | 45 | 90
- 5 Fish cage



## Packaging

Keep	30	45	90
Weight:	30 kg	35 kg	55 kg
Length:	70 cm	70 cm	70 cm
Width:	45 cm	45 cm	45 cm
Height:	30 cm	32 cm	55 cm

## Pure oxygen conversion factors

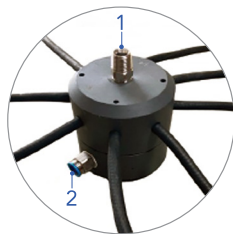
	WEIGHT		GAS		LIQUID*	
	kg	lb	m <sup>3</sup> (15°C, 1 atm)	scf (70°F, 1 atm)	l (1atm)	Gal (1atm)
1 kg	1	2,2046	0,7386	26,631	0,8764	0,2315
1 lb	0,4536	1	0,3350	12,079	0,3975	0,105
1m <sup>3</sup>	1,354	2,985	1	36,06	1,1867	0,3135
1 scf	0,0375	0,08279	0,02773	1	0,03291	0,008695
1 l	1,141	2,5155	0,8427	30,384	1	0,2642
1 gal	4,319	9,522	3,1899	115,02	3,7854	1

14,7 psi = 10mca = 1 bar = 1 atm | 1m<sup>3</sup> GOX = 1.354 kg | GOX – Gaseous Oxygen | \*At boiling temperature

## Accessory

### Surge chamber

- 1 Oxygen inlet
- 2 Air inlet



System integrated into the Keep diffuser, which uses macrobubbles to displace microalgae-free water toward the surface.

