



LPP
HOLDING

ZT J-SERIES ENGINES

AIRBREATHING PROPULSION
TURBOJET ENGINES

ZT J Series is a line of compact, high-performance turbojet engines for UAVs, target drones, and light aerial platforms. It includes the ZT J23, ZT J40, ZT J60, ZT J80, and ZT J160 – covering a thrust range from 230 to 1 600 N. Each engine uses a single-stage radial compressor and a single-stage axial flow turbine. The result is a high thrust-to-weight ratio and fast throttle response in a form factor well suited to space constrained airframes.

MAIN FEATURES

- + Compact turbojet engines delivering high thrust for UAVs, target drones, and light aerial platforms.
- + High thrust-to-weight ratio with optimised diffuser stage for additional efficiency.
- + Spool up from idle to maximum RPM in under four seconds for rapid throttle response.
- + Support for manual, air-start, or electric start for flexible integration.
- + Streamlined design fits demanding space-constrained installations without performance trade-offs.



PRODUCTION CAPABILITIES

Our manufacturing is set up for series production across the full range. We also provide end-to-end engineering support for custom turbojet solutions. This allows tailoring across varied applications while maintaining common interfaces and straightforward maintenance.

TECHNICAL SPECIFICATIONS

All specifications are subject to change without notice. All data at STP ± 2%.
S.T.P.: 15 °C / 59 °F, Pressure: 1013 mbar / 29.91 inHg

SPECIFICATIONS	ZT J23	ZT J40	ZT J60	ZT J80	ZT J160
Engine diameter	130 mm	147 mm	175 mm	201 mm	261.4 mm
Engine length	374 mm	385 mm	470 mm	524 mm	700 mm
Engine weight	2 900 g	3 645 g	6 850 g	9 150 g	21 450 g
System airborne weight *	3 845 g	5 211 g	7 900 g	11 300 g	25 650 g
Thrust at S.T.P.	230 N	392 N	588 N	784 N	>1 569 N
Maximum RPM	108 500	96 000	72 000	61 500	46 000
Thrust at Idle RPM	13 N	13 N	25 N	40 N	75 N
Pressure ratio at max RPM	3.5:1	3.8:1	4:1	4:1	4:1
Mass flow	450 g/s	660 g/s	950 g/s	1 250 g/s	2 500 g/s
Max EGT	750 °C	850 °C	875 °C	875 °C	850 °C
Fuel consumption	640 g/min	1 020 g/min	1 648 g/min	1 900 g/min	3 600 g/min
Specific fuel consumption	46.4 g/(kN · s)	43.3 g/(kN · s)	46.71 g/(kN · s)	40.36 g/(kN · s)	38.24 g/(kN · s)
Starting method	Direct kerosene starting, on request propane start for ZT J23 and ZT J40.				

* Total weight includes engine-specific additional equipment configuration.

ENGINE CONTROL POSSIBILITIES	
1 x RS-232 (or RS-485 for ZT J160 **)	Throttle and switch settings including special functions *
2 x PWM between 1-2 ms **	Throttle and switch settings. (special functions * with push button)
2 x Analog inputs 0-5 V DC **	Throttle and switch settings. (special functions * with push button)

* Activation of prime function, igniter function, starter function, speed cool.

** Specify at ordering.

OPERATING CONDITIONS	
Min operation temperature *	-25 °C / -35 °C for ZT J23 and ZT J160
Maximum operating temperature	+50 °C
Maximum operating altitude	8 000 m
Maximum operating speed	1 000 km/h

* With the use of LiPo batteries the minimum operation temperature is limited to -10 °C.



L.P.P. Holding a.s.

Pod Hajkem 406/1a, 180 00 Prague, Czech Republic

+420 605 295 772

info@lpp-holding.com

www.lpp-holding.com