Knitting Production Parameters

In STARFISH, the Knitting Production Parameters provide information to the knitter concerning the actual production rate of each Knitting Quality on each Knitting Machine and the Net Weight and Length of each piece **after** dyeing and finishing.

They comprise the Production Input Variables and the Production Output Variables.

The **Production Input Variables** are defined as the

- **Machine Production Variables:** Machine Speed (RPM or Speed Factor), Number of Active Feeders, and the

- **Knitting Production Variables:** Machine Efficiency, Roll Weight, Rolls per Lot, Total Yarn Weight, Knitting Waste, Shift Time.

The **Production Output Variables** are defined as

- **Grey Fabric:** Weight per hour, Revs per Roll, Time per Roll, Weight per Shift.

- **Finished Fabric Yield:** Finished Piece Net Weight, Finished Piece Net Length, Finished Lot Net Weight.

The Knitting Production Parameters for each Knitting Quality and Knitting Machine in the Active Model can be reviewed and edited in the Prediction Window: View Production.

If a Model has never before been opened in the View Production, the Values for the Production Parameters are calculated from the following starting values,

- the specified Knitting and Finishing Quality Values,

- the Values for Machine Speed and the Total Number of Feeders that are stored in the Machines Database Records for each Active Machine,

- the nominated Default Production Values for the Active Fabric Type.

The Active Production Input Variables can be edited using the data entry boxes to enable different production scenarios to be evaluated.

When a Value is altered the Dependent Production Parameters are recalculated and the Predictions Table updated.

The Values of the Production Output Variables are dependent on the Knitting and Finishing Quality Values and the Production Input Variables. They are recalculated dynamically when the Production Input Variables are altered. They cannot be edited directly.

▷ **Notes:**

- ❑ The Knitting and Finishing Quality Values cannot be edited directly in View Production. To change the Knitting or Finishing Quality Values use the Prediction Windows View By Quality or View By Machine.

The following topics provide additional information

- Default Production Values
- Production Input Variables
- Production Output Variables

Default Production Values

Default Production Values are stored by STARFISH for each Fabric Type Default Model.

The STARFISH Default Production Values are provided in the initial Default Settings for each Default Model when the software is first issued.

Once STARFISH has been run the first time, the STARFISH Default Production Values can be retained or changed as appropriate for each Default Model using the Default Production Values dialog.

STARFISH Model Environment
Knitting Production Parameters

The first time that a Model is opened in the View Production the Default Production Values together with the Values for Machine Speed and Number of Feeders stored in the Machines Database Records are used to make the initial calculations for the Production Parameters.

The Default Production Values are also used when New Qualities or Machines are added to the Active Model.

To Restore the Default Production Values to the Active Model, select Default Production Values from the Restore Menu.

Machine Efficiency

Machine Efficiency provides the means for estimating the actual production rate of an individual knitting machine as a percentage of the theoretical maximum.

The STARFISH Default Value for Machine Efficiency is 90%.

Values between 10.0% and 100.0% can be entered.

Roll Weight

Roll Weight is the nominal weight of each production roll of grey fabric produced on each Knitting Machine. The Default Units for Roll Weight can be either kilograms or pounds, they are determined by the Units selected for the Default Area Weight.

STARFISH calculates Roll Weight correct to 1 decimal place.

The STARFISH Default Values for Roll Weight are 25 kg or 55.1 lb.

Values between 1.0 and 200.0 kg or 2.2 and 441.0 lbs. can be entered.

Total Yarn Weight

Total Yarn Weight is the weight of Grey Yarn available for the production of a particular Fabric Quality. The Default Units for Total Yarn Weight can be either kilograms or pounds, they are determined by the Units selected for the Default Area Weight.

The STARFISH Default Values for Total Yarn Weight are 1000 kg or 2205 lb.

Values between 5 and 100,000 Kg or 11 and 220,460 lbs. can be entered

▷ **Note:**

> To conserve space in the Predictions Table in View Production and in the Default Production Values dialog, the values for Total Yarn Weight are displayed in thousands. Thus, 1000 Kg is displayed as 1.000.

Knitting Waste

Knitting Waste provides a means for estimating the actual number of Rolls of specified Weight that can be obtained from the Total Weight of Yarn available.

The STARFISH Default Value is 0%.

Values between 0.0% and 25.0% can be entered.

Shift Time

Shift Time is used to calculate the Total Weight of Fabric that can be produced by each Machine during a normal production shift or defined time period. The Unit for Shift Time is hours.

The STARFISH Default Shift Time is 8 hours.

Values between 5 and 168 hours can be entered.

Production Input Variables

The Production Input Variables comprise the Machine Production Variables and the Knitting Production Variables.

Machine Production Variables

The Machine Production Variables are the Values for Machine Speed and Number of Feeders.

STARFISH Model Environment
Knitting Production Parameters

The Default Values are those stored in the Machines Database Records for the selected machines. These values are used to make the initial production calculations the first time that a Model is opened in the View Production.

The Active Values for the Machine Production Variables can be adjusted in the View Production to enable different production situations to be evaluated.

The Active Machine Production Values are stored by STARFISH along with all of the other data for the current Active Model and are recovered each time that the Model is opened in View Production.

To make permanent changes to the Default Values edit the Machine Record using the Edit Machines dialog.

Knitting Production Variables

The Knitting Production Input Variables are the values for Machine Efficiency %, Roll Weight, Number of Rolls, Total Yarn Weight, Knitting Waste % and Shift Time.

The Default Values are those stored in the Default Model for each Fabric Type. The Default Production Values are used to make the initial production calculations the first time that a Model is opened in the View Production.

The Active Values for the Knitting Production Variables can be adjusted in the View Production to enable different production scenarios to be evaluated.

The Active Production Values are stored by STARFISH along with all of the other data in the current Active Model and are recovered each time the Model is opened in the View Production.

To make permanent changes to the Default Production Values use the Default Production Values dialog.

▷ **Note:**

    The Default Value for Number of Rolls is calculated dynamically from the Default Values for the Total Yarn Weight and the Weight per Roll.

The following topics provide additional information

- Machine Production Variables
- Knitting Production Variables

Machine Production Variables

The Machine Production Variables are the Values for the Machine Speed and the Number of Feeders.

The Machine Production Variables affect the number of courses that can be produced per revolution per minute. Therefore, to obtain accurate information about Production Rates the Values that are entered for the Machine Speed and the Number of Feeders should reflect the actual production situation.

The Default Values are those stored in the Machines Database Records for the selected machines. These values are used to make the initial production calculations the first time that a Model is opened in the View Production.

The Active Values for the Machine Production Variables can be adjusted for each Machine in the Active Model in the View Production to allow different production scenarios to be evaluated.

When a Value is altered

- the Production Data for ALL of the Qualities knitted on the modified machine are recalculated and the Predictions Table updated.
- the Active Machine Parameters displayed in the Active Machines Memory Prompt and in the Active Machines Selection List are updated to show the new value.

The Active Machine Production Values are stored by STARFISH along with all of the other data for the current Active Model and are recovered each time the Model is opened in View Production.

To make permanent changes to the Default Values edit the Machine Record using the Edit Machines dialog.

Tip

To Restore the original values stored in the Machine Record to the Active Model open the Active Machines Selections dialog and replace the modified machine with the original Machine Record re-selected from the Machines Database File List.

The following topics provide additional information.

- Active Machine Speed
- Active Machine Feeders

Active Machine Speed

The Active Machine Speed directly affects the rate at which a particular Knitting Quality can be produced. Together with the Number of Active Feeders, the Active Machine Speed determines the number of courses produced per revolution per minute.

To obtain accurate production information these values should reflect the actual production speed of the knitting machine, and the actual number of feeders knitting.

Machine Speed, RPM

Machine Speed is the nominal speed of rotation of the knitting machine cylinder measured in revolutions per minute.

In the View Production RPM is calculated and displayed correct to one decimal place.

Values between 1 and 100 rpm can be entered, but the maximum value allowed for any individual machine depends on the Machine Diameter and the maximum allowed value for Speed Factor.

Values that are entered for the Machine Speed in RPM that are calculated to produce a Speed Factor greater than 1500 for the specified machine diameter are not allowed.

Speed Factor

Speed Factor is a convenient, practical and direct indicator of the productivity of knitting machine, being proportional to the peripheral speed of the cylinder.

In the View Production Speed Factor is calculated and displayed correct to the nearest whole number.

Speed Factor = Diameter * RPM

Values between 5 and 1500 can be entered, but the minimum and maximum values that can be entered for any individual machine depends on the Machine Diameter and the minimum and maximum allowed Values for the Machine Speed in RPM.

Values that are entered for Speed Factor that are calculated to produce a Machine Speed greater than 100 RPM for the specified machine diameter are not allowed.

Active Model

The Values for Machine Speed and Speed Factor that are stored in the Machines Database Records provide the starting point for the Production Calculations the first time that a Model is opened in the View Production.

The Active Values for Machine Speed in RPM and Speed Factor for each Active Machine can be adjusted in the View Production to enable different production scenarios to be evaluated. When the value of either one is changed the other is adjusted automatically.

When the Machine Speed is altered

- the Production Data for ALL of the Qualities knitted on the modified machine are recalculated and the Predictions Table updated.

- the Active Machine Parameters displayed in the Active Machines Memory Prompt and in the Active Machines Selection List are updated to show the new value.

Tips:

- ❑ To Restore the original values stored in the Machine Record open the Active Machines Selections dialog and replace the Modified Machine with the original Machine Record re-selected from the Machines Database File List.

❑ To make permanent changes to the information stored in the Machine Record use the Edit Machine Files dialog.

Important Note:

STARFISH cannot determine what is an appropriate production speed for a particular machine and knitting quality since practical production (fault) rates will be affected by many factors. For example, the yarn quality and tightness of knitting, the make and model of machine, the age and the mechanical condition, the level of maintenance etc.

Therefore, although STARFISH attempts to limit the entry of unrealistic Machine Speeds, it is the responsibility of the User to ensure that the Values entered observe both practical and commercial limitations.

Active Machine Feeders

For a given Fabric Type, the Number of Feeders in use on a particular Knitting Machine determines the number of courses that can be produced per revolution. Therefore, in order to obtain accurate production information, it is important that the correct value for the actual number of feeders in use is entered.

Number of Feeders

The Number of Feeders is entered as a whole number.

Values between 1 and 273 can be entered, but the maximum value that can be entered for any individual machine is restricted by the maximum value allowed for Feeder Density.

Feeder Density

Feeder Density is usually defined as the number of Feeders per diameter inch. The Actual Number of Feeders per inch available in any individual Machine depends on the Machine Type, the Make and Model and the limitations imposed by the individual machinery manufacturer.

For the entry of Machine Data in the Machines Database the maximum Feeder Density allowed depends on the Machine Type.

In the View Production, to allow room for experimentation, the Maximum Value that is allowed for Feeder Density is 4.2 feeders per diameter inch. Values entered for the Active Feeders that are calculated to produce a Feeder Density greater than 4.2 for the specified Machine Diameter are not allowed.

Active Model

The Values for the Number of Machine Feeders that are stored in the Machines Database Records provides the starting point for the Production Calculations the first time that a Model is opened in the View Production.

The Number of Active Feeders can be adjusted for each Active Machine in the View Production to enable different production scenarios to be evaluated.

When the Number of Feeders is altered

- the Production Data for ALL of the Qualities knitted on the modified machine are recalculated and the Predictions Table updated.

- the Active Machine Parameters displayed in the Active Machines Memory Prompt and in the Active Machines Selection List are updated to show the new values.

Tips:

❑ To Restore the original values stored in the Machine Record open the Active Machines Selections dialog and replace the Modified Machine with the original Machine Record re-selected from the Machines Database File List.

❑ To make permanent changes to the information stored in the Machine Record use the Edit Machine Files dialog.

STARFISH Model Environment
Knitting Production Parameters

Important Note:

To allow maximum flexibility STARFISH does not impose any restrictions on the number of feeders that can be entered other than by reference to the Maximum Limits imposed for Feeder Density. It is the responsibility of the user to ensure that the Number of Feeders entered does not exceed the practical or commercial limitations imposed by machinery builders for the particular Machine Type in use.

Knitting Production Variables

The Knitting Production Input Variables are the values for Machine Efficiency %, Roll Weight, Number of Rolls, Total Yarn Weight, Knitting Waste % and Shift Time.

The Default Values are those stored in the Default Model for each Fabric Type. The Default Production Values are used to make the initial production calculations the first time that a Model is opened in the View Production.

The Active Values for the Knitting Production Variables can be adjusted for each Knitting Quality and each Machine in the Active Model in the View Production to enable different production scenarios to be evaluated.

When a Value is altered

- The Values for all of the Dependent Production Properties are recalculated and the Predictions Table updated.

The Active Production Values are stored by STARFISH along with all of the other data for the current Active Model and are recovered each time that Model is opened in the View Production.

To make permanent changes to the Default Production Values use the Default Production Values dialog.

Tip:

To Restore the Default Production Values, select the Restore Defaults button on the Active toolbar and then select Production Values from the Restore Menu.

Note:

The Default Value for Number of Rolls is calculated dynamically from the Default Values for the Total Yarn Weight and the Weight per Roll.

The following topics provide additional information.

- Machine Efficiency
- Roll Weight
- Number of Rolls
- Total Yarn Weight
- Knitting Waste
- Shift Time

Machine Efficiency

The Machine Efficiency option provides a means for estimating the actual production rate of an individual knitting machine as a percentage of the theoretical maximum.

The Value is determined by the user but should usually take account of time lost through stoppages due for example to quality adjustments, cone changes, yarn and fabric faults, roll changes, machine cleaning, maintenance etc.

Machine Efficiency can also be affected by the Knitting Quality. e.g. a tight fabric knitted from a poor-quality yarn may need to be produced at lower machine speeds, in order to keep fault rates within acceptable limits, than a looser fabric knitted from good quality yarn.

Units

Machine Efficiency is calculated as a percentage correct to 1 decimal place.

Values

Active Model

The Active Values for Machine Efficiency can be adjusted using the Machine Efficiency data entry box adjacent to the Predictions Table in the View Production. A different Value can be entered for each Knitting Quality on each Knitting Machine.

Machine Efficiency affects the Weight of fabric that can be produced per hour and per shift.

Therefore, when the Value for Machine Efficiency is altered, the Dependent Production Parameters are recalculated and the Predictions Table updated.

Tip:

> To Restore Default Production Values, select the Restore Defaults button on the Active toolbar and then select Production Values from the Restore Menu.

Default Models

The Value for Machine Efficiency that is stored in the Default Model for each Fabric Type provides the starting point for the Production Calculations the first time that a Model is opened in the View Production.

To change the Default Value for Machine Efficiency, use the Default Production Values dialog.

Limits

Values between 10 and 100% can be entered.

Roll Weight

Roll Weight is the nominal weight of each production roll of grey fabric produced on each knitting machine.

Units

The Units for Roll Weight can be either kilograms or pounds. STARFISH calculates Roll Weight correct to 1 decimal place.

Active Model

The Active Roll Weight Units are changed using the Active Weight Units dialog. If the Active Weight Units are changed the Values for Roll Weight are converted and updated in the Predictions Table automatically.

Default Models

To change the Default Weight Units, use the Default Units dialog.

Values

Active Model

The Active Values for Roll Weight can be adjusted using the Roll Weight data entry box adjacent to the Predictions Table in the View Production. A different Value can be entered for each Knitting Quality on each Knitting Machine.

The Roll Weight affects the Total Number of Rolls that can be produced from the specified Total Yarn Weight, the Number of Revolutions per roll and the Time required to produce each roll.

Therefore, when the Value for Roll Weight is altered, the Dependent Production Parameters are recalculated and the Predictions Table updated.

Default Models

The Value for Roll Weight that is stored in the Default Model for each Fabric Type provides the starting point for the Production Calculations the first time a Model is opened in the View Production. Default Values are converted to correspond to the Active Weight Units if necessary.

To change the Default Value for Roll Weight, use the Default Production Values dialog.

Limits

Values between 5.0 and 200 kg or 11.0 and 441 lbs. can be entered.

Number of Rolls

The Number of Rolls is the total Number of Rolls of specified Weight that can be produced from the Total Weight of Yarn available.

Units

STARFISH calculates the Total Number of Rolls correct to 1 decimal place.

Values

Active Model

The Number of Rolls is calculated dynamically for each Knitting Quality and Knitting Machine from the Values specified for the Roll Weight and the Total Yarn Weight.

The Active Values for the Number of Rolls can be changed using the Number of Rolls data entry box adjacent to the Predictions Table in the View Production. A different Value can be entered for each Knitting Quality on each Knitting Machine.

When the Number of Rolls is altered, the Dependent Production Parameters are recalculated and the Predictions Table updated.

Default Models

The Values for Roll Weight and Total Yarn Weight that are stored in the Default Model for each Fabric Type provide the starting point for the Production Calculations the first time that a Model is opened in the View Production.

To change the Default Values, use the Default Production Values dialog.

Limits

The maximum Number of Rolls that can be entered or calculated is determined by the limits imposed on the Values for Roll Weight and Total Yarn Weight. The minimum number is 1.

Total Yarn Weight

Total Yarn Weight is the total weight of Grey Yarn available for the production of a particular Fabric Quality.

Units

The Units for Total Yarn Weight can be either kilograms or pounds.

Active Model

The Active Total Yarn Weight Units are changed using the Active Weight Units dialog. If the Active Weight Units are changed the Values for Total Yarn Weight are converted and updated in the Predictions Table automatically.

Default Models

To change the Default Weight Units, use the Default Units dialog.

Values

The Active Values for Total Yarn Weight can be changed using the Total Yarn Weight data entry box adjacent to the Predictions Table in the View Production.

The Total Yarn Weight affects the Total Number of Rolls that can be produced at the specified Roll Weight.

Therefore, when the Total Yarn Weight is altered the Dependent Production Parameters are recalculated and the Predictions Table updated.

▷ **Note**

To conserve space in the Predictions Table, the values for Total Yarn Weight are entered and displayed in thousands. Thus, 1000 Kg is displayed as 1.000.

STARFISH Model Environment
Knitting Production Parameters

Default Models

The Value for Total Yarn Weight that is stored in the Default Model for each Fabric Type provides the starting point for the Production Calculations the first time that a Model is opened in the View Production.

To change the Default Value for Total Yarn Weight, use the Default Production Values dialog.

Limits

Values between 5 and 100,000 Kg or 11 and 220,460 lbs. can be entered.

Knitting Waste

The Knitting Waste option provides a means for estimating the Total Weight of Fabric that can actually be produced as a percentage of the Total Weight of Yarn available.

It is determined by the user but should normally take account of yarn (fabric) lost due to cone changes, quality adjustments, yarn and fabric faults, machine cleaning and maintenance, sampling, changes in Moisture Content etc.

Units

Knitting Waste is calculated as a percentage correct to 1 decimal place.

Values

Active Model

The Active Values for Knitting Waste can be altered using the Knitting Waste data entry box adjacent to the Predictions Table in the View Production. A different Value can be entered for each Knitting Quality on each Knitting Machine.

Knitting Waste affects the Total Weight of Yarn that is required to produce the specified Number of Rolls at the specified Weight.

For example, if the Knitting Waste is increased, the Total Weight of Yarn that is required to produce the specified Number of Rolls increases. Conversely if the Total Yarn Weight available is fixed, then an increase in the Knitting Waste reduces the Number of Rolls of specified weight that can be produced.

Therefore, when the Value for Knitting Waste is altered the values for the Dependent Production Parameters are recalculated and the Predictions Table updated.

Default Models

The Value for Knitting Waste that is stored in the Default Model for each Fabric Type provides the starting point for the Production Calculations the first time that a Model is opened in the View Production.

To change the Default Value for Knitting Waste % use the Default Production Values dialog.

Limits

Values between 0.0% and 25.0% can be entered.

Shift Time

The Shift Time option provides the means for calculating the Total Weight of Fabric that can be produced by each Machine (or operative) during a specified time period. e.g. during a normal production shift.

Units

The Units for Shift Time are hours.

Values

Active Model

The Active Shift Time can be adjusted using the Shift Time data entry box in the View Production.

STARFISH Model Environment
Knitting Production Parameters

When the Active Shift Time is altered the Production Weight per Shift for ALL of the Qualities on ALL of the Machines is recalculated and the Predictions Table updated. No other data are affected.

Default Models

The Value for Shift Time that is stored in the Default Model for each Fabric Type provides the starting point for the Production Calculations the first time that a Model is opened in the View Production.

To change the Default Value for Shift Time, use the Default Production Values dialog.

Limits

Values between 5 and 168 hours can be entered.

Production Output Variables

The Production Output Variables are those parameters whose values are entirely dependent on the Knitting and Finishing Quality Values, and the Production Input Variables.

The Values for the Production Output Variables are calculated dynamically for each specified Knitting Quality and selected Knitting Machine in the Active Model. They cannot be changed directly.

The first time that a Model is opened in the View Production the Output Variables are calculated using the Default Values for Machine Speed and Number of Feeders stored in the Machines Database and the Default Production Values.

Grey Fabric

The Values for the Grey Fabric are calculated for each Knitting Quality and Knitting Machine from the specified Values for the Active Machine Speed, the Number of Active Feeders, the Machine Efficiency and the Roll Weight.

Finished Fabric

The Values for the Finished Fabric are calculated for each Knitting Quality and Knitting Machine from the Finishing Quality Target Values, the specified Roll Weight and the Total Yarn Weight.

The following topics provide additional information.

- Production Rate
- Revolutions per Roll
- Time Per Roll
- Weight per Shift
- Finished Fabric Yield

Production Rate

The Production Rate is the Total Weight of Fabric that can be produced per Hour.

Units

The Total Weight of fabric can be expressed either in kilograms or in pounds. STARFISH calculates Production Rate in Weight per hour correct to one decimal place.

The Active Weight Units are changed using the Active Weight Units dialog. If the Active Weight Units are changed the Values for Total Yarn Weight are converted and updated in the Predictions Table automatically.

Values

The Production Rate depends on the Knitting Quality Values, and the Values entered for the Active Machine Speed, the Number of Active Feeders and the Machine Efficiency.

The Knitting Quality Values, Yarn Count and Course Length, determine the weight of yarn in each course. The Active Machine Speed (RPM), the Number of Active Feeders and the Machine Efficiency determine the Number of Courses that can be produced in a given length of time.

The Production Rate in kilograms or pounds per hour is calculated dynamically for each Knitting Quality and Knitting Machine. When the values for the Active Machine Speed, the Number of

Active Feeders or the Machine Efficiency are altered the Production Rate is recalculated and the Predictions Table updated.

The Production Rate cannot be changed directly.

Limits

The Values that can be calculated for the Production Rate are determined by the limits imposed on the Active Machine Speed, the Number of Active Feeders and the Knitting Quality Values.

Revolutions Per Roll

The Revolutions Per Roll is the Total Number of Machine Revolutions that are required to knit a Roll of the specified Knitting Quality at the specified Roll Weight.

Units

STARFISH calculates the number of revolutions to the nearest whole number.

Values

The Number of Revolutions per Roll depends on the Knitting Quality Values, the Number of Active Feeders and the specified Roll Weight.

The Weight of a Roll is simply a reflection of the Weight of each Course and the Total Number of Courses in the Roll.

The Knitting Quality Values, Yarn Count and Course Length, determine the Weight of Yarn in each course and the Number of Active Feeders determines how many courses are knitted per revolution.

For a specified Knitting Quality and a specified Number of Active Feeders the Total Number of Revolutions required to produce a Roll of the specified weight is therefore predetermined.

The Number of Revolutions required to produce a roll of fabric of specified weight is calculated dynamically. When the Number of Active Feeders or the Roll Weight is altered the Number of Revolutions required to knit the roll is recalculated and the Predictions Table updated.

The Number of Revolutions per Roll cannot be changed directly.

Limits

The Values that can be calculated for Revolutions per Roll are determined by the limits imposed on the Roll Weight and the Number of Active Feeders.

Time per Roll

The Time per Roll is the total time that is required to produce a Roll of the specified Knitting Quality on the specified Machine at the specified Weight.

Units

STARFISH calculates the Time per Roll in hours correct to 2 decimal places.

Values

The Time per Roll depends on the Production Rate and the Roll Weight.

The Production Rate depends on the Knitting Quality Values, and the Values entered for the Active Machine Speed, the Number of Active Feeders and the Machine Efficiency.

The Knitting Quality Values, Yarn Count and Course Length, determine the weight of yarn in each course. The Active Machine Speed (RPM), the Number of Active Feeders and the Machine Efficiency determine the Number of Courses that can be produced in a given length of time.

The Roll Weight determines the Number of Revolutions that are required to produce a Roll of the specified Knitting Quality at the specified weight.

The Time per Roll is calculated dynamically for each Knitting Quality and Knitting Machine. When the Values for the Active Machine Speed, the Number of Active Feeders the Machine Efficiency or the Roll Weight are altered the Time per Roll is recalculated and the Predictions Table updated.

The Time per Roll cannot be changed directly.

Limits

The Values that can be calculated for Time per Roll are determined by the limits imposed on the Active Machine Speed, the Number of Active Feeders, the Machine Efficiency and the Roll Weight.

Weight per Shift

Weight per Shift or Shift Weight is simply the Total Weight of fabric that can be produced of the specified Knitting Quality on the selected Machine during the specified time period.

Units

STARFISH calculates the Total Weight that can be produced in the specified time correct to 1 decimal place.

The Units for Fabric Weight can be either kilograms or pounds. The Units for Time are Hours.

The Active Weight Units are changed using the Active Weight Units dialog. If the Active Weight Units are changed the Values for Shift Weight are converted and updated in the Predictions Table automatically.

Values

Active Model

The Weight of Fabric that can be produced per Shift depends on the Production Rate and the Value specified for the Active Shift Time.

The Production Rate depends on the Knitting Quality Values, and the Values entered for the Active Machine Speed, the Number of Active Feeders and the Machine Efficiency.

The Knitting Quality Values, Yarn Count and Course Length, determine the weight of yarn in each course. The Active Machine Speed (RPM), the Number of Active Feeders and the Machine Efficiency determine the Number of Courses that can be produced in a given length of time.

The Value entered for the Active Shift Time simply determines the Length of Time for which the calculations should be made.

The Production Rate in kilograms or pounds per hour is calculated dynamically for each Knitting Quality and Knitting Machine. When the Values for the Active Machine Speed, the Number of Active Feeders or the Machine Efficiency are altered the Production Rate and the Shift Weight are recalculated and the Predictions Table updated.

If the Shift Time is altered the Weight per Shift is recalculated but no other data are affected.

Shift Weight cannot be changed directly.

Default Models

To change the Default Value for Shift Time, use the Default Production Values dialog.

Limits

The Values that can be calculated for Shift Weight are determined by the limits imposed on the Active Machine Speed, the Number of Active Feeders, the Machine Efficiency, the Knitting Quality Values and the Active Shift Time.

Finished Fabric Yield

In addition, to the Grey Fabric production data, the View Production also provides information concerning the Finished Fabric yield.

For each Knitting Quality and Knitting Machine, the Nominal Length and Weight that each roll of grey fabric will obtain after dyeing and finishing is calculated together with an estimate of the Total Nominal Weight of finished fabric that can be achieved from the Total Weight of Grey Yarn available.

Units

STARFISH calculates the Piece Weight and Piece Length correct to 1 decimal place and the Total Lot Weight correct to the nearest whole number.

The Units used can be either metric or imperial and are determined by the Active Weight Units.

The Active Weight Units are changed using the Active Weight Units dialog. If the Active Weight Units are changed the Values are converted and updated in the Predictions Table automatically.

Values

The Values for the finished fabric are calculated dynamically for each Knitting Quality and Knitting Machine from the Finishing Quality Target Values, the specified Roll Weight and the Total Yarn Weight.

Finished Piece Weight

The Finished Piece Weight is the Net Weight of each knitted piece or roll **after** dyeing and finishing to the specified Target Values.

Finished Piece Length

The Finished Piece Length is the Net Length of each knitted piece or roll **after** dyeing and finishing to the specified Target Values.

Finished Lot Weight

The Finished Lot Weight is the Total Nominal Weight of finished fabric that can be achieved from the starting Total Yarn Weight. It is calculated from the Finished Net Piece Weight and the specified Number of Rolls.

Important Note:

The calculations for the Finished Fabric Weight and Length assume that the grey fabric is dyed according to the selections for the Wet Process and Depth of Shade and delivered according to the specified Target Values. They take into account the Net Weight Change % during processing but do not make any allowance for losses due to sampling, sewing, trimming etc.

Limits

The Values that can be calculated are determined by the limits imposed on the Knitting and Finishing Quality Values, the Roll Weight and the Total Yarn Weight.