

## Article # 1275

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### Technical Note: Understanding the Employer Matching/Contribution by Percentage Method Formula

**Difficulty Level:** Intermediate Level AccountMate User

**Version(s) Affected:** AccountMate 7 for SQL, Express and LAN

**Module(s) Affected:** PR

**Posting Date:** 06/24/2009

#### DESCRIPTION

An employee's retirement fund such as 401(K) is a simple and effective way to save a portion of an employee's gross earnings to an investment fund. Although not required to do so by federal law, employers often offer a matching plan as an employee benefit and an effective way of increasing an employee's desire to remain employed there. AccountMate now has this feature that enables users to record the employer's matching contribution to the employee's deduction. Reviewing the employer matching contribution calculated using the percentage method may be complicated without a clear understanding about how AccountMate computes the amount.

The purpose of this Technical Note is to discuss the formulas AccountMate uses to calculate the values when the **Employer's Matching/Contribution by Percentage Method** is selected.

#### SOLUTION

The Employer Matching/Contribution feature facilitates the calculation and accrual of the employer's share or contribution to the employee's deduction. The employer's contribution can be calculated by setting it up in the Deduction Maintenance function. The settings in the Deduction Maintenance become the default settings for all new employees created; however, you can customize each employee's settings by accessing the Deduction tab in the Employee Maintenance function. You can perform any of the following in the Employee Maintenance Deductions tab:

1. Disable the Employer Matching/Contribution.
2. Change the rate, amount, percentage table or annual limit used in calculating the Employer Matching/Contribution.

The Percentage Method provides the option to use any of the following as the basis for calculating the Employer Matching/Contribution amount:

1. Employee's deduction amount
2. Employee's gross earnings
3. Employee's net pay

## The Formula

The **Employer Matching/Contribution by Percentage Method** uses the rates specified in the Employer Matching/Contribution (M/C) by Percentage Method table (Figure 1). The rates specified in the Deduction Maintenance become the default values in the Employee Maintenance. The user can override the employee default rates in the Employee Maintenance Deductions tab (Figure 2).

The screenshot shows the 'Deduction Maintenance' window for deduction code 401K. The 'Employer Matching/Contribution (M/C)' tab is active. The 'Calculate During Apply Payroll' checkbox is checked. The 'Annual Limit' is set to 15,000.00. The 'Matching/Contribution Method' is set to 'Percentage of Employee Deduction'. A table below shows the matching and over rates for different methods.

Matching/Contribution Method	Matching %	Over	% of Gross But Not Over
<input checked="" type="radio"/> Percentage of Employee Deduction	25.00	0.00	10.00
<input type="radio"/> Percentage of Employee Gross	15.00	10.00	20.00
<input type="radio"/> Percentage of Employee Net	10.00	20.00	100.00

Liability Account: 220360-000-00 (Employer Matching Liab - General)  
Expense Account: 810360-000-00 (Employer Matching Exp-General)

Figure 1: Employer Matching/Contribution (M/C) by Percentage Method table

The screenshot shows the 'Employee Maintenance' window for employee BBW1 (Williams, Bill). The 'Deductions' tab is active, displaying a table of deductions. Below the table, the 'Employer Matching/Contribution' section is highlighted, showing the 'Override Employer Matching/Contribution' checkbox checked and the 'M/C Method' set to 'Percentage of Employee Deduction'. A table below shows the matching and over rates for different methods.

Apply	Ded Code	Short Desc	Type	Amt/Pct/Rate	Min YTD Gross	Max YTD Gross	Ded Limit	YTD Deduction
<input checked="" type="checkbox"/>	401K	401k	%	15.00	0.00	9,999,999.99	15,000.00	406.02
<input checked="" type="checkbox"/>	CREDITUN	Creditunion	\$	25.00	0.00	9,999,999.99	9,999,999.99	75.00
<input checked="" type="checkbox"/>	MEDICAL	Medical	\$	33.33	0.00	9,999,999.99	1,000.00	99.99
<input checked="" type="checkbox"/>	UNION	Union	\$/Hr	0.05	0.00	9,999,999.99	500.00	13.20

Employer Matching/Contribution	Matching %	Over	% of Gross But Not Over
<input type="checkbox"/> Disable Employer Matching/Contribution	25.00	0.00	10.00
<input checked="" type="checkbox"/> Override Employer Matching/Contribution	15.00	10.00	20.00
M/C Method: Percentage of Employee Deduction	10.00	20.00	100.00

Annual Limit: 15,000.00

## Figure 2: Employee Maintenance function- Deductions tab

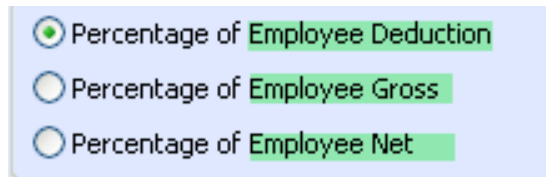
The following step-by-step procedure will show you how AccountMate calculates the Employer Matching/Contribution amount using the Percentage Method:

### Legend:

- **A** – Employer Matching/Contribution (M/C) Base Amount
- **B1** – 1<sup>st</sup> Maximum Employer Matching/Contribution (M/C) Amount
- **B2** – 2<sup>nd</sup> Maximum Employer Matching/Contribution (M/C) Amount
- **B3** – 3<sup>rd</sup> Maximum Employer Matching/Contribution (M/C) Amount
- **C1** – 1<sup>st</sup> Employer Matching/Contribution (M/C) Amount
- **C2** – 2<sup>nd</sup> Employer Matching/Contribution (M/C) Amount
- **C3** – 3<sup>rd</sup> Employer Matching/Contribution (M/C) Amount
- **D1** - Difference between B2 and B1
- **D2** – Difference between A and B1
- **D3** – Sum of B1 and B2
- **D4** – Difference between B3 and D3
- **D5** – Difference between A and B2
- **E1** – 1<sup>st</sup> Available Deduction Amount
- **E2** – 2<sup>nd</sup> Available Deduction Amount
- **F** – Final Employer Matching/Contribution (M/C) Amount

**Step 1:** Determine which **Employer Matching/Contribution (M/C) by Percentage Method** option is to be used; then, determine the **Employer Matching/Contribution (M/C) Base Amount**.

The Employer M/C by Percentage Methods available are:



The **Employer M/C Base Amount (A)** is the employee's deduction amount, gross earnings amount, or net pay amount; depending upon the Employer M/C by Percentage Method selected in the Deduction Maintenance function.

**Step 2:** Calculate the maximum employer matching/contribution amount for each percentage of gross earnings.

The **Maximum Employer M/C Amount (B1, B2, or B3)** is the employee's gross earnings multiplied by the percentage of gross earnings.

The percentage of gross earnings is the rate specified in the % of Gross But Not Over fields in the Deduction tab of the Employee Maintenance function. Below is an example of the % of Gross Earnings.

Matching %	Over	% of Gross But Not Over	
25.00	0.00	10.00	<b>B1</b>
15.00	10.00	20.00	<b>B2</b>
10.00	20.00	100.00	<b>B3</b>

The formulas are as follows:

**B1 = Gross Earnings X 1<sup>st</sup> % of Gross Earnings**

**B2 = Gross Earnings X 2<sup>nd</sup> % of Gross Earnings**

**B3 = Gross Earnings x 3<sup>rd</sup> % of Gross Earnings**

**Step 3:** Calculate the **1st Employer M/C Amount (C1)**.

The **1st Employer M/C Amount (C1)** is the product of the 1<sup>st</sup> Employer Matching % multiplied by either the **Employer M/C Base Amount (A)** or the **1<sup>st</sup> Maximum Employer M/C Amount (B1)** (whichever is less) in steps 1 and 2 above. The formulas are as follows:

- If the **Employer M/C Base Amount (A)** is LESS than the **1<sup>st</sup> Maximum Employer M/C Amount (B1)**:

$$C1 = A \times 1^{\text{st}} \text{ Employer Matching \%}$$

- If the **Employer M/C Base Amount (A)** is MORE than the **1<sup>st</sup> Maximum Employer M/C Amount (B1)**:

$$C1 = B1 \times 1^{\text{st}} \text{ Employer Matching \%}$$

You will find the employer matching rates in the Employee Maintenance Deduction tab . Below is an example of the employer matching rates:

	Matching %	Over	% of Gross But Not Over	
<b>C1</b>	25.00	0.00	10.00	<b>B1</b>
<b>C2</b>	15.00	10.00	20.00	<b>B2</b>
<b>C3</b>	10.00	20.00	100.00	<b>B3</b>

**Step 4:** Compute the **Difference between the 2<sup>nd</sup> and 1<sup>st</sup> Maximum Employer M/C Amount (D1)**. The formula is as follows:

$$D1 = B2 - B1$$

**Step 5:** Compute the **Difference between the Amount Used for Comparison with Maximum Employer M/C Amount and the 1<sup>st</sup> Maximum Employer M/C Amount (D2)**. The formula is as follows:

$$D2 = A - B1$$

**Step 6:** Determine the **1<sup>st</sup> Available Amount of Deduction (E1)**.

Identify the lesser value between D1 and D2 in steps 4 and 5. The lesser value becomes the **1<sup>st</sup> Available Amount of Deduction (E1)**. The formula is as follows:

**E1 = whichever is lower between D1 and D2**

**Step 7:** Calculate the **2nd Employer M/C Amount (C2)**.

The **2<sup>nd</sup> Employer M/C Amount (C2)** is the **1<sup>st</sup> Available Amount of Deduction (E1)** multiplied by the 2nd Employer Matching %. The formula is as follows:

**C2 = E1 X 2nd Employer Matching %**

**Step 8:** Compute the **Sum of the 1<sup>st</sup> and 2<sup>nd</sup> Maximum Employer M/C Amount (D3)**. The formula is as follows:

**D3 = B1 + B2**

**Step 9:** Compute the **Difference between the 3<sup>rd</sup> Maximum Employer M/C Amount and the Sum of the 1<sup>st</sup> and 2<sup>nd</sup> Maximum Employer M/C Amount (D4)**. The formula is as follows:

**D4 = B3 – D3**

**Step 10:** Compute the **Difference between the Employer M/C Base Amount and the 2<sup>nd</sup> Maximum Employer M/C Amount (D5)**. The formula is as follows:

**D5 = A – B2**

**Step 11:** Determine the **2<sup>nd</sup> Available Amount of Deduction (E2)**.

Identify the lesser value between D4 and D5 in steps 9 and 10 above. The formula is as follows:

**E2 = whichever is lower between D4 and D5**

**Step 12:** Calculate the **3<sup>rd</sup> Employer M/C amount (C3)**.

The **3<sup>rd</sup> Employer M/C Amount (C3)** is the **2<sup>nd</sup> Available Amount of Deduction (E2)** multiplied by the 3<sup>rd</sup> Employer Matching %. The formula is as follows:

**C3 = E2 X 3<sup>rd</sup> Employer Matching %**

**Step 13:** Calculate the **Final Employer Matching/Contribution Amount (F)**.

The **Final Employer Matching/Contribution Amount (F)** is the sum of the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Employer M/C Amounts computed in the previous steps.

**F = C1 + C2 + C3**

The discussion above helps users to identify the factors that affect the computation of the employer matching/contribution. Knowing how the system calculates the employer matching/contribution allows users to easily trace and correct the formula settings if necessary.

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