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HYDRAULIC VS FULL ELECTRIC

ENERGY CONSUMPTION COMPARISON

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MACHINE MODEL

ELECTRIC
ADVT2-750

HYDRAULIC
SYSTEM 4000-T660

PRODUCT TESTED: Personal care bottle

Volume	Net weight	Gross weight	Cavities	Cycle time	Output
750 ml	42 g	53 g	2 x 7	10,5	4.800 bph

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POWER ENERGY CONSUMPTION

		ADVT2-750	SYSTEM 4000-T660
			
Plastic consumption	kg / h	255	255
Average consumption ratio	kW/kg	0,27	0,55
Electric consumption	kW/h	68	140

Electric. Power Savings.	kW/h	72
	%	51%

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MACHINE COOLING

		ADVT2-750	SYSTEM 4000-T660
			
Average air consumption	dm^3/ min	3.000	4.400
Mould cooling capacity required	kJ/h	150.000	150.000
Mould water flow required	dm^3/ h	18.000	18.000
Machine cooling capacity required	kJ/h	53.300	104.000
Machine water flow required	dm^3/ h	2.550	5.000

Savings on cooling	kJ/h	50.700
Power savings for cooling	kW/h	14,1
	%	49%

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POWER ENERGY SAVING SUMMARY

ADVT2-750

Savings for machine cooling (Elect. Vs Hydraulic)	kW/h	14	
Savings for electric consumption(Elect. Vs Hydraulic)	kW/h	72	
Total saving with electric machine(Elect. Vs Hydraulic)	kW/h	86	
Electricity cost per kW/h	€	0,12	*Europe avg price*
Total saving per hour	€	10,32 €	
Total saving per year	**€**	**63.984 €**	*(6.500 hours / year)*

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HYDRAULIC VS ELECTRIC

OTHER FEATURES

	ADVT2-750	SYSTEM 4000-T660
		
Bottle shape control	**High** Electric motions controlled by pc	**Low** Hydraulic cylinder driven motions
Repeatability	**High**	**Low**
On-line remote service/maintenance	**High performances** Electric movements provide signals to PLC	**Low performances** Hydraulic system share few data with PLC
Failure predictive analysis	**Good**, in continuous improvement Monitoring motors overconsumption can lead to prevent failures and down times	**Not present**
Expected lifetime	**Very long** (no oil means less wear and tear)	**Long**

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END

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