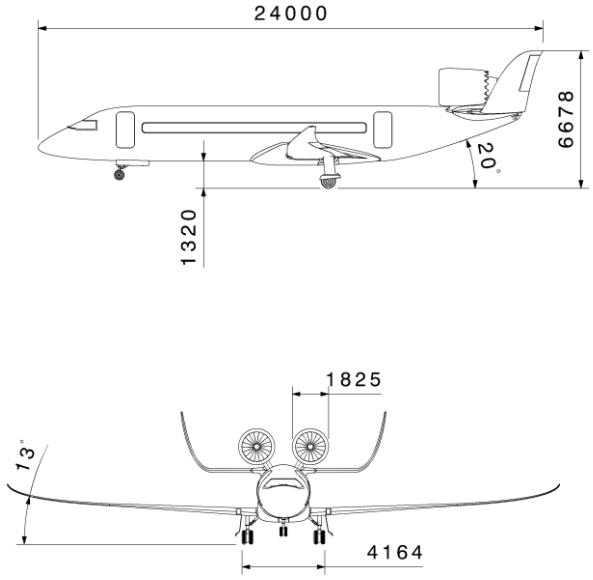
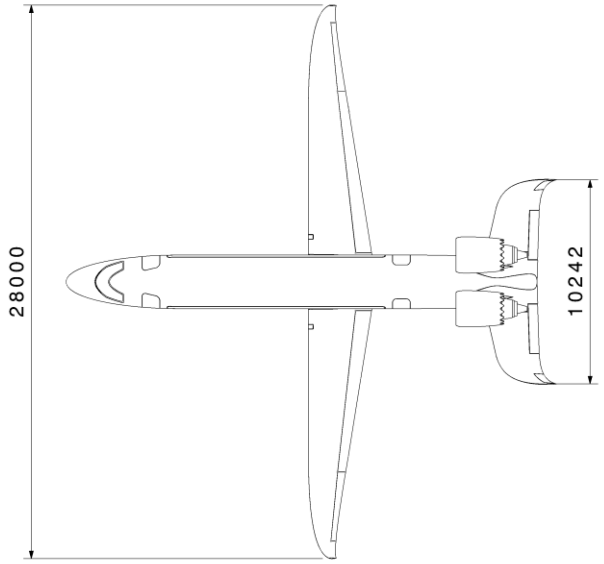
“CityBird” aircraft concept
Technical data sheet

Bauhaus Luftfahrt
Neue Wege.

Three-view





General details

Model description	CityBird Short take-off and landing aircraft for inner-city operation
Launch	2035
Entry into service	2040
Accommodation (standard PAX)	60 PAX

Design criteria

Max. operating V_{mo} / M_{mo}	308 KCAS / M0.68
Dive V_D / M_D	340 KCAS / M0.75
Certified max. alt.	41000 ft.

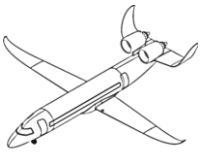
Geometry

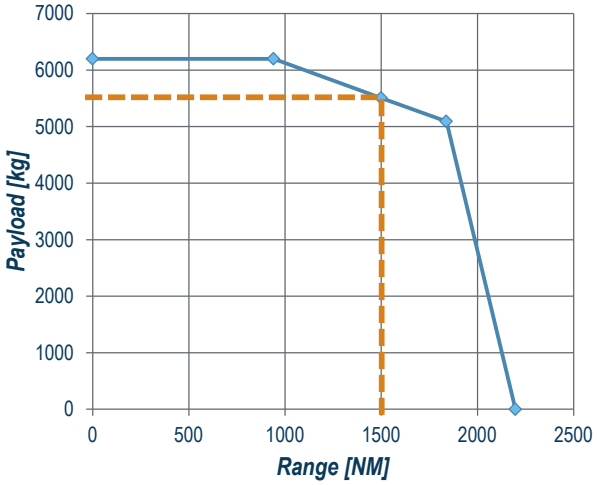
Overall length	24.0 m / 78.7 ft.
Overall height	6.7 m / 22.0 ft.
Wingspan	28.0 m / 91.9 ft.
Ref. area wing (Airbus)	58.9 sq.m / 633.9 sq.ft.
Aspect ratio wing (Airbus)	13.3
1/4Chd wing	-1.9°
1/4Chd stabiliser	9°
t/c wing root / tip	0.143 / 0.100
Cabin length	15.0 m / 49.3 ft.
Max. cabin width / height	2.4 m / 7.8 ft. 2.0 m / 6.5 ft.
Cabin floor width	2.1 m / 6.9 ft.
Fuselage diameter (external)	2.7 m / 8.8 ft.

Systems

- All electric subsystem architecture
- Ultra-high bypass ratio Composite Cycle Engine technology
- Plasma actuators for increased high-lift performance
- Advanced fly by light flight control system
- Low noise optimised airframe and technologies
- High aspect ratio wings

Payload range





"CityBird" aircraft concept
Technical data sheet

Bauhaus Luftfahrt
Neue Wege.

Weights and loadings

Maximum ramp weight	20713 kg / 67956 lb
Maximum take-off weight	20610 kg / 67618 lb
Maximum landing weight	19146 kg / 62817 lb
Max. zero fuel weight	18544 kg / 60842 lb
Operational empty weight	12344 kg / 40501 lb
Maximum payload	6200 kg / 20341 lb
Maximum usable fuel	3176 kg / 10421 lb
Design payload	5508 kg / 18070 lb
Wing loading (MTOW)	350 kg/sq.m 71.7 lb/sq.ft.
Thrust to weight (aircraft)	0.350
Thrust to weight (aircraft and catapult)	0.490
OEW/PAX	205.7 kg/PAX 675 lb/PAX
OEW/MTOW	0.600

Performance

SLS thrust per engine	35.8 kN

Airfield performance (MTOW / MLW)

TOFL inner-city airport, ISA+10K, elevation 2000 ft.	532 m / 1745 ft. (assisted take-off)
TOFL conv. airport, ISA+10K, elevation 2000 ft.	1215 m / 3986 ft.
LFL inner-city airport, ISA+10K, elevation 2000 ft.	553 m / 1814 ft.
LFL conv. airport, ISA+10K, elevation 2000 ft.	1243 m / 4078 ft.
Approach speed (MLW)	102 KCAS

Climb performance (AEO, ISA+10K, MTOW)

Initial cruise altitude	37000 ft.
Time to climb to ICA	25 min.

En route performance

Cruise	M0.65 / 381 KTAS

Payload range

Reserves description	EU OPS 1.225
Accommodation/weight	54 PAX/102 kg (335 lb)
Design range for given accommodation (at LRC)	1500 NM
Range with 60 PAX	1000 NM

Block performance (given PAX, see above)

Assumptions	102 kg per PAX, LRC
Design range	1500 NM
Block time	246 min.
Fuel per passenger	1.7 L/100 km
SAR	0.798 NM/kg

Bauhaus Luftfahrt e. V. | Willy-Messerschmitt-Strasse 1 | 82024 Taufkirchen | GERMANY