the diaphragm cell process

Chlorine gas (Cl₂)
Saturated brine (H₂O & NaCl)

2Cl⁻ → Cl₂ + 2e⁻
(This reaction happens at the anode)

Cl⁻
Cl₂

Power supply
Anode +
Cathode -
Lid

Brine passes through diaphragm

Diluted brine (H₂O & NaCl)
Permeable Diaphragm

Cl⁻

2H₂O + 2e⁻ → H₂ + 2OH⁻
(This reaction happens at the cathode)

Na⁺
OH⁻

Diluted caustic soda (NaOH/H₂O) and diluted brine (H₂O & NaCl)

H₂

Source: Euro Chlor
www.eurochlor.org