


# List of Consumables

## CO<sub>2</sub> Capture Facility

Kårstø, Norway

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## List of Consumables

### 1.0 QUALIFICATIONS

The list of consumables includes utilities and major materials. It does not include breakdown of minor lubricants (such as for hinges, rollup doors, etc.), machining oils, incidental cleaning agents and solvents, rags, fasteners, gaskets, grinding disks, etc.

All values presented will require verification during detail design (Post FEED).

Type, material specification, condition specification, additional requirements, etc., will also require verification during detail design (Post FEED).

This list does not form the basis of any contractual guarantees. Quantities listed are estimate averages. Refer to contract documents for any specific guarantees, as applicable.

### 2.0 LIST OF CONSUMABLES

Description Consumable	Units of Measurement	Estimated Consumption Rate	Intermittent/ Continuous	Remark
Electrical Power	kVa	49261	Continuous	Full Production, max operation
Steam	tonnes/hr	200 LP 12 HP	Continuous	
Sea Water Cooling	m <sup>3</sup> /hr	17,340	Continuous	
Fuel Gas	kg/hr	1,500	Intermittent	Only when aux boiler is fired
Compressed Air	Nm <sup>3</sup> /hr	270	Continuous	produced by on site compressor -
Amine process solvent	m <sup>3</sup> /year	1,400	Continuous	makeup for emission losses via makeup metering pump and storage tank
Amine cartridge filter element	each/year	300	Intermittent	Change once per 3 to 6 months
Activated carbon	tonnes/month	< 40	Intermittent	500kg/m <sup>3</sup> bulk
Nitrogen Gas	Nm <sup>3</sup> /hr	85	Continuous	
Soda-ash solution	kg per reclaim batch	1700	Intermittent	When re-claimer is operated

Reverse Osmosis Antiscalant	kg/month	< 100	Continuous	For process demineralized water makeup from sea water
Reverse Osmosis Membrane Elements	each/3 years	approx. 30	Intermittent	48" SWRO elements
Reverse Osmosis cartridge filter elements	each/year	30	Intermittent	Change once per 6 months
Diesel Fuel	liter/yr	< 1000	Intermittent	Backup Generator use only Main consumption is monthly testing
ID Fan lubricant	liters/yr	< 500	Intermittent	
CO <sub>2</sub> Compressor lubricant	liters/yr	< 1000	Intermittent	
Centrifugal Pump bearing case lubricant	liters/yr	< 500	Intermittent	
Bearing/Joint lubrication grease	kg/month	< 10	Intermittent	Several Types to be required
Misc. lubricant/grease	kg/month	< 1	Intermittent	Several Types to be required
Potable Water	m <sup>3</sup> /day	5 to 10	Continuous	Potable users
Analyzer Reagents	lot	during detail design	Intermittent	
Test Lab Reagents	lot	during detail design	Intermittent	