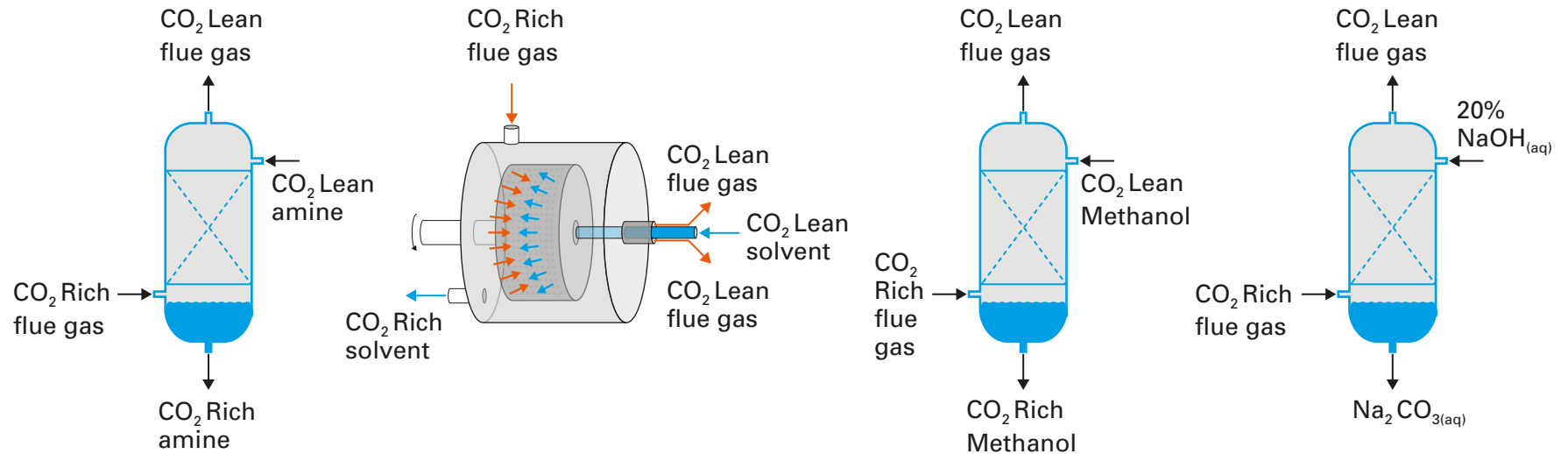


CCUS technologies – Absorption based



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	Amine-wash with tower contactor	Amine-wash rotating disk contactor	Methanol wash	Mineralisation
Separation principle	Absorption	Absorption	Absorption	Absorption
Specific energy demand	3 GJ/t _{CO₂}	Predominantly electrical power, with heat	1.4 GJ/t _{CO₂}	8.3 GJ _e /t _{CO₂}
Typical temperature	40-60°C	40-60°C	-40°C	<35°C
Typical pressure	Ambient	Ambient	25-70 bar _g	Ambient
Typical CO ₂ removal	90%	90% (target)	Up to 100%	90%
Typical CO ₂ purity	>99%	95% (target)	>98.5%	CO ₂ mineralisation to Na ₂ CO ₃
Typical plant size (Tonnes per year CO ₂ removal)	40,000 – 400,000	1,000 – 500,000	> 100,000,000	1,000 – 75,000
Technology maturity level	Commercial from many suppliers	Laboratory, eg ROTA-CAP from GTI & CCSL	Commercial, eg Linde Rectisol	Demonstration, eg SkyMine