

STANDARD OXYGEN ETP

The Standard Oxygen ETP, or SO-ETP, is a standardized oxygen planning format designed to provide flight crews with reliable information at decompression altitudes above 10,000ft as well as reduce workload and confusion associated with oxygen planning.

The program uses performance data provided by the flight planning provider. This format is designed in conjunction with a typical flight plan where the pilot will record at specific intervals predicted fuel remaining based on route, altitude, temperature aircraft weight etc. The fuel data is broken down and rearranged this familiar compatible format found in a regular flight plan. The format then adds another column which predicts oxygen remaining at the prescribed timed interval.

So for the first time a flight plan has been developed with predicted fuel quantities based on 15-minute time intervals and prepared for the pilot to reference should such an event occur. In addition, since time remaining has replaced all other metrics for the oxygen system, another column for oxygen remaining has been added to this analysis which will calculate oxygen remaining in all 3 metrics (psi, liters and % of full). The pilot can keep track of the oxygen remaining as well. Ostensibly this paper work relieves the pilot from having to look at a fuel or oxygen chart since it is already calculated prior to departure. The analysis is based on data received from their flight planning agency and this becomes an essential component to the master flight plan.

The often confusing litany of tabular data of fuel versus oxygen reserves at various altitudes is condensed into a single standardized page and organizes it according to time intervals, very similarly to existing flight plans used under normal conditions.

Why the SO-ETP was Created

It is a little known fact that professional flight planning organizations do NOT factor oxygen ranges into ETP calculations. This is largely in part due to: A) Traditional industry best practices assuming that an aircraft can always descend during a decompression and B) Traditional physical metrics, such as PSI and Liters, do not provide adequate data to reliably plan for diversion scenarios at higher altitudes.

Flight planning organizations typically compensate for this by adding enough fuel for a 10,000ft ETP descent altitude. However, in many instances, for example flights with weight restrictions or simply not enough fuel capacity, flight planning organizations will issue ETP analysis with decompression altitudes up to 25,000ft in order to reduce tankering payloads or simply to have enough fuel to complete the flight. In instances such as these, the aircraft is not provisioned with enough fuel to descend to 10,000ft, to fly to a diversion airport nor is it verified that their oxygen reserves will support operations at a higher altitude.

ADS created the SO-ETP in order to condense Fuel and Oxygen information into a like (logical) format and accurately project what those reserves mean to the flight crew based on time/fuel or time/oxygen intervals.

What Does the SO-ETP do?

The SO-ETP adds a standardized and simple oxygen component to a flight plan. Information is condensed into time/fuel or time/oxygen intervals at various altitudes. This gives the flight crew a clear assessment of what their fuel/oxygen reserves mean in a tangible format.

The SO-ETP is purposed to simplify the oxygen section of a flight plan, reduce workload on the pilot and to verify that the flight plan adequately accounts for oxygen at decompression altitudes above 10,000ft.

Most importantly the SO-ETP provides global standardization for all aircraft types regardless of aircraft or Oxygen OEM. Every aircraft flown using the SO-ETP will manage fuel and oxygen in the same way making this very complex system simple and safe to manage.

To Whom is the SO-ETP Useful

Pilots: As is the case with all ADS products, practical use by the flight crew is of foremost concern. The SO-ETP is simply meant to reduce workload on pilots during flight planning by providing them useful information on oxygen reserves while providing fuel remaining based on their flight plan analysis. This planning component will bring clarity to the operational value of oxygen reserves as well as peace of mind in that fuel and oxygen reserves have been verified for the planned ETP altitude.

Planning and Dispatching Professionals:

Whether you are an internal dispatcher working for a specific flight operation, or a flight planning service provider, the SO-ETP is meant to make your job easier while increasing the quality of your product. The SO-ETP is a web based program that can be utilized by your personnel or integrated directly into your planning software.

The SO-ETP represents a substantial value added to your flight crews/clients, especially when planning for flights requiring an ETP calculation.

	A	B	C	D	E	F	G	H	I
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3		RC# 5456		N125CH		Crew 2		Pax 8	
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11									
12	Dispatch				Enroute				Landing
13	CYR				ETP 1				EINN
14	Min O-2	1322		Altitude	17,000'			Total Used	663
15	Actual O-2	1750		O-2 to ETP	330			Dest. O-2	1087
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Fuel		Oxygen						
High FL410	Eng Inop FL260	O-2 FL150	Actual	TIME	% of full	Liters	PSI	Actual
				:15 Intervals				
		15341		4:40	86	2733	1420	
		14704		4:25	84	2643	1370	
	15567	14067		4:10	82	2553	1320	
	15010	13430		3:55	80	2463	1270	
	14453	12793		3:40	78	2373	1220	
15422	13896	12156		3:25	76	2283	1170	
14956	13339	11519		3:10	74	2193	1120	
14490	12782	10882		2:55	72	2103	1070	
14024	12225	10245		2:40	70	2013	1020	
13558	11668	9608		2:25	68	1923	970	
13092	11111	8971		2:10	66	1833	920	
12626	10554	8334		1:55	64	1743	870	
12160	9997	7697		1:40	62	1653	820	
11694	9440	7060		1:25	60	1563	770	
11228	8883	6423		1:10	58	1473	720	
10762	8326	5786		0:55	56	1383	670	
10296	7769	5149		0:40	54	1293	620	
9830	7212	4512		0:25	52	1203	570	
9364	6655	3875		0:10	50	1113	520	

Figure 1 The OS-ETP Format condenses pages of oxygen data into a single page format matched against time intervals

Functions and Features of the SO-ETP

FUNCTION

The SO-ETP' sole function is to provide useful and relevant information on aircraft fuel/oxygen reserves.

FEATURES

Aircraft Specific Customization:

Like the people who fly them, every aircraft is different. Even aircraft of the exact same make and model, can possess minor differences that create a big impact on the duration of an oxygen reserve. As standard practice, ADS conducts a thorough analysis of your aircraft systems during the integration process. This means the outputs generated by the IS-ETP during the planning phase are reflective of the exact performance values of your aircraft based on OEM and equipment specifications found on that specific aircraft, as well as information corresponding with the rest of your flight plan.

Universal Standardization:

As we like to say to all of our clients: You may be trained on 20 different airframes in your career, but with ADS you will only need to be trained on one asset management platform. Because of our staunch practice of aircraft customization, the SO-ETP will produce a standardized interface regardless of the aircraft you are flying.

Pressure/Volume to Time Intervals

The core feature of the SO-ETP is its use of time as the standard metric for oxygen planning. By converting data in physical metrics to a duration metric, the oxygen component of a flight plan gains practical use in the field.

The SO-ETP as Part of an ADS Oxygen SMS Component

The SO-ETP covers the planning portion of the ADS Oxygen SMS Component. The ADS Oxygen SMS component is unique in that it syncs all aspects of of aviation oxygen in the metrics of time and distance. The SO-ETP provides both regulatory compliance and standardization at the planning level. Click here to find out more about how [the SO-ETP fits into your ADS Oxygen SMS Component.](#)