

Incentive Wages: Overview



HELP.PTRCIW

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Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Contents

Incentive Wages: Overview	5
Incentive Wages Accounting: Processes	6
Monthly Wage Calculation for Incentive Wages.....	7
Calculating the Earnings Factor for Incentive Wages	10
Earnings Factor: Example.....	11
Incentive Wages Accounting: Hourly Wage Earners	12
Incentive Wage Accounting: Tools	13
Incentive Wages Accounting: Personnel Calculation Schemas.....	14
Personnel Calculation Rules DIW0 and XIW0	15
Functions PW1 and PW2	16
Incentive Wages Accounting: Personnel Calculation Rules	17
Special Operations	18
Wage Types	19
Wage Types from Basic Pay.....	20
Wage Types on Time Tickets	21
Wage Types as Accounting Results	22

Incentive Wages: Overview

Familiarity with the technical aspects of *SAP Payroll* is a prerequisite for understanding incentive wages accounting. In particular, you must understand the following terms: personnel calculation scheme, personnel calculation rule, function, and operation.

The extensive options for implementing *SAP Incentive Wages* make system standardization difficult. If the time ticket types and the manner in which time tickets are recorded differs greatly from one enterprise to the next, then valuation of time tickets can often be completely different. Therefore, it does not make sense to elaborate incentive wages accounting processes in detail to cover all possible accounting scenarios.

Following, you will find a number of versions as examples to use when setting up your own incentive wages accounting process. The international version contains an accounting process for hourly-wage earners, while the German version features two additional processes for monthly wage earners based on the collective agreement provisions existing in the Federal German states of Baden Wuerttemberg and North Rhein-Wesfalia. Please refer to the Implementation Guide (IMG) for further information.

Incentive Wages Accounting: Processes

Three accounting processes for incentive wages are contained in the standard SAP System. The concepts behind these processes are explained further.

Monthly Wage Calculation for Incentive Wages

Monthly Wage Calculation for Incentive Wages

In monthly wage calculation, the target time is valued for each time ticket using the piecework rate. The piecework rate for the [wage group \[Ext.\]](#) entered on the time ticket is used for this case. The result is the amount that the piecework employee is due for the respective time ticket. The calculated amount is made up of the following:

- Basic Monthly Wage
- Time-dependent variable element
- Performance-dependent variable element

Basic Monthly Wage

The basic monthly wage is the part of the gross wage paid to employees regardless of their performance. It can be paid in a monthly lump sum, or defined as an hourly wage dependent on the working time.

The basic monthly wage is determined in the gross part of payroll. This amount is used in incentive wages as the basis for calculating variable elements.

Monthly wages are converted to hourly rates for incentive wage accounting.



Various bonuses can be paid out in addition to the basic wage. Examples include bonuses for working nights or on Sundays. However, these bonuses are **not** taken into account in the standard SAP System for incentive wages accounting.

Time-Dependent Variable Element

Employees can be assigned to a pay scale group different from their master pay scale group, and remunerated at a higher rate for certain activities in incentive wages accounting. The higher pay scale group must be entered on the time ticket. The difference amount is determined in incentive wage accounting, and valued using the actual time as specified on the time ticket. The resulting amount is referred to as a **time-dependent variable element**.

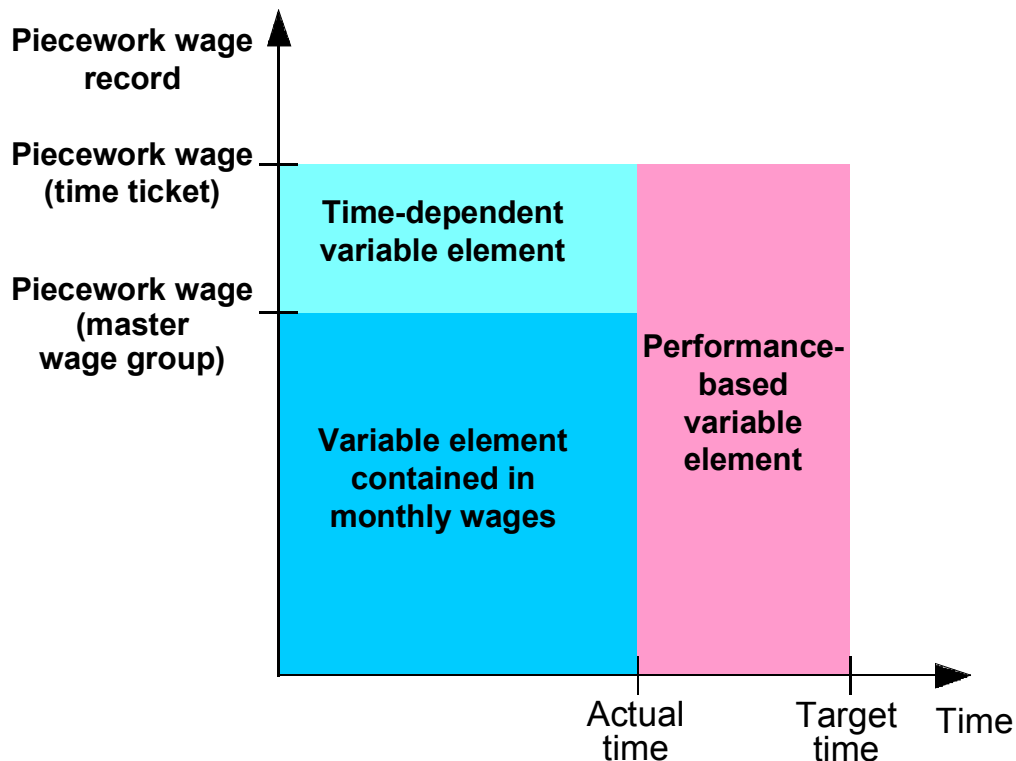
Performance-Dependent Variable Element

The performance-dependent variable element credits the employee with completing work in less than the target time. The difference between target and actual time is valued according to the pay scale group specified on the time ticket.

Theoretically, both the time-dependent and the performance-dependent variable elements can be negative and result in a wage deduction. This can be the case for the time-dependent variable element if the pay scale group specified on a time ticket is lower (that is, valued at a lower rate) than the employee's master wage group. Downgrading is limited to a maximum of one pay scale group in the standard SAP System. If the actual time is greater than the target time, the performance-dependent variable element assumes a negative value. In this case, the time ticket is usually paid at the average rate, that is, the performance-dependent variable element has a value of zero.

The following diagram shows the relationship between the various gross wage elements:

Monthly Wage Calculation for Incentive Wages



The individual areas are represented in proportion to the gross wage elements.



The piecework rate in an employee's master wage group is 22 euros/hour.

The employee completes an order in four hours, instead of the target time of five hours. The employee is also assigned to a higher wage group with a piecework rate of 24 euros/hour. The higher wage group is entered on the time ticket.

The standard calculation performed in incentive wages accounting for this time ticket is as follows:

The total amount due to the employee for this time ticket is calculated by multiplying the target time by the piecework rate on the time ticket:

$$5 \text{ hours} \times 24 \text{ euros/hour} = 120 \text{ euros}$$

The *basic monthly wage element* is determined by multiplying the actual time by the piecework rate of the master wage group:

$$4 \text{ hours} \times 22 \text{ euros/hour} = 88 \text{ euros}$$

You get the *time-dependent variable element* by multiplying the 2 euros extra in the higher wage group by the actual time:

$$4 \text{ hours} \times 2 \text{ euros/hour} = 8 \text{ euros}$$

The *performance-dependent variable element* is determined by multiplying the difference between target and actual time by the piecework rate of the time ticket:

Monthly Wage Calculation for Incentive Wages

$(5 \text{ hours} - 4 \text{ hours}) \times 24 \text{ euros/hour} = 24 \text{ euros}$

The result is then:

$88 \text{ euros} + 24 \text{ euros} + 8 \text{ euros} = 120 \text{ euros}$

The *time-dependent variable element* of 8 euros and the *performance-dependent variable element* of 24 euros are explicitly indicated as elements of the gross wage.

Calculating the Earnings Factor for Incentive Wages

Calculating the Earnings Factor for Incentive Wages

The following describes the procedure for calculating the earnings factor in incentive wages accounting, based on the one stipulated in Baden Wuerttemberg. The basic monthly wage of the current month is multiplied by the earnings factor of the last two months.

The earnings factor is calculated as follows:

$$DRS_A = \frac{\text{Total (SZ(LS) x ARS(LS)) + DZ(LS) x DRS_V}{ANWZ}$$

$$\text{Earnings Factor} = \frac{DRS_V}{ARS}$$

Whereby:

Table Caption

●	SZ(LS):	The target time of the individual time ticket
●	ARS(LS):	The piecework rate of the wage group on the time ticket
●	DZ(LS):	The actual time of the time tickets paid at the average rate
●	DRS_A:	The average basic rate of the current month
●	DRS_V:	The average basic rate of the last two months
●	ARS:	The piecework rate of the master wage group
●	ANWZ:	The total of all actual times (piecework and average)

The total is for all time tickets in the reference period, that is, two months in the standard SAP System.

Earnings Factor: Example

An employee receives a basic monthly wage of 3,200 euros. This is an hourly wage (= piecework rate) of 20 euros/hour for a monthly working time of 160 hours.

Of the 160 working hours, he works 100 hours on a piecework basis (= actual time), and the remaining 60 hours are paid at the average rate.

The employee's performance corresponds to a **target time** of 120 hours. From this target time, 20 hours are paid at a rate of 20 euros/hours and 100 hours are paid at a rate of 25 euros/hour. A higher is entered as the master wage group on the time ticket for the 100 hours. The employee is entitled to a total of 2,900 euros for the work. The piecework hourly wage (actual time = 100 hours) is thus calculated as 29 euros/hour. This value is the average rate for the current month.

To calculate the earnings factor for the current month, the average rate of the current month is divided by the piecework rate of the master wage group:

$$\text{Earnings Factor} = \frac{29 \text{ euros/hour}}{20 \text{ euros/hour}} = 145\%$$

In order to calculate the employee's gross monthly wage, the basic monthly wage is multiplied by the earnings factor:

$$\text{Gross Monthly Wages} = 3,200 \text{ euros} \times 145\% = 4,640 \text{ euros}$$

The employee's gross monthly wage is 4,640 euros.



In the above example, the gross monthly wage was calculated according to the earnings factor of the current month. The average earnings factor of the previous two months is also used in the standard procedure, however. This allows a monthly wage with deferred payment.

Incentive Wages Accounting: Hourly Wage Earners**Incentive Wages Accounting: Hourly Wage Earners**

The process for hourly wages accounting is basically the same as the process for [monthly wages accounting \[Page 7\]](#). However, There is one major difference:

The monthly wage is specified as an hourly wage from the start of the process. As a result, the monthly basic wage does not need to be converted into an hourly wage.

Incentive Wage Accounting: Tools

The following sections contain additional information regarding personnel calculation schemas, functions, and personnel calculation rules to be used in incentive wages accounting.

Incentive Wages Accounting: Personnel Calculation Schemas

The recorded time tickets are valued in the gross part of payroll; incentive wages accounting is an integral part of payroll.

There are two reference schemas for incentive wages accounting:

- **German Version: DIW0**

Schema DIW0 is used in the German version of *SAP Payroll*, and contains special features that are specific to Germany only.

In the German version, subschema DT00 is called from schema D000. From there, schema DT00 (which processes the time data) is called to value the time tickets.

The feature of schema DIW0 specific to Germany is the final monthly calculation.

For more information, see the Implementation Guide (IMG) for *SAP Incentive Wages* under *Set controls for accounting*.

- **International Version: XIW00**

Since the procedure for valuing time tickets varies so greatly from one country and organization to the next, there are no country-specific accounting schemas for Incentive Wages. Instead, you can use schema XIW0 as a reference for setting up your own incentive wage accounting system.

Schema X000 serves as a reference for the entire international *Payroll* component (gross and net part). Subschema XT00 is provided for the gross part. Schema XIW0 is then called from schema XT00, and is used to value the time tickets.

For more information, see the IMG for *SAP Incentive Wages* under *Set controls for accounting*.



The personnel calculation schemas XIW0 and DIW0 are activated in the standard SAP System. If they are not required, they can simply be deactivated to improve system performance.

Personnel Calculation Rules DIW0 and XIW0

The structures of personnel calculation rules DIW0 and XIW0 are identical. They consist of the following steps:

- Testing the employee's employee subgroup
- Reading special valuation bases for incentive wages
- Processing time tickets for individual incentive wages
- Processing time tickets for group incentive wages

Schema DIW0 includes the following additional feature for Germany: Final monthly calculation

The above steps are carried out in separate functions.

Before the time tickets are valuated, average values from the previous month are read by calling the ACTIO function with the XW0 personnel calculation rule as a parameter. These are used as valuation bases for working times that are valuated with an average rate (for example, working times that have been recorded on time-based time tickets).

Two special functions are provided to actually process the individual time tickets: Individual time tickets are valuated with function PW1, and group time tickets are valuated with function PW2.

After the time tickets have been valuated in the German DIW0 schema, the ACTIO function is called with the DWM personnel calculation rule as a parameter to perform a final monthly calculation.

Functions PW1 and PW2

Functions PW1 and PW2

Functions **PW1** and **PW2** are used to process time tickets in *SAP Payroll*.

Function PW1 performs the following steps:

- Reads the time ticket data for individual incentive wages, importing only those time tickets:
 - Having payroll indicators with a value of 1
 - Which are not locked
 - Whose posting date is within the recording period.
- Reads the account assignment splits for work center, cost center, and employee subgroup grouping for personnel calculation rules for each time ticket.
- Values the time tickets according to the personnel calculation rule that is entered as the parameter.

Function PW2 performs the following steps:

- Reads the time ticket data for individual incentive wages, importing only those time tickets:
 - Having payroll indicators with a value of 2
 - Which are not locked
 - Whose posting date is within the accounting period.
- Reads the group results.
- Enters the group result in the *labor utilization rate* field of the time ticket (this takes place temporarily so that calculations can be performed and is *not* written to the database).
- Calculates the target time from the actual time on the respective time ticket and the group result, and enters it in the appropriate time ticket field.
- Reads the account assignment splits for work center, cost center and employee subgroup grouping for personnel calculation rules for each time ticket.
- Values the time tickets according to the personnel calculation rule that is entered as the parameter.

Incentive Wages Accounting: Personnel Calculation Rules

The following personnel calculation rules are used in the international and in the German payroll schema to perform various individual steps:

	International	German
Test Employee Subgroup	XW3	XW3
Test Employee	XW4	XW4
Special Valuation Bases	XW0	XW0
Process Individual Time Tickets	XW1	DW1
Process Group Time Tickets	XW2	DW2
Final Monthly Calculation	—	DWM

XW3:

The employee subgroup is read in the XW3 personnel calculation rule. Employees who work on an incentive wage basis have to be assigned to employee DJ, DK, DO, or DP subgroups in the standard SAP System. If this is the case, the variable INCW is set to a value of 1. If the employee belongs to a different subgroup, then the variable retains its initial value of 0.

XW4:

The XW4 personnel calculation rule is used as a parameter by the IF function. The INCW variable is evaluated in this particular rule. If INCW has the value of 1, the subsequent processing steps are carried out; they are not if the value is other than 1.

XW0:

Average values from the previous month are made accessible in the XW0 personnel calculation rule, according to the employee subgroup. These are used as valuation bases for working times that are valued with an average rate (for example, working times that have been recorded on time-based time tickets).

XW1, XW2, DW1, DW2:

The time tickets are valued according to XW1, XW2, DW1 and DW2.

DWM

A final monthly calculation is performed in the DWM personnel calculation rule, according to the employee's pay scale area. This only makes sense if the [earnings factor \[Page 10\]](#) was calculated in the previous accounting steps.



All of the procedures described here depending on wage group, that is, the amounts calculated are differentiated by wage group for the hourly wage.

Special Operations

Special Operations

The following operations are required to set up incentive wages accounting to suit individual customer requirements:

- MEANV: Average calculation
- VWTCL: Value of processing class
(Processing class 46 is used here)
- RE510: Reads pay scale table
- GETAL: Sets labor utilization rate
- TABLE: Prepares access to table fields
 - You can activate the *LE* parameter to access all fields in the time ticket being processed.
 - You can activate the *GT* parameter to read data on an employee's membership in the group when processing group time tickets.
- VARGB: Sets field from table in variable argument
- FILLW: Writes to the [subsequent time ticket \[Ext.\]](#)
- ADDWT: Totals in subsequent time ticket (specification M)



For more information, see the RPDSYS00 documentation.

Wage Types

Wage types for basic pay, wage types on time tickets, and wage types as payroll results are relevant in *SAP Incentive Wages*.

Wage Types from Basic Pay

Wage Types from Basic Pay

Different wage types are taken as the basis for calculating piecework bonuses, depending on whether the employee is an hourly or monthly wage earner.

Hourly Wage Earners:

The standard hourly wage **ME10** is referenced to value time tickets for hourly wage earners.

Monthly Wage Earners:

Wage type **MC10** is used in the standard system for monthly wage earners.

The basic monthly wage is included in the gross amount for the monthly wage calculation in the standard system, and is supplemented by the variable elements for incentive wages accounting.

For earnings factor calculation, which is also set up in the standard system, the basic monthly wage is multiplied by the earnings factor. The difference between this amount and the basic monthly wage is included in the gross amount as a piecework bonus.



The monthly wage or the standard hourly wage must be specified in the *Basic Pay* infotype (0008).

Wage Types on Time Tickets

There are two methods of valuating a time ticket in payroll.

The target time on the time ticket can be valuated with the piecework rate for the wage group specified on the time ticket. The time tickets are paid at a *piecework rate*.

The actual time on a time ticket can be paid at an average rate (for example average value from previous month). These are time tickets paid at an *average rate*.

The wage type entered on the time ticket specifies whether the time ticket is paid at a piecework rate, or at an average rate.

Wage type **ML01** is used for piecework payment in the standard system, while payment at an average rate is indicated by wage type **ML02**.



A wage type is only entered on time tickets that specify a personnel number.

You can specify which wage types can be entered on which types of time ticket when you customize the system. See *Define permitted wage types* in the *SAP Incentive Wages* section of the IMG.

Processing class 46 is used in the wage type settings to identify the payment type (piecework or average). The processing class has two standard specifications:

- 1: Piecework paid time tickets
- 2: Average paid time tickets

This is difference between the ML01 and ML02 wage types in the standard SAP System.

Wage Types as Accounting Results

Wage Types as Accounting Results

Different wage types are entered in the result table by the personnel calculation rules in *SAP Incentive Wages*, depending on the accounting procedure used.

The following wage types are used for the standard accounting procedures:

- **Hourly and Monthly Wage:**
 - Time-dependent variable elements per wage group:
ML09, ML10, ML11, ..., ML19
 - Performance-dependent variable elements per wage group:
ML29, ML30, ML31, ..., ML39
 - Earnings for times paid at an average rate:
MLDU
 - Performance-dependent variable element:
MLVL
 - Time-dependent variable element:
MLVZ
- **Earnings Factor:**
 - Piecework earnings per wage group:
ML59, ML60, ML61, ..., ML69
 - Earnings for times paid at an average rate:
MLDU
 - Earnings factor:
MLSU
 - Incentive wages bonus:
MLAZ