

# Contiform - Energy Costs Forecast



General Data									
Date	20.04.16	Machine type	S24	Bottle Specifications	[-]	Krones			
Offer / Order no.	44153571	Process	Relax	Mean annual temperature	[°C]	22			
Customer	LEUROPÉENNE D'EMBOUTEILLAGE	Type Air Wizard	2	Installation altitude	[m]	100			
		Series-production status	2011	Humidity	[%]	75			
		Compressor supplier	Other	Energy costs	[€/kWh]	0,07			
		Oven pitch	50mm	Operating hours	[h/a]	5000			
		Oven Configuration	2.1	Machine efficiency	[%]	90,0			
Data depending on container									
		Container 1	Container 2	Container 3	Container 4	Container 5	Container 6	Container 7	Container 8
Bottle name									
Product									
Production distribution	[%]	30	30	40					
Volume	[l]	0,25	0,33	0,5					
Bottle height	[mm]	160	170	192					
Preform weight	[g]	19	19	21					
Weight of neck finish	[g]	4,7	4,7	4,7					
Preform resin / specific IR value *	[-]	Sample 1 / 120	Sample 1 / 120	Sample 1 / 120					
Output per cavity	[b/h/c]	1.800	1.800	1.800					
Production on every 2nd station	[-]	No	No	No					
Preblow pressure	[bar]	3,5	3,5	3,5					
Final blow pressure	[bar]	30	30	30					
Stretching pressure	[bar]	7	7	7					
Machine output	[b/h]	43.200	43.200	43.200					
Produced bottles	[b/a]	58.320.000	58.320.000	77.760.000					
Consumption data and costs									
<b>Air consumption / recovery</b>									
Air consumption DIN 1343 **	[Nm³/h]	614	668	805					
Air consumption ambient cond.	[m³/h]	677	736	887					
Air consumption DIN 1945 ***	[Nm³/h]	668	727	876					
<b>Energy consumption</b>									
Contiform (incl. preform supply)	[kW]	207,1	207,1	211,0					
Compressor	[kW]	135,4	147,2	177,4					
Chiller	[kW]	15,6	15,6	17,0					
Temperature unit	[kW]	24,0	24,0	24,0					
TOTAL	[kW]	382,1	393,9	429,4					
<b>Specific energy Contiform</b>									
Net (without neck finish)	[Wh/g]	0,335	0,335	0,300					
Gross (incl. neck finish)	[Wh/g]	0,252	0,252	0,233					
<b>Energy costs</b>									
Annual energy costs	[€/a]	36.108	37.224	54.110					
Energy costs per 1000 container	[€/1000b]	0,62	0,64	0,70					
<b>Total annual energy costs</b>	<b>[€/a]</b>	<b>127.442</b>							

\* Specific IR value is material-dependent and influences Contiform energy consumption.

\*\* 0°C, 1,013bar

\*\*\* 20°C, 1bar

**This calculation must not be used for compressor dimensioning.**

All calculated values are typical energy consumptions based on Krones experiences and may vary for certain application.  
 The assumptions for this energy forecast are a Krones base design and a suitable preform geometry.  
 Energy consumption is strongly depending on: PET resin type (impact up to 30%), ambient conditions, machine set up, ...  
 The calculation of the electrical energy consumption of the chiller was done with a performance factor of 2.£  
 Therefore all mentioned data must not be used for contractual claims without a detailed verification.