

**Payback Calculation - Automated reverse vending system**

<b>Store Type - Hypermarket</b>	<b>Volume</b>	<b>Sold bottles / cans per day</b> 9500	<b>Sold bottles per Month</b> 285 000	<b>Return Rate</b> 90%	<b>Number of bottles per Month</b> 256 500
<b>2x large sized reverse vending systems</b>	<b>Investment</b>	<b>50 000,00 €</b>			
	<b>Deposit € per unit</b>	<b>0,10 €</b>			25 650,00 €

Per month					monthly costs for automated system	Difference	monthly costs for manual system	
Manual labour work	cost labour work / hour	3,15 €			- €	- 2 213,15 €	2 263,64 €	2 persons
Deposit losing			0,10%		25,65 €	- 1 256,85 €	1 282,50 €	5% cheating
Handling, change bags	labour work per bag change /h	0,05	unit per emptying	800	50,49 €	- 353,41 €	403,89 €	100 bottles/can per bag
Error/Halt correction	cost labour work / hour	3,15 €	once after 1000 bottles	0,1	80,78 €		- €	
Cleaning	cost labour work / hour	3,15 €	hours per month	8	25,19 €		- €	
Service, maintenance	15%		maintenance, service	625,00 €	625,00 €		- €	
Power consumption	price per KW/h	0,12 €	power consump. KW/h	288	34,56 €		- €	
Investment	automated re-vending system	50 000,00 €	monthly, for 7 years	595,24 €	595,24 €			
					<b>1 436,91 €</b>	<b>- 2 462,64 €</b>	<b>3 950,03 €</b>	

<b>Handlings fee per bottle/can</b>	<b>Per month</b>	<b>Per year</b>
0,01 €	2 565,00 €	30 780,00 €

<b>Costs per year</b>	<b>Automated system</b>	<b>Difference</b>	<b>Manual system</b>
	17 242,90 €	- 29 551,63 €	47 400,37 €
Handling fee per year	30 780,00 €		30 780,00 €
<b>Total Costs per year</b>	<b>- 13 537,10 €</b>		<b>16 620,37 €</b>