



CTT @ MAY 24, 2022
ABGSC INVESTOR DAYS

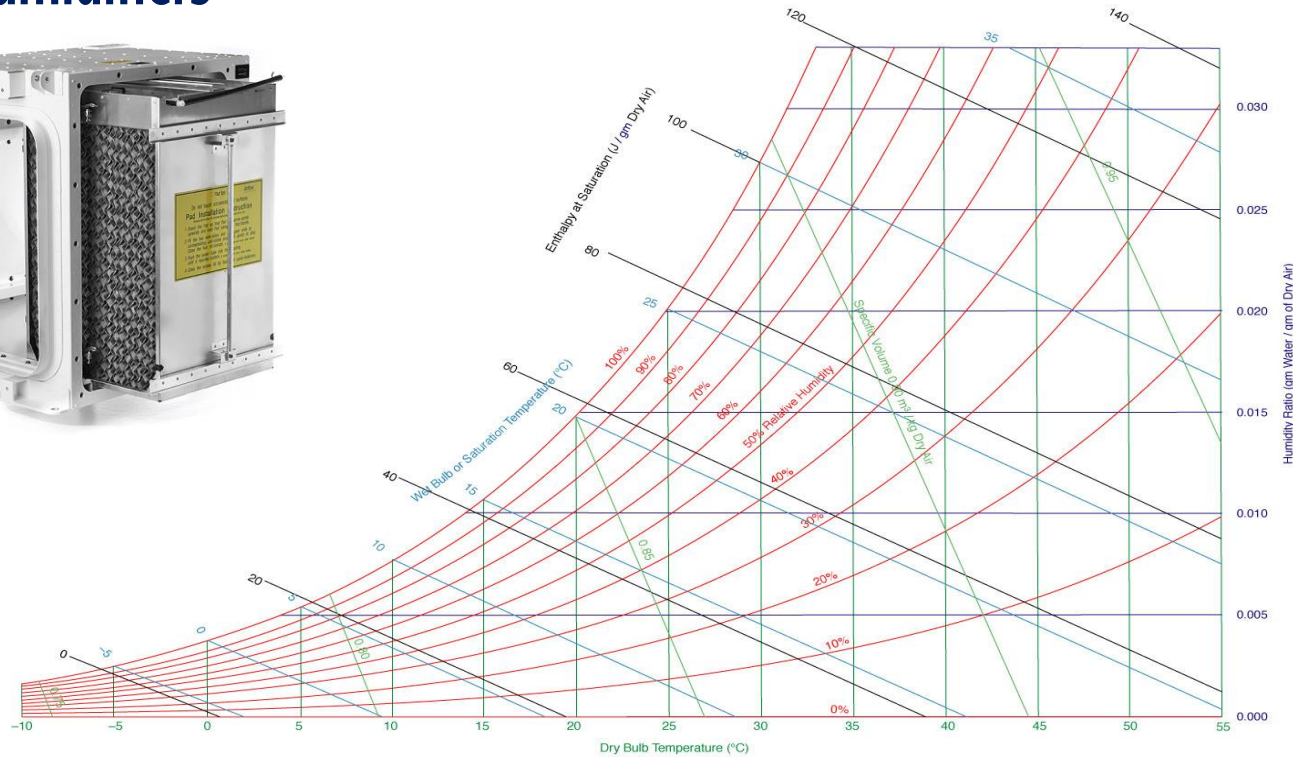


HENRIK HÖJER
CEO

Active Humidity Control in Aircraft

Passive means do not solve the root-cause of condensation / dry air

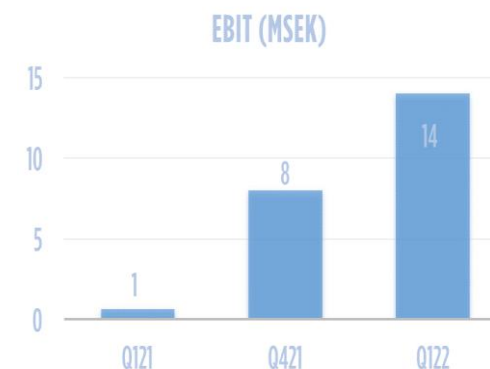
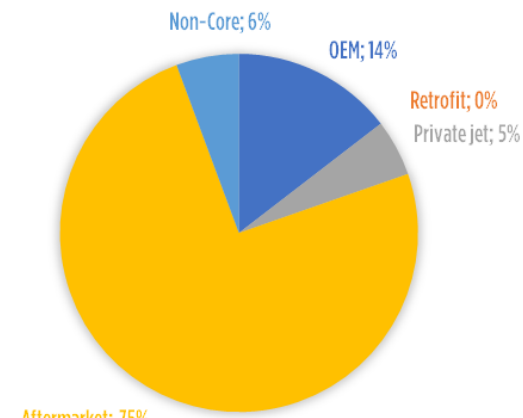
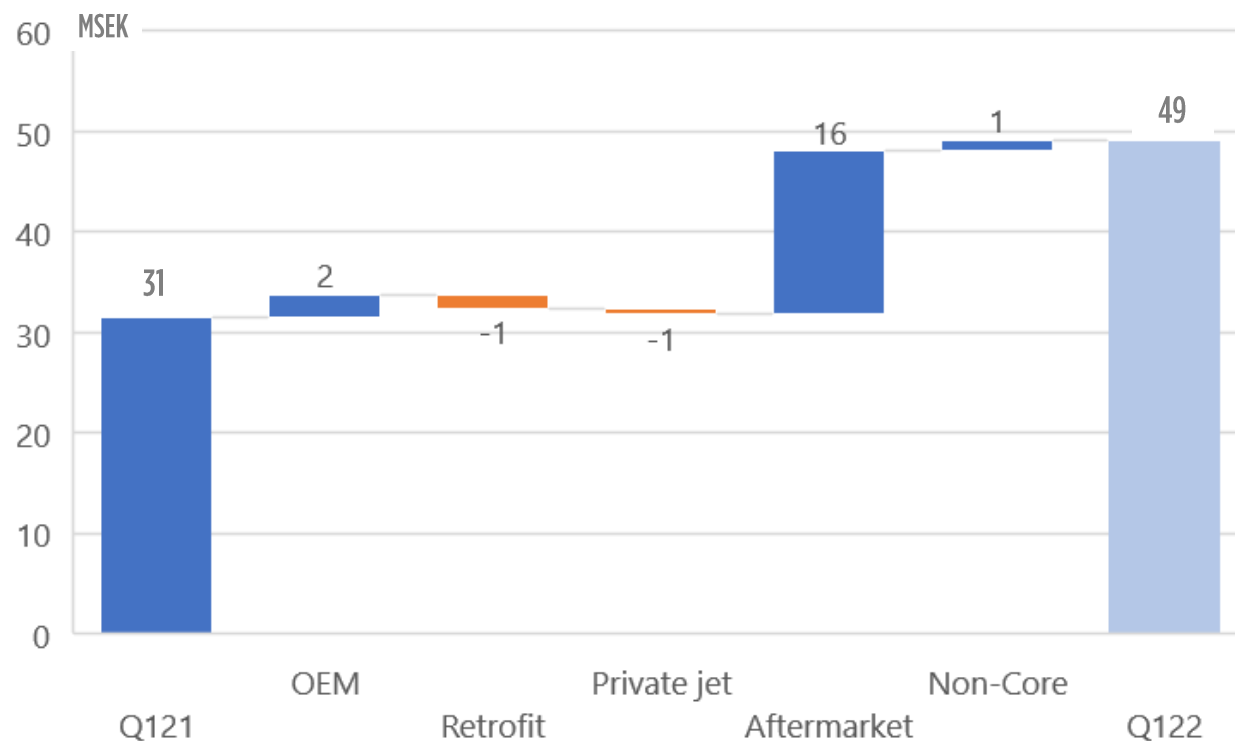
Humidifiers



De-Humidifiers

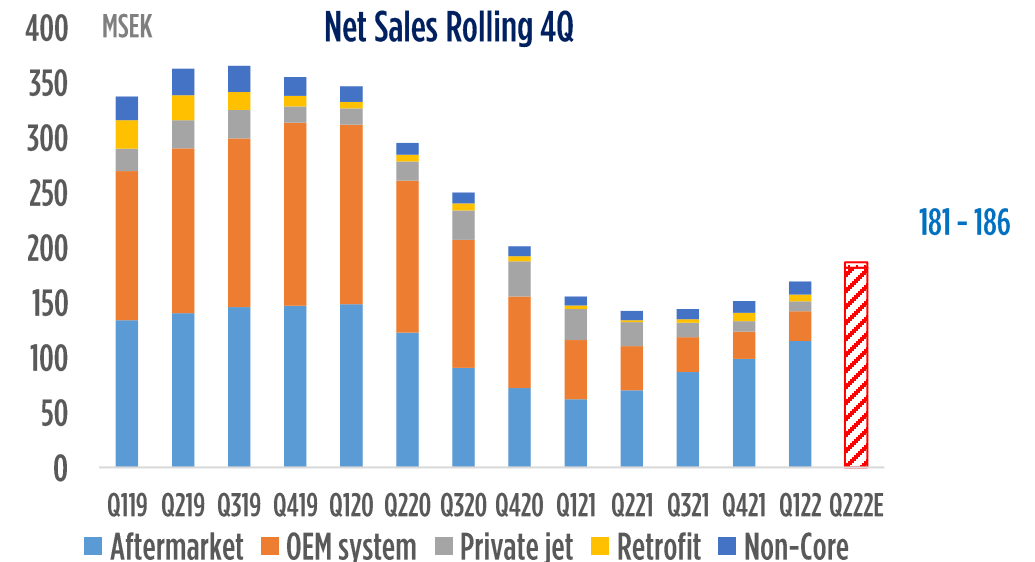
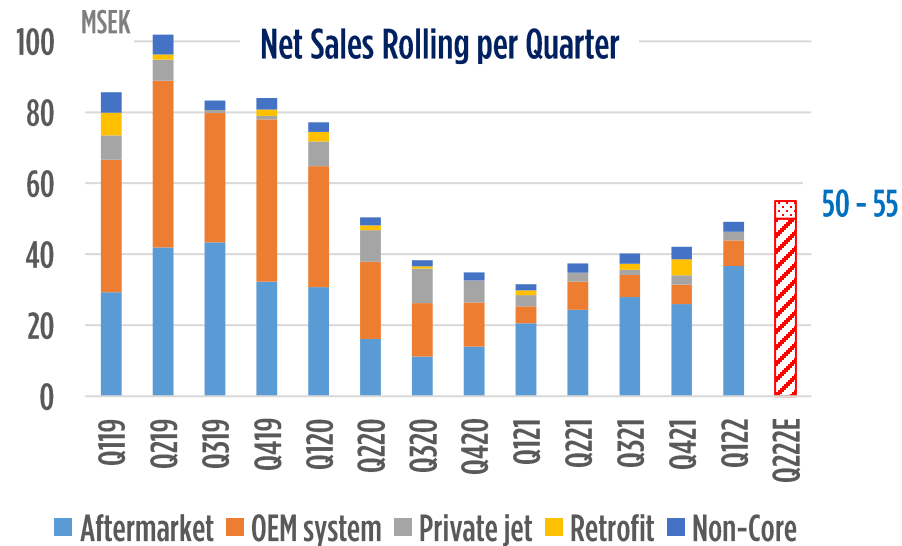
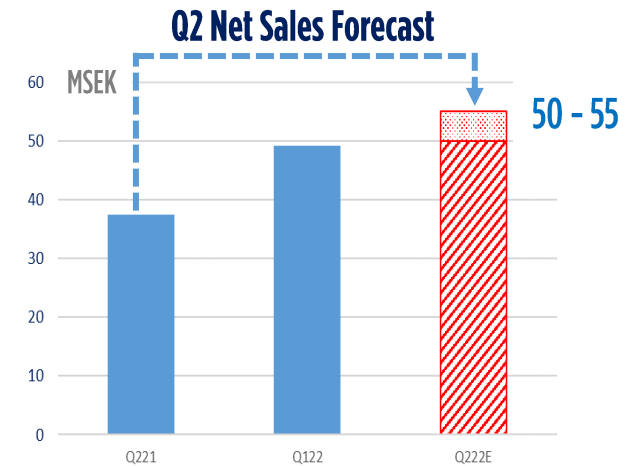
Q1 2022 Financials in short

Sales increased 56 % driven by aftermarket sales - Better EBIT



CTT in recovery and growth mode

- Net Sales Forecast Q2 2022: 50 - 55 MSEK (37) (Y-o-Y-increase of 33 % - 47 %)
- Aftermarket almost restored sales to 2019 – driven by resumed intercontinental travel
- Private jet – driven short term by VIP and from 2023 also underpinned by business jet (TwoTwenty)
- Retrofit outlook better but no orders yet
- OEM to remain at record-low level until Boeing resume 787 aircraft deliveries and normalize production



Travel demand booming – driven by US and EMEA

Strong international bookings – primarily for transatlantic traffic – business travel demand growing stronger in the US

- ❑ Domestic travel on large markets such as US and China
- ❑ North America, Europe and Middle-East leading intercontinental recovery
 - transatlantic bookings booming – Asia / China lagging
- ❑ Airlines shifting focus to medium- and long-term widebody fleet planning – driven by US Airlines and airlines in Middle-East

Indirect effects can lower travel demand

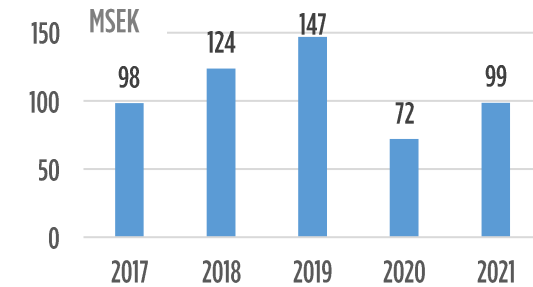
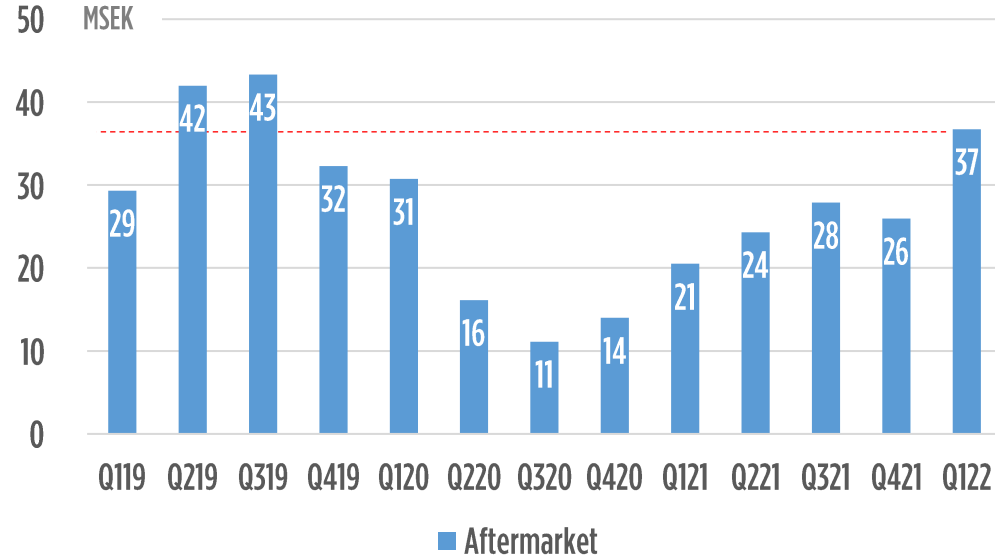
- ❑ Fuel is 25 % - 40 % of OPEX for airlines
- ❑ Spending power: Higher inflation / interest rates = less disposable income
- ❑ Supply challenges for aircraft manufacturing such as for titanium



Aftermarket sales expected to increase in 2022

Q2 - Pause in upward trend in light of exceptionally strong Q1 2022

- More products flying totally on A350 and Boeing 787 vs pre-pandemic
- Boeing 787 fleet restored to 99 % - high population growth rate when 787 deliveries of resume - 100+ ready-built in inventory as of end-2021
- A350 aftermarket higher in 2021 vs 2019 – continuous growth in 2022



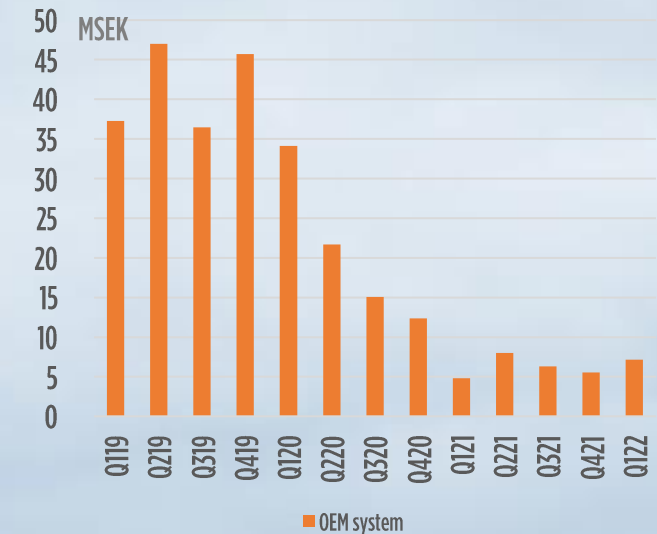
Growth drivers going forward:

- More flight hours: Intercontinental flights - Longer flights - Higher utilization per aircraft
- Population growth:
 - 110 Boeing 787 in inventory + build-rate 1 - 2 to 5
 - A350 fleet increasing - build-rate of 5 per month

OEM lagging but strong position when recovery starts

OEM will not contribute to growth in 2022

- ❑ Boeing 787 at low build-rate (1 – 2 per month) – gradual increase to 5 when deliveries are resumed
- ❑ Airbus currently targeting A350 build-rate to increase to 6 in 2023
- ❑ Boeing expects to deliver first 777X in 2025
- ❑ MC-21 type certificate in Dec 2021 – targeting entry-into-service in Q3 2022



Boeing 787

- ❑ Awaiting regulatory approval for pre-delivery inspections on reworked aircraft in inventory
- ❑ Meanwhile producing the 787 at a very low rate
- ❑ Expected gradual return to five airplanes per month over time

- ❑ Penetration at max – Only more content (cabin humidifier) or higher production

Airbus A350

- ❑ Guided higher production rate in 2023, up from 5 per month to 6
- ❑ Many large CTT customers with remaining humidifier orders

- ❑ Max content – Only via penetration and rate increase

Boeing 777X

- ❑ Certification delayed
- ❑ Boeing pushed EIS from late 2023 to 2025

- ❑ Max content – Only via penetration and ramp-up

MC-21 – Paused

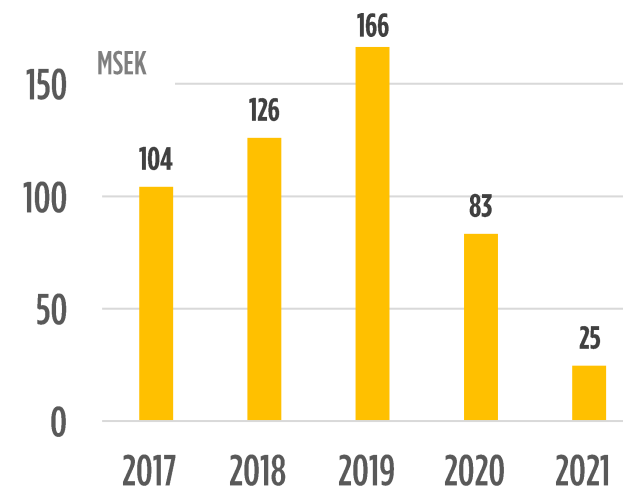
- ❑ Type certificate Russia in December 2021
- ❑ Targeted EIS in Q3 2022

- ❑ Basic – Only ramp-up and more content

OEM opportunity road-map

Higher selection – Higher a/c production rate – More content – New programs

- ❑ Boeing 787 humidification SFE for business class – cabin performance equal to A350 / 777X
- ❑ Boeing 737 MAX – A321 Family incremental upgrade opportunities
- ❑ New aircraft models (Boeing NMA)



	More content	Higher selection		More content	Incremental upgrades - New Programs		
	Boeing 787	Airbus A350	Boeing 777X	MC-21			
Passenger cabin					Airbus A321LR/XLR	CRAIC CR929	Boeing NMA
Flight deck					Airbus A321LR/XLR	CRAIC CR929	Boeing NMA
Crew rests						CRAIC CR929	
Anti-Condensation					Airbus A320 Family Boeing 737 MAX	CRAIC CR929	Boeing NMA

Paused

Huge market potential

The cabin humidification retrofit opportunity

Air quality and health in focus – Benefit versus cost compelling – Driven by wellbeing and wellness

- ❑ Growing airline interest in cabin air quality / humidity / wellness
- ❑ Short-term limited number of refurbishment programs
- ❑ Projects conditional on re-start of intercontinental travel
- ❑ Delayed 777X increases importance of retrofit success - Boeing 787 retrofit market is prime target

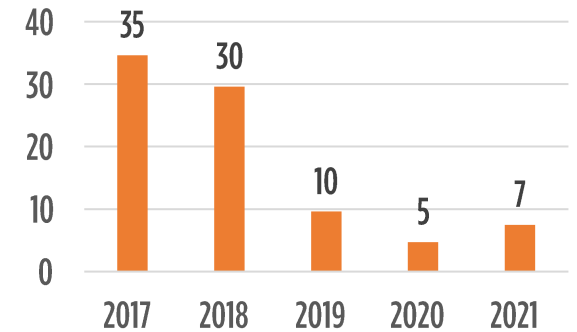
- ❑ Retrofit opportunity: 1,000 Boeing 787 aircraft
- ❑ Humidification system for the business class at a cost <50% of the cost to retrofit 1 new business class suite



Humidifier Onboard
Enabling an 'oasis in the desert'

The anti-condensation retrofit opportunity

- ❑ Anti-Fuselage-Condensation (A320 / Boeing 737) – sustainability and oil at 13 year high
- ❑ Retrofit to drive OEM:
 - ❑ Efforts to obtain STC for Boeing 737 MAX
 - ❑ A320 operators to demand line-fit or post-delivery modification



Apr 25, 2022



Focus on airlines in northern Europe

- Sustainability key selling point
- Strong prospect list

Jet2.com



- ❑ 57 A321s on order to be delivered 2023-

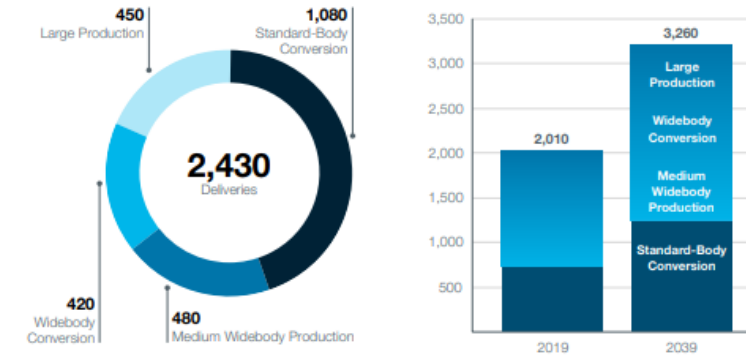
- ❑ 100 A320 Family aircraft on order to be delivered 2023-

The freighter opportunity

OEM is key but also opportunities in P2F programs and retrofit installations

- ❑ Freightier OEM: A350F (EIS 2025) – Boeing 777F launched in Q1 2022 (EIS 2027)
- ❑ Passenger-to-freighter conversion programs (P2F)
- ❑ Retrofit modern air cargo aircraft: Boeing 777F and Boeing 767F

Freighter Fleet Will Grow Over 60% by 2039



NEW

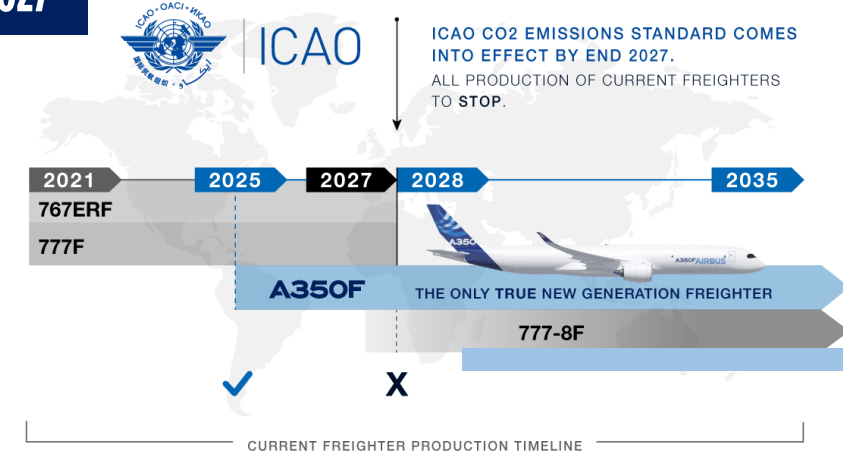


Milestone: A350F catalogue availability

OEMs are key – Nextgen freighters to meet ICAO CO2 emissions standard from 2027

❑ Market potential: 20 – 30 newbuilt large freighter a/c per year

	OEM Catalogue	Entry-into-Service
Airbus A350F	✓	2025
Boeing 777XF		2027



AIRFRANCE KLM GROUP

SINGAPORE AIRLINES

Ethiopian
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QATAR AIRWAYS
القطرية

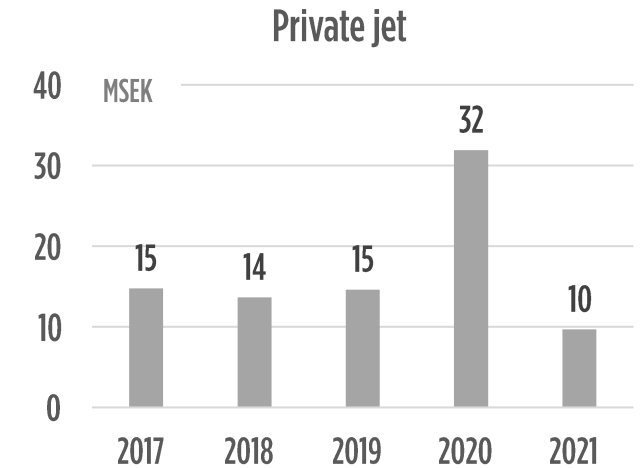
Lufthansa

The private jet opportunity

Dominating the widebody VIP segment – Poised to grow into large cabin bizjet segment

CTT is the dominating humidification supplier for VIP aircraft:

- Widebody VIP: Humidification is a de-facto standard
- Narrowbody VIP: Humidification has lower penetration / selection rate
- Biz Jet: Historically CTT has not addressed bizjet market, but the large-cabin segment is an entry-point



Successfull private jet event



#1 Opportunity: Narrowbody VIP penetration

Higher selection rate on Airbus ACJ320 – ACJ sells it as bolt-on-kit with STC together with green ACJ320 aircraft

- ❑ Development together with Airbus Corporate Jets
- ❑ Optimized system for ACJ320 – two humidifiers – four zones

	Completion projects	OEM project	Kit + STC	Addressable Market (per year)	Entry-into-Service
ACJ320	✓	✓	✓	\$1.5M	In-service



- ❑ Kit together with STC delivered with green aircraft
- ❑ Airbus Corporate Jets sells the ACJ-Enhanced IFH system
- ❑ Three orders since launch

#2 Opportunity: Large-cabin bizjet market

OEMs are key – Strong references in VIP to successfully migrate in large cabin bizjets

- ❑ Large-cabin, long-range business jets - 50 – 100 a/c per year
- ❑ Long-range (10+ hours) – Equipped for best comfort – Humidification system required for matching climate

ACJ TwoTwenty

CTT selected for the humidification system ✓



1st Humidification fitted Global 7500 aircraft delivered to charter operator – In-service



❑ Addressed Market potential: \$13M per year

	Completion projects	OEM project	Kit + STC	Addressable Market (per year)	Entry-into-Service
Bombardier Global 7500	✓			\$10M	In-service
ACJ TwoTwenty		✓	✓	\$3M	2023

Objective: Catalogue option is pre-requisite for high market penetration

Gulfstream

G700 EIS: 2022

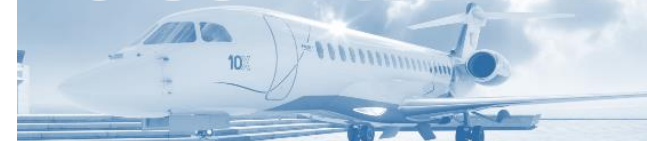
Zero re-circulation – 100 % fresh air



3,000-foot cabin pressure

Falcon 10X

EIS: 2025



3,000-foot cabin pressure

❑ Unaddressed market: \$15M per year

Milestone: 1st large-cabin business jet development agreement



BREAKING AWARD

CTT signs ACJ development contract for the TwoTwenty aircraft

RECENT NEWS

CTT
SYSTEMS

08.00 2022-03-17

Airbus Corporate Jets selects CTT to develop Inflight Humidification system with anti-condensation protection for the ACJ TwoTwenty aircraft

World's first Global 7500 fitted with cabin humidification

Bombardier endorsement / catalogue availability requirement for high penetration

- ☐ Humidification in four zones and anti-condensation protection
- ☐ Test flights in June 2021
- ☐ Entry-into-service in 2021



Gas filtration added feature in humidifiers

Humidity @ wellness-level and filtration of Ozone and VOC

- ☐ Verification tests
- ☐ Discussions with OEMs
- ☐ Part of retrofit and VIP offering



- ☐ Ozone and VOC reduction in the air
- ☐ VOC on the ground – avoid toxic fume events in passenger cabin or flight deck
- ☐ No added maintenance

CTT
S Y S T E M S

 **camfil**

Leading position and projects for growth – Power to invest



Q & A





Air travel a little more sustainable – far more pleasurable

