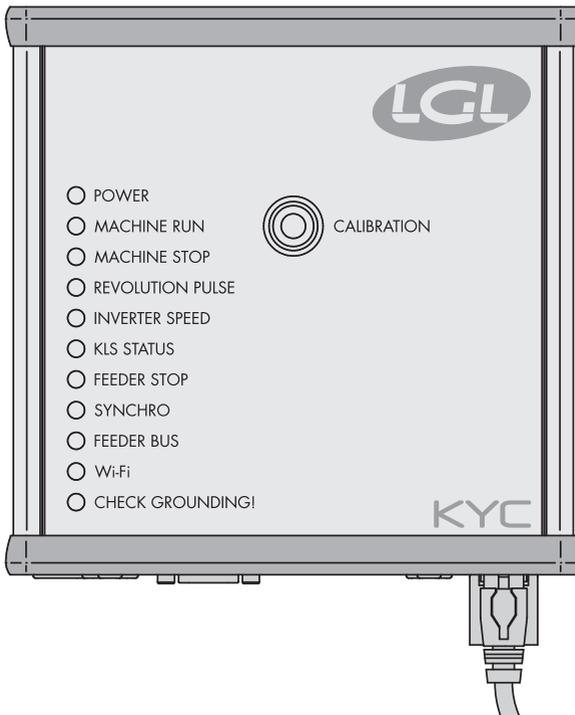




KYC

MANUALE DI ISTRUZIONE
INSTRUCTION MANUAL
NOTICE D'INSTRUCTION
BEDIENUNGSANLEITUNG
MANUAL DE INSTRUCCION
EL KİTABI
使用手冊
取扱説明書





Scope of supply: Design, manufacture and after sales service of yarn and weft feeders, measuring winders, stands, creels and oil systems for textile machinery.

TRADUZIONI DELLE ISTRUZIONI ORIGINALI.
TRANSLATION OF THE ORIGINAL INSTRUCTIONS.
TRADUCTIONS DES INSTRUCTIONS D'ORIGINE.
ÜBERSETZUNG DER ORIGINALANLEITUNGEN.
TRADUCCIÓN DE LAS INSTRUCCIONES ORIGINALES.
ORJİNAL TALİMATLARIN TERCÜMESİ.
原始使用说明书的翻译.

L.G.L. Electronics is gratified by your choice
and thanks you for the preference.

INSTRUCTION MANUAL

KYC

ISSUED BY:

Service

Manager



Date: 01/09/2019

APPROVED BY:

Technical

Manager



Date: 01/09/2019

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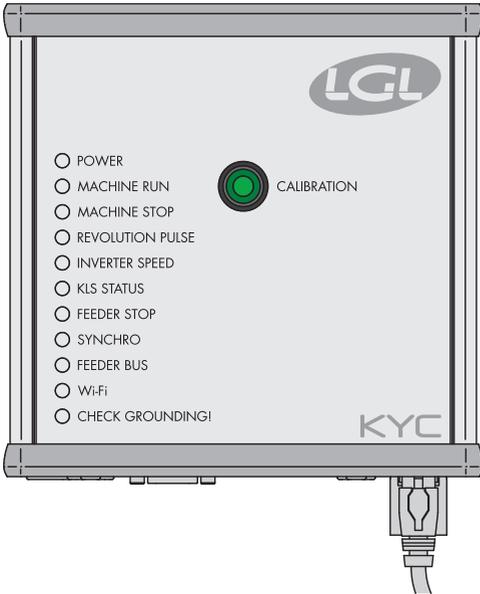
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1 - GENERAL FEATURES

1.1 INTRODUCTION



The KYC is an interface between feeders and lap top.

It is connected to feeders through a communication cable. It has a wireless or a LAN connection with lap top.

The Lap Top is required to have following features:

1. Internet Explorer, Chrome or Firefox.
2. Wireless or LAN connection.
3. JAVA (Free download from JAVA Web Site).

It takes power supply (24VAC – 35VDC) from LGL power box.

1 - GENERAL FEATURES

1.2 KYC INFORMATION LED

- POWER
- MACHINE RUN
- MACHINE STOP
- REVOLUTION PULSE
- INVERTER SPEED
- KLS STATUS
- FEEDER STOP
- SYNCHRO
- FEEDER BUS
- WI-FI
- CHECK GROUNDING

LED

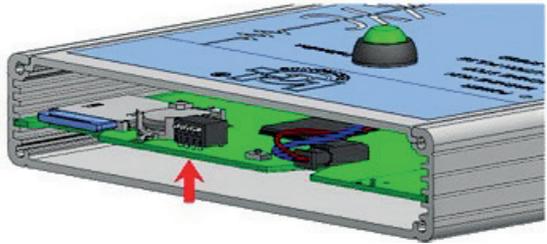
The KYC device has the following information LED:

1. **POWER.** It is simply connected to the 5 Volts logic power supply. It indicates that the KYC is powered up.
2. **MACHINE RUN.** When this yellow LED is on, the machine runs. If it is off the machine is standing.
3. **MACHINE STOP.** When this red LED turns on, it means that the KYC sends a stop signal to the machine. Normally this led blinks once when the KYC stops the machine. The led does not stay on because the KYC removes the stop signal, thus permitting the operator to turn the machine.
4. **REVOLUTION PULSE.** This yellow LED makes a short lighting when the revolution input sensor is detected (normally once each machine revolution).
5. **INVERTER SPEED.** This green LED light is proportional to the INVERTER SPEED (more light means higher inverter speed).
6. **KLS STATUS.** This is a bicolor LED: when it is yellow it indicates that KLS function is enabled, if it is red flashing it means that KLS function is disabled.
7. **FEEDER STOP.** This red LED indicates one or more feeder is in alarm condition.
8. **SYNCHRO.** This yellow LED flashes when the SYNCH output signal is driven (useful for LGL technical service).
9. **FEEDER BUS.** This orange LED flashes when there is communication flowing on the feeders bus (485 or CAN bus).
10. **Wi-Fi.** This is a bicolor LED : when it is yellow lighted it indicates that Wi-Fi connection is ON. The LED will become orange for a while on each data packet received.
 - when the Wi-Fi interface is in ad-hoc or soft ap mode, the LED will become soon yellow after power-up and it will stay in that state anyway.
 - When the Wi-Fi interface is in infrastructure mode, the LED will become yellow only after that KYC has joined. The Access Point with the configured SSID. If said access point will shut down, the yellow LED will turn off (with a delay of about 8-10 seconds).
11. **CHECK GROUNDING.** This red LED will flash when KYC detects an excessive current flowing into the RS485 ground wire. This normally means that feeders are not correctly grounded.

1 - GENERAL FEATURES

1.3 KYC DIP SWITCHES

KYC V2 has four DIP-SWITCHES



All DIP-SWITCH settings has effect only on the next device reset or power - up.

DS1

Software Upgrade forcing: when it is in OFF state (default configuration) the application software will start. If it is in ON state, the boot loader will wait indefinitely for the software upgrade and will prevent application software from running until a valid software is loaded.

DS2

Network interface selection: when it is OFF state the Wi-Fi interface is selected and the wired Ethernet is disabled. When it is on, Ethernet interface is enabled and Wi-Fi is disabled.

DS3

Feeder bus selection: when it is in OFF state the communication is enabled on the RS485 BUS only and it is disabled on the CAN BUS. On the opposite, when it is in ON state, the CAN BUS is enabled and RS485 is disabled.

DS4

Default network configuration: when it is in OFF state (default) the network configuration is read from the SD card. When it is in ON state, the network configuration is forced to the following one :

- a. KYC has a static ip address of 169.254.0.1
- b. KYC acts as a DHCP server assigning to the DHCP clients a pool from 169.254.0.5 up to 169.254.0.11
- c. For the wireless side, the Wi-Fi mode is forced to be ad hoc and without data encryption; moreover the SSID and the host name are both set to "KYC_DEFAULT"

1 - GENERAL FEATURES

1.4 STEPS TO DO TO INCLUDE THE KYC IN AN INFRASTRUCTURE

Note: follow this procedure only in case you want to include the KYC in a company network. After you have connected to the KYC (in soft ap mode) with the usual address : 169.254.0.1, you have to select , from the **"File"** menu, the submenu **"Options"** (like below).



The program asks for a password :



Enter **option1** password and then press **OK** button.

1 - GENERAL FEATURES

After a while the “Setup Connect” menu will appear like below :

The screenshot shows the "Setup Connect" window with the following configuration details:

- ADVANCED**
- Wi-Fi Mode:** Ad hoc
- Network settings:**
 - Type: Static IP
 - IP Address: 169 . 254 . 0 . 1
 - Subnet Mask: 255 . 255 . 0 . 0
 - Gateway: 169 . 254 . 0 . 2
 - DNS: 169 . 254 . 0 . 200
- Advanced settings:**
 - Host Name: NEWKYC000405
 - SSID: NEWKYC000405
 - WiFi Channel: 11
 - WiFi Power (dbm): 15
 - WiFi Rate (Mbps): b
- Security settings:**
 - NONE
 - WEP
 - WEP Mode: open
 - Key 1: 8CFFF43365 (64-bit)
 - Key 2: 8CFFF43365 (64-bit)
 - Key 3: 8CFFF43365 (64-bit)
 - Key 4: 8CFFF43365 (64-bit)
 - WPA/WPA2
 - WPA Version: WPA
 - WPA Encryption: TKIP
 - Password: wifi_passphrase

At the bottom, there are two buttons: "Save" (with a floppy disk icon) and "Exit" (with a red X icon).

1 - GENERAL FEATURES

The fields to be changed are at least the followings :

Wi-fi Mode: you have to change from "Ad Hoc" to "Infrastructure", or from «soft AP» to «infrastructure» (see also paragraph 1.5).

Type: We recommend to select "Static IP" in order to address each KYC with a fixed address (if you select dynamic addressing you cannot know a priori the IP address).

IP Address: For each KYC you have to set a unique static IP address in order to not create IP conflicts : i.e. Machine Nr. 1 -> 192.168.0.1; Machine Nr. 2 -> 192.168.0.2, etc.

Subnet Mask: ask to the network administrator (usually 255.255.255.0 or 255.255.0.0).

Gateway: this is necessary just if you would like to reach the KYC from outside the local subnet; if you don't know you should ask to the network administrator or set it to : 0.0.0.0 or the router / access point IP address.

DNS server: actually not used (this field is provided for future uses), you can set 0.0.0.0 or the router / access point IP address.

Host Name: this field is the label that appears on the JAVA client upper bar for fast identification : this field should describe the machine where the KYC is installed (i.e. : MachineNr01).

SSID: when the infrastructure mode is selected (like in this case), this field is the SSID of the Access Point that the KYC will use to access the network.

Security Settings: this field select the encryption type and the relative keys.

1 - GENERAL FEATURES

A configuration example is given below (using WPA-2 Encryption) :

The screenshot shows the 'Setup Connect' window with the following configuration details:

- Wi-Fi Mode:** Infrastructure
- Network settings:**
 - Type: Static IP
 - IP Address: 192, 168, 1, 1
 - Subnet Mask: 255, 255, 0, 0
 - Gateway: 192, 168, 1, 254
 - DNS: 192, 168, 1, 254
- Advanced settings:**
 - Host Name: MachineNr1
 - SSID: KYCLGLNETSSID
 - WiFi Channel: 11
 - WiFi Power (dbm): 15
 - WiFi Rate (Mbps): b
- Security settings:**
 - NONE
 - WEP
 - WEP Mode: open
 - Key 1: 8CFFF43365, 64-bit
 - Key 2: 8CFFF43365, 64-bit
 - Key 3: 8CFFF43365, 64-bit
 - Key 4: 8CFFF43365, 64-bit
 - WPAWPA2
 - WPA Version: wpa2
 - WPA Encryption: CCMP
 - Passphrase: ee19-8hlx-utuh

Buttons at the bottom: Save (floppy icon) and Exit (red X icon).

To save the changed configuration, press the **Save** button: the KYC will reboot itself and will try to use the new settings.

If you have any problems in the configuration (i.e. : inserted the wrong SSID) there is always the possibility to revert the KYC to the std. soft ap connection by putting the DS4 dip switch ON on the KYC device: you can then reconnect in soft ap mode and write the correct configuration (before pressing **Save** remember to put DS4 to OFF position otherwise the KYC will reboot in soft ap mode anyway...).

1 - GENERAL FEATURES

1.5 WIFI MODE: AD HOC AND SOFT AP

Following the procedure described at point 1.3, there is the possibility to have access to the "setup connect" menu.

In this menu the voice **WI-FI Mode** deserves a bit of attention, because the first KYC devices sold in the market were set "**Ad Hoc**" by default, while the most recent pieces are set "**Soft AP**". This change is due to the fact that "**Ad Hoc**" mode is no more supported by Windows (starting from Windows8 on).

On the contrary "**Soft AP**" mode works with Windows XP, Windows7, Windows8 and Windows10.

If you can't connect WI-FI to the KYC device, one of the reasons could be that you are using windows 8 or windows10 and the KYC device is set "Ad Hoc". In this case we suggest to connect through LAN and change this parameter.

2 - CONNECTION

2.1 HOW TO ESTABLISH A CONNECTION BETWEEN KYC AND LAP TOP

2.1.1 Get connection with KYC through WIFI or LAN

WI-FI

If the netbook is provided by LGL, click on "LGL Connect" icon, located on the desktop. The machine and the KYC box must be switched on.

If the netbook/Laptop is not provided by LGL, follow the procedure below: Open "net connections" Click on the button "refresh network list" The lap top will search for available nets.

After a little while, one of the found nets will be "LGL KYC00XX". Press the CONNECT button. After some seconds the writing "connected" will appear.

LAN

Connect the LAN cable located in the KYC package between KYC and PC.

The communication will be established after a little while.

2.1.2 Open KnittingGlobal software based upon JAVA

A. Double click on **KnittingGlobaleExe_10.0XX.jar**: the following picture appears:



B. Press **Settings – Set IP address**. Insert the address of the KYC (169.254.0.1 in the example of the picture).

C. Click on OK. The software will automatically close the program and re start it. When the program restarts, you are connected to the KYC device. Top of the screen the KYC address and its name (NEWKYC00601 in teh example) appear.

2 - CONNECTION



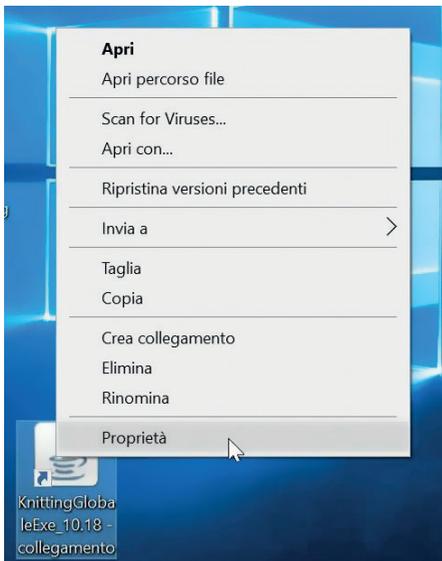
Note: The first double click on the KnittingGlobaleExe_10.XX.jar file automatically creates a LGL FILES folder on the PC under local disc.

We suggest to copy the .jar file into the LGL FILES folder and create a shortcut on the desktop. It is possible to create a shortcut for each knitting machine, as it is explained in the following paragrah.

2.2 CREATE A SHORTCUT TO EACH KNITTING MACHINE

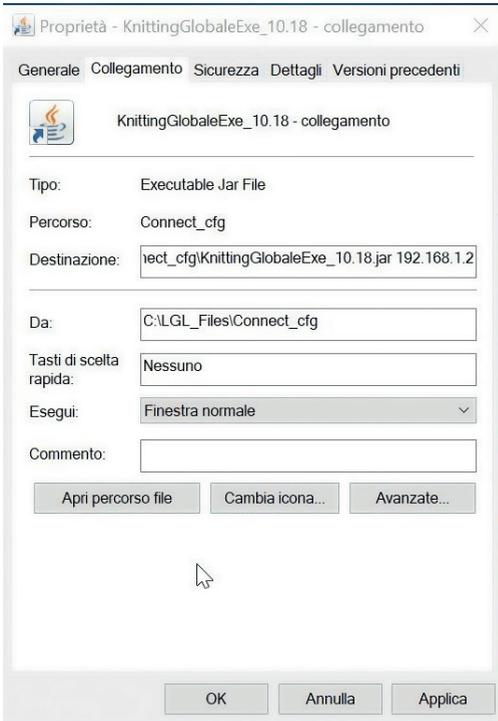
Available from software global knitting 10.18 onwards

1. Copy KnittingGlobaleExe_10.18.jar into LGL_Files folder
2. Create a shortcut on the desktop
3. Open shortcut properties



2 - CONNECTION

4. In the "Target" tab ("Destinazione" in Italian) add the IP address of the KYC: Here in the below example we add SPACE 192.168.1.2



5. At the end rename the short cut on the desktop with the machine name.

2.3 ERASE UNDESIRED FEEDERS FROM VISUALIZATION

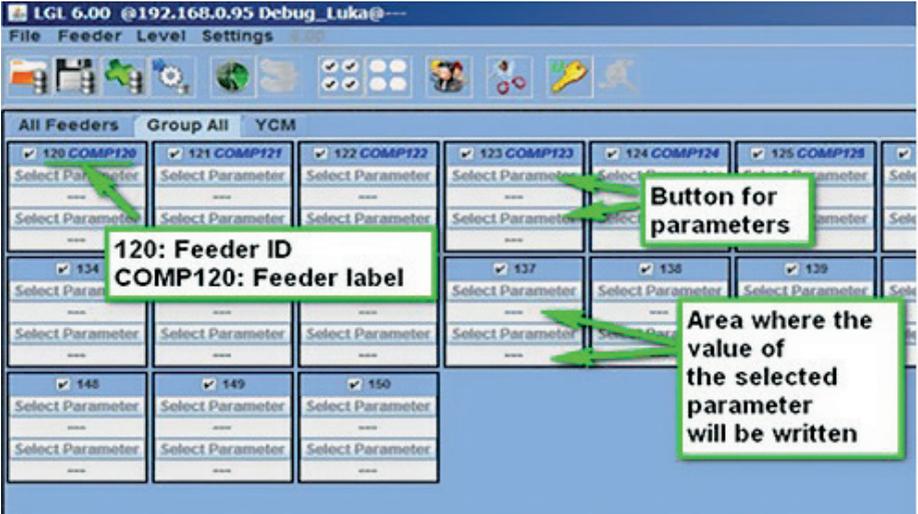
Select feeders that do not have to be shown, then press icon:



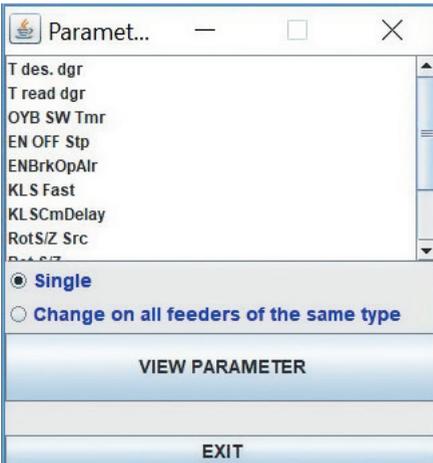
3 - PARAMETERS

3.1 FEEDERS PARAMETERS

Press **GROUP ALL**.

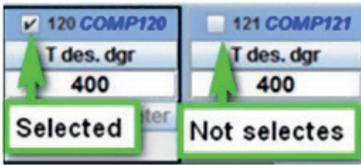


Click on one of the two **SELECT PARAMETER** buttons.
A parameter list will appear:



Note: The list will be displayed only if there are selected feeders.

3 - PARAMETERS



Feeder
selected

Feeder
not selected

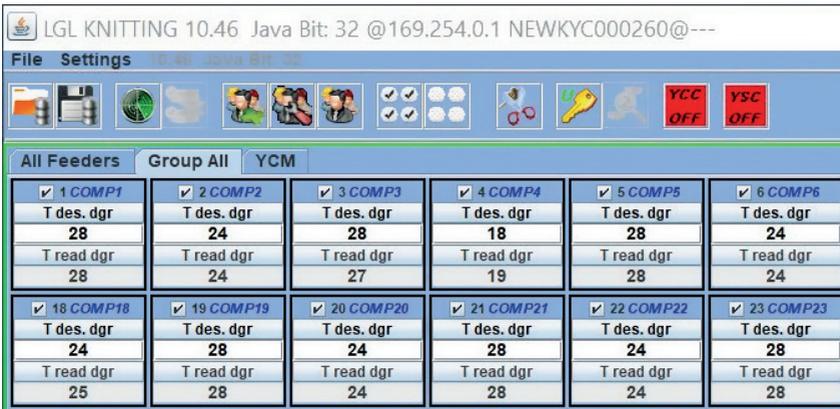
Click on the parameter which you would like to see and click on "view parameter" (in the picture Tdes. Dgr).

Note: there is the option to select "single" or "change on all feeders of the same type".

"single": the desired parameter will be shown only for one feeder.

"change on all feeders of the same type" means that the desired parameter will be shown for all connected feeders (if all connected feeders are of the same model).

In the example, the parameter will be shown as in the following picture:



The parameter "Tdes. Dgr" has been displayed and the value is 28 (which means 2,8 grams). Since there are parameters that may change in time, the system keeps reading the parameter in real time until the operator does not click on STOP.

It is possible to display two parameters together and, by clicking on RUNNING, the two parameters are read in real time. In the previous picture "Tdes dgr" and "Tread dgr" are displayed together and read in real time.

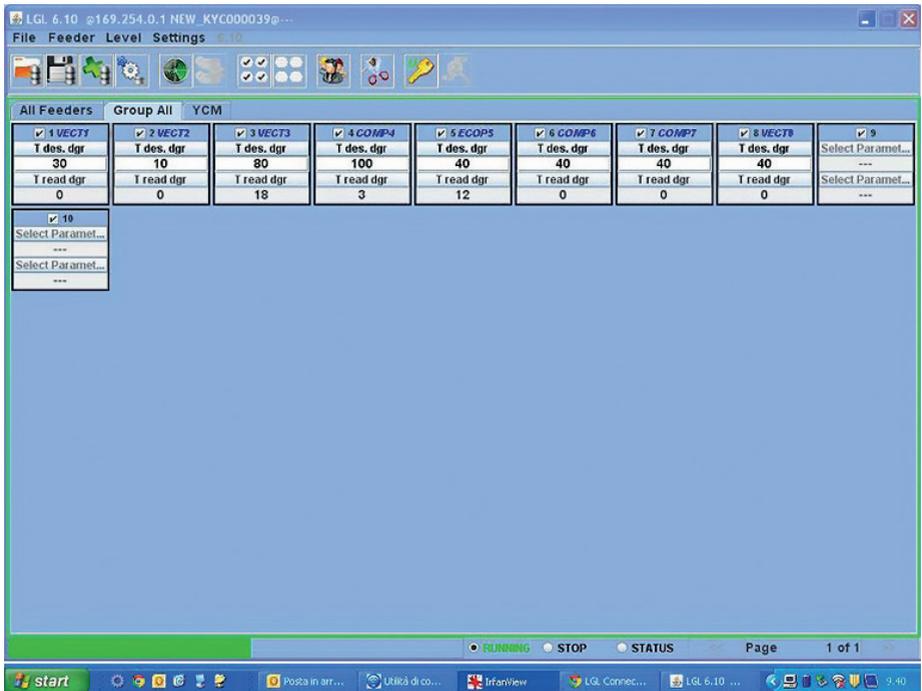
3 - PARAMETERS

T des. dgr is a read/write parameter, and it is written in white. Read/write means that it is possible to read the parameter value but also to set a desired value. T read dgr is a read only parameter, and it is written in grey. Read only means that it is only possible to read the actual value of the parameter.

In order to set a Tdes.dgr desired value, the new value must be typed into the white tab and press **ENTER**.

The new value will be sent to all selected feeders of the same model.

If the operator wants to set a new value only for one specific feeder, he has to deselect all the other feeders of the same model.



To select all feeders,
click on icon:

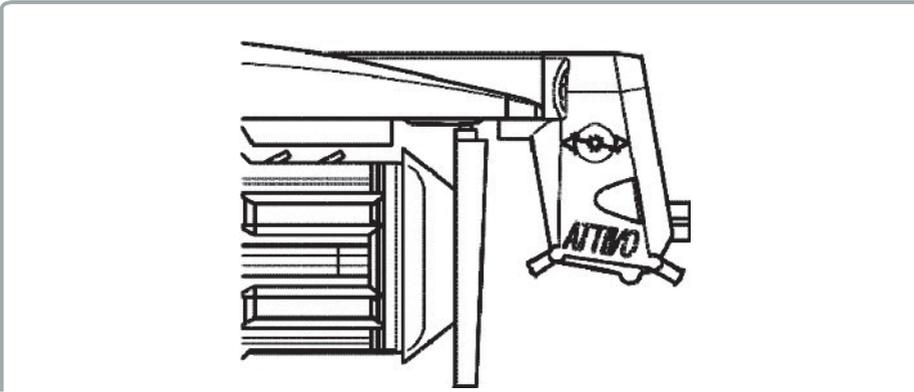


To deselect all feeders,
click on icon:

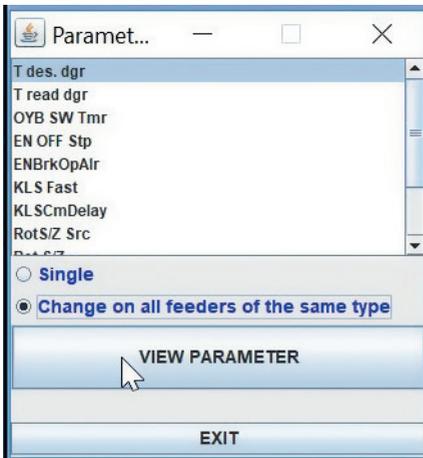


3 - PARAMETERS

3.2 ATTIVO ELECTRONIC BRAKE SETTINGS: TDES. DGR AND TREAD DGR



It is possible to read actual yarn tension and to program the desired tension on each feeder.

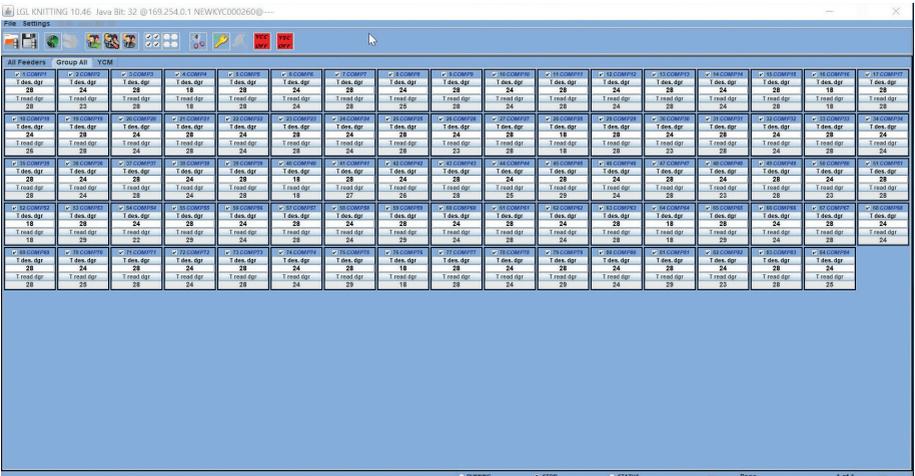


For example in the following picture the KYC is reading Tread dgr and Tdes dgr. These parameters are written in the feeder square because they have been selected from the list (shown in the previous picture). The system is in continuous reading mode (green bar running at the bottom and green line surrounding the screen). The value of the parameters are shown in real time.

3 - PARAMETERS



The continuous reading mode can be stopped any time by pressing STOP. See following picture.



In this picture the system is standing and the screen shows the last read numbers. Tdes.dgr is written in white (read/write parameter, 2.8g for first feeder, 2.4g for second feeder and so on). T read dgr is written in grey (read only parameter, 2.8g for first feeder, 2.3g for second feeder and so on).

3 - PARAMETERS

3.3 LIST OF PARAMETERS

Tdes dgr (read/write):

This is the desired tension in tens of grams.

Tread dgr (read only):

It is the actual tension read from the load cell of the ATTIVO (in tens of grams).

ENBrkOPAlr (read/write):

if it is =1, when the ATTIVO brake is completely open (open with the pertinent button on located on the ATTIVO support) the feeder send an alarm and the machine cannot start.

If it is =0, when the ATTIVO brake is completely open the feeder does not send any alarm and the machine starts.

EN OFF Stp (read/write):

if it is =1, when one feeder is switched off, it sends an alarm to the machine and the machine cannot start.

If it is =0, no alarm is sent and the machine will start.

Following parameters are available on the ECOMPACT from software ECM2012, on the ECO-POWER from ECO2018:

RotS/Z Src (read/write):

RotS/Z Src =1 the sense of rotation is set by DS1 on the feeder

RotS/Z Src =0 the sense of rotation is set by paramter RotS/Z

RotS/Z (read/write):

RotS/Z=1 S rotation

RotS/Z=0 Z rotation

Note: if RotS/Z src=1, RotS/Z loses any meaning.

SensFtcSrc (read/write):

SensFtcSrc=1 sensitivity of the feeder optical sensors is set by DS2 on the feeder

SensFtcSrc=0 sensitivity of the feeder optical sensors is set by parameter SensFtc

SensFtc (read/write):

SensFtc=1 standard sensitivity (yarn count > 40Den)

SensFtc=0 high sensitivity for very fine yarns

Note: if SensFtc src=1, SensFtc loses any meaning.

See next chapter for KLS parameters **OYB SW Tmr**, **KLSfast** and **KLSCmDelay**.

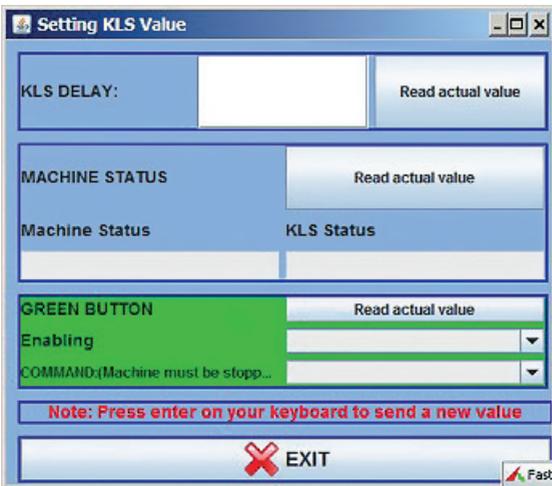
4 - KLS

4.1 KLS: AUTOMATIC OUTPUT STOP MOTION SYSTEM

KLS system allows the feeder to stop the machine without using a sensor, in case of an output yarn break event. If the yarn gets broken between the feeder and the machine, the feeder will be able to detect the event and stop the machine.

Note: if the yarn gets broken before the feeder (between the bobbin and the feeder), this system is not involved. There is another sensor on the feeder itself detecting this case.

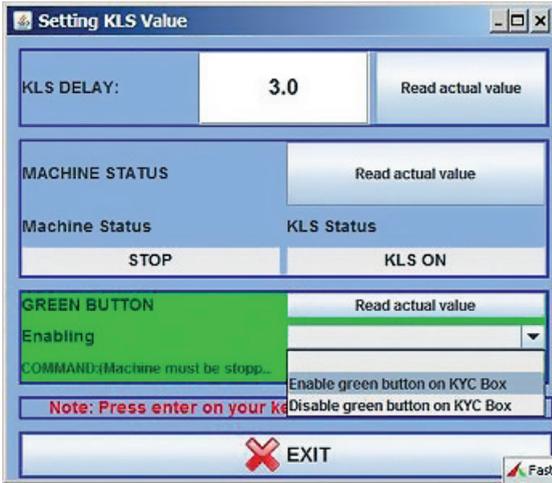
Press icon:



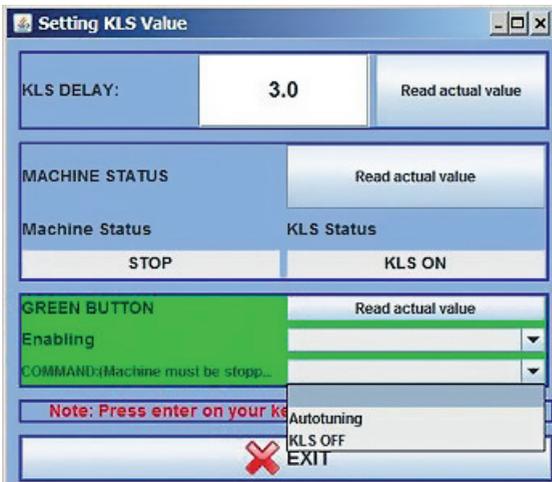
1. **KLS DELAY:** it is possible to read the present value with “read actual value” button and it is possible to write the desired value in the white space. The suggested value is 3. Write 3 and press **ENTER**.

4 - KLS

2. **MACHINE STATUS:** (read only) by pressing READ ACTUAL VALUE button, the information about the machine status is shown. In the following picture the machine is standing and the KLS system is active.



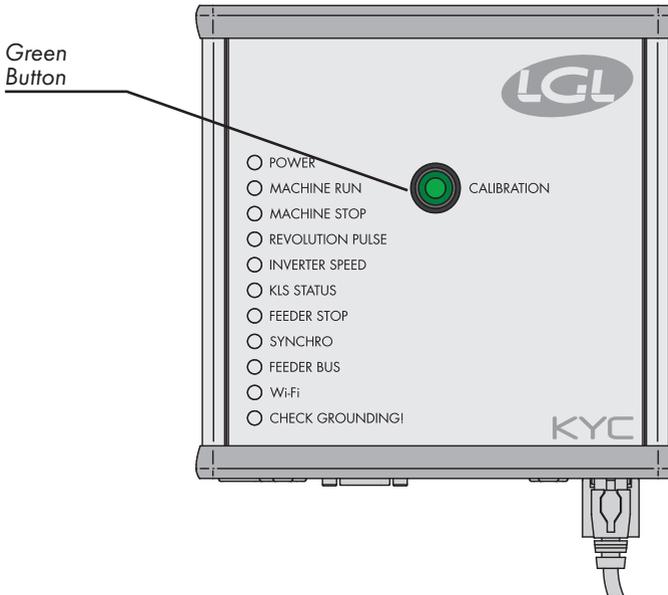
3. **GREEN BUTTON. ENABLING:** there is the possibility to enable or disable the green button that is located on the KYC box (look at the previous picture). If the green button on the KYC box is disabled, the operator can press it as much as he wants, but nothing will happen. **COMMAND (machine must be stopped):** it is possible to disable KLS function or to send feeders in auto tuning procedure. This is the learning procedure described in paragraph 4.1.



The filter time is related to the machine acceleration phase. Select the filter time according to the duration of the machine acceleration ramp. Usually number 3 is OK (It means 3 seconds).

4 - KLS

4.2 BUTTON FOR THE LEARNING PROCEDURE LOCATED ON THE KYC BOX



Once the installation is finished and the machine is ready to start, perform the following learning procedure:

1. Press the button for the learning procedure until all feeders lights turn on (approximately 1 s).
Feeders will keep their lights on while the machine stands.
2. Start up the machine with working speed. All lights turn off.
3. Run the machine until the end of the pattern.
4. At the end of the pattern stop the machine.

When the machine stops, the feeders store the timing in their memory. Now the feeders are ready to check yarn breaks between feeder and machine.

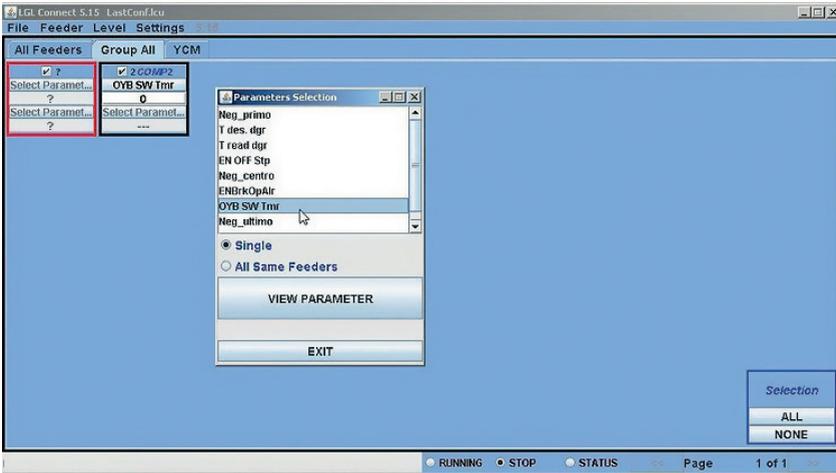
Note 1: The machine has to run for at least 8 seconds. If for any reason the machine stops earlier than 8 seconds, re start the machine. If the machine runs for more than 8 seconds, but it stops before the end of the pattern, feeders will be ready to check output yarn breaks. In any case if you get false stops, repeat the procedure being sure that the machine completes one full pattern.

Note 2: during the procedure, feeders are not able to detect output yarn breaks.

Note 3: by pressing the button for the learning procedure, all feeders lights turn on. If at this moment the button is pressed a second time, all feeders lights turn off and the system is no more active.

4 - KLS

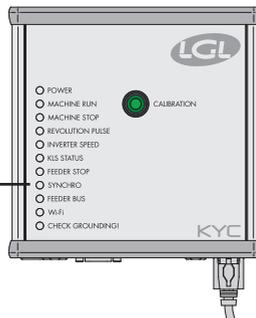
4.3 OYB SW TMR



This parameter can be intended as a test parameter for KLS system. During running, if the operator increases machine speed, the value of this parameter should decrease. If the operator decreases the machine speed, its value should increase.

If $OYB\ SW\ Tmr=0$, then the output stop motion system is not active and feeders won't stop the machine if the yarn gets broken after the feeder. In this case two LED on the KYC box will blink once per second.

The KLS STATUS LED is yellow if the KLS is active and it is working; the LED is red and blinks if the KLS is not active.



Press the green button for learning procedure as it is described in paragraph 4.1.

4 - KLS

4.4 KLS FAST (DEFAULT VALUE = 0)

Compact from SW CMX0040 CMX2014

If this parameter is set to 1, the KLS response time is 40% faster.

Note: in case of false stops during production, KLS FAST must be set to 0.

4.5 KLSCM DELAY (DEFAULT VALUE = 86; MIN=20; MAX=100)

Compact from SW CMX0065 CMX2028

Ecompact from SW ECM0001 ECM2001

Ecopower from SW ECO0011 ECO2012

This parameter modifies the KLS response time. If, in case of yarn break at the output side of the feeder, the machine stops late, it is possible to decrease this value to make the machine stop earlier. If the value is set too low you may have false stops. We suggest to make some tests to find the correct value for each pattern.

Note: from softwares mentioned above KLSFAST is no more active, it has been replaced by KLSCmDelay. KLSFAST can be still present in the parameters list but setting it to 0 or to 1 does not bring to any result.

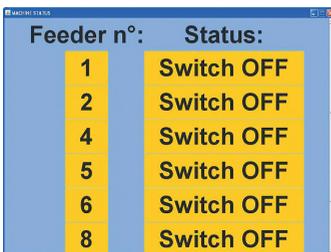
5 - ALARMS

5.1 FEEDERS ALARMS

By clicking on the **ALARMS** button located on each feeder square, it is possible to ask feeders about their status. If a feeder has its lights ON or blinking, it means the feeder is in alarm condition. At the same time the feeder is sending an information about the alarm.



STATUS TAB located at the bottom of the screen: alarm monitoring in continuous mode. This feature is necessary if the computer is far from the machine, in order to be able to have information on possible alarms without being at the machine. In case an alarm takes place while the machine is running and the STATUS tab is selected, the feeder will stop the machine and a big writing will come out on the display as in the following picture:



5 - ALARMS

In case feeders are OK, nothing will be shown on the display. Here below a list of the possible alarms:

| ALARM | MEANING | ACTIONS |
|------------------|---|--|
| AC PWRFAIL | Phase number 2 (blue) and / or phase number 3 (yellow) are missing. | Check input voltage and feeder connection on the flat cable. |
| YARN BREAK | Yarn broken before the feeder. | Repair the yarn. |
| MOTOR LOCK | Yarn entangled somewhere between the bobbin and the feeder. | Check yarn passage between bobbin and feeder. |
| HIGH TEMPERATURE | Too high temperature on the feeder electronic. | <ol style="list-style-type: none"> 1. Reduce input tension on the yarn. 2. Check that the flywheel turn freely. In case disassemble spool body and remove dust and/or yarn residual. |
| TIME ERROR | The feeder takes too much time to wind up the yarn on the spool body at the start up. | Stop the yarn on the spool body with one finger to help yarn reserve filling procedure. |
| VB MOT FAIL | DC voltage on the motor too low. | Check connections on the power transformer primary voltage winding. |
| AC1PWRFAIL | Phase number 1 (black) is missing. | Check input voltage and feeder connection on the flat cable. |
| SWITCH OFF | ON OFF switch in position OFF. | Switch ON the feeder (see also EN OFF STP parameter page pagina 22). |
| TENSMTRERR | The feeder can't reach the preset tension value within a preset time (see also TensTMOut parameter page pagina 22). | <p>Check the following:</p> <ol style="list-style-type: none"> 1. The yarn is passing on the load cell. 2. The TWM brake and springs are suitable to reach the desired tension. 3. OFFSET of the load cell. |
| OYB ERROR | Yarn broken after the feeder (or yarn consumption too low). | Repair the yarn. |

5 - ALARMS

| ALARM | MEANING | ACTIONS |
|--------------|--|---|
| ELBRK OPEN | Brake open (ATTIVO). | Close it by pressing the related button located on the ATTIVO blk support. |
| PREWINDERR | Only during winding up phase of the spool body, during the start up or after a yarn break. | It tells that during spool body filling up, the machine cannot run. |
| I2T ERROR | I2T protection. | <ol style="list-style-type: none">1. Reduce input tension on the yarn.2. Check that the flywheel turn freely. In case disassemble spool body and remove dust and/or yarn residual. |

6 - CONFIGURATION

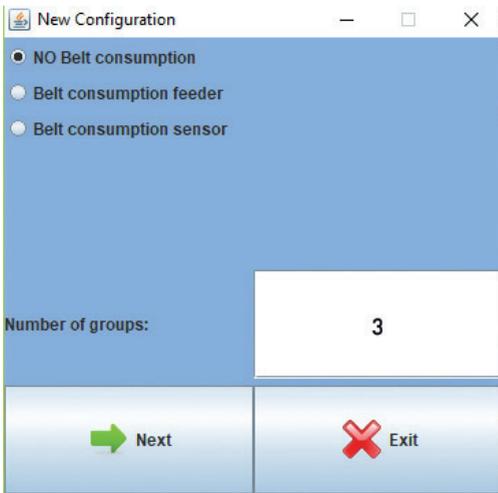
6.1 MACHINE CONFIGURATION

It is possible to create different feeders groups and work on each group separately.

For example if the operator has to set 2grams tension on feeder number 1, number 5, number 9 and so on, it may be easier to create one group with feeder 1, feeder5, feeder9 ...

The system allows to have on the screen only this specific group and set parameters which are valid only for this group.

Press icon **NEW GROUPS CONFIGURATION**



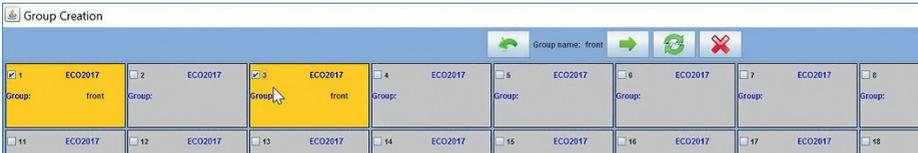
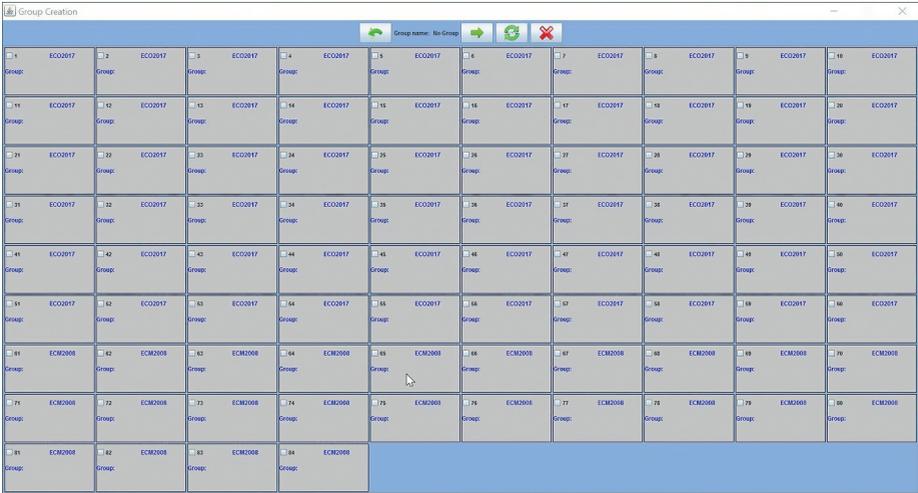
Press **"NEXT"**



This screen will appear for each group that is requested to be created. In this exaple three groups will be created, and each group needs a name.

We suggest to use the name of the yarn which is processed on the feeders belonging to the group.

6 - CONFIGURATION



On top of the screen there is the name of the group (front in this case) and the operator has the possibility to choose the feeders he wants to associate to the group. He can insert just the single repetition. In this case feeder 1 and feeder 3 have been associated to "front" group. Then pass to the next group by means of the arrow.

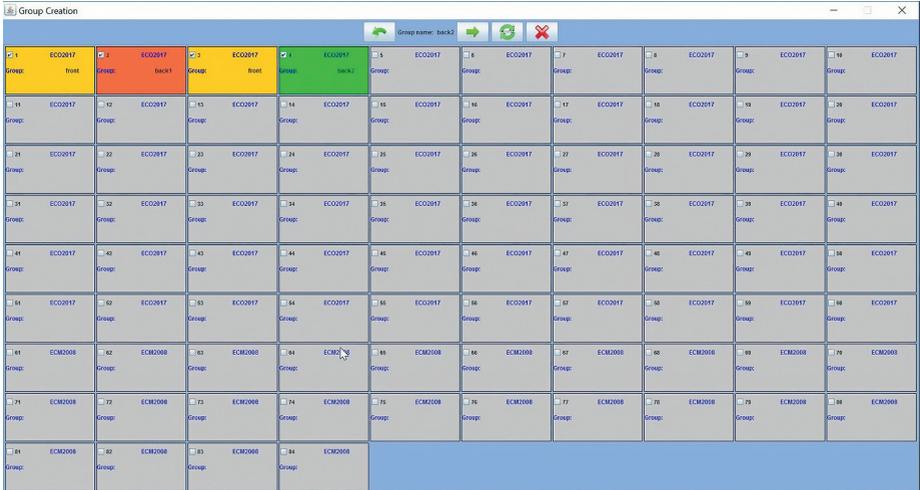


By following commands the operator can move back and forth among the groups:

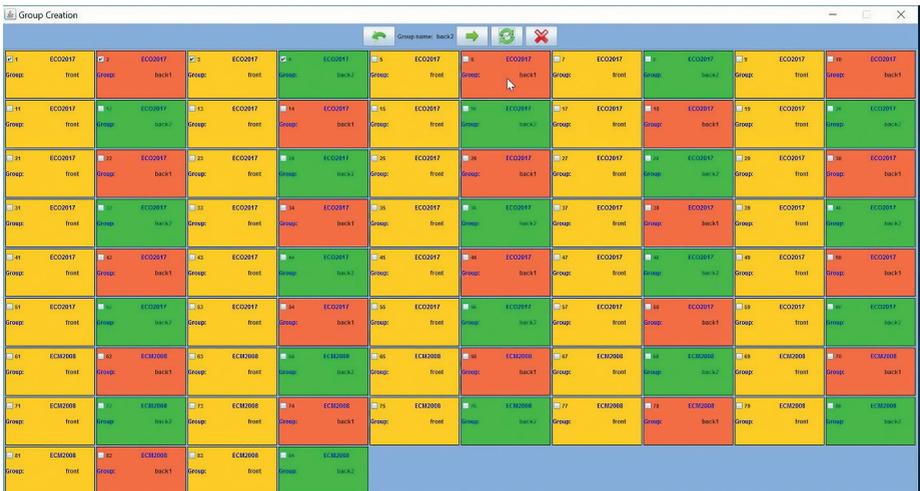


6 - CONFIGURATION

The next picture shows all groups associated in one single repetition.



Now press **REPEAT** icon:

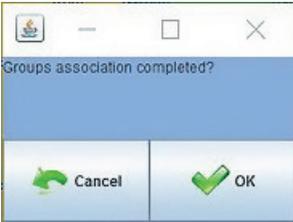


The single repetition will be copied on all the other feeders, so that each feeder will be associated to the correct group.

Press icon:



6 - CONFIGURATION

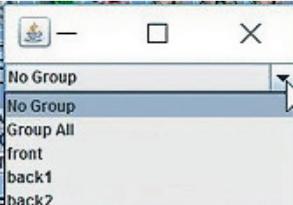


Press **OK**.

Now groups have been created and they are loaded in the program.
By clicking **VIEW GROUPS** icon:



A drop down menu will appear and the operator will be able to load one group at a time and work with it.

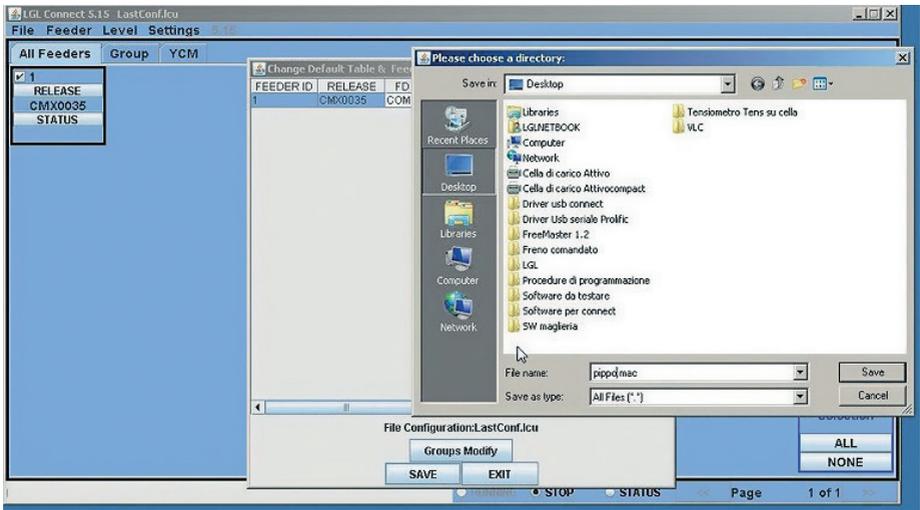


The machine configuration made by the groups and the corresponding parameters (the parameters located in the user table) can be saved in a file.

Press icon **SAVE CONFIGURATION**
top left of the main page:



6 - CONFIGURATION



Please note that the name of the configuration (in this case pippo.mac) will appear top left of the screen, near the LGL connect release writing.

6 - CONFIGURATION

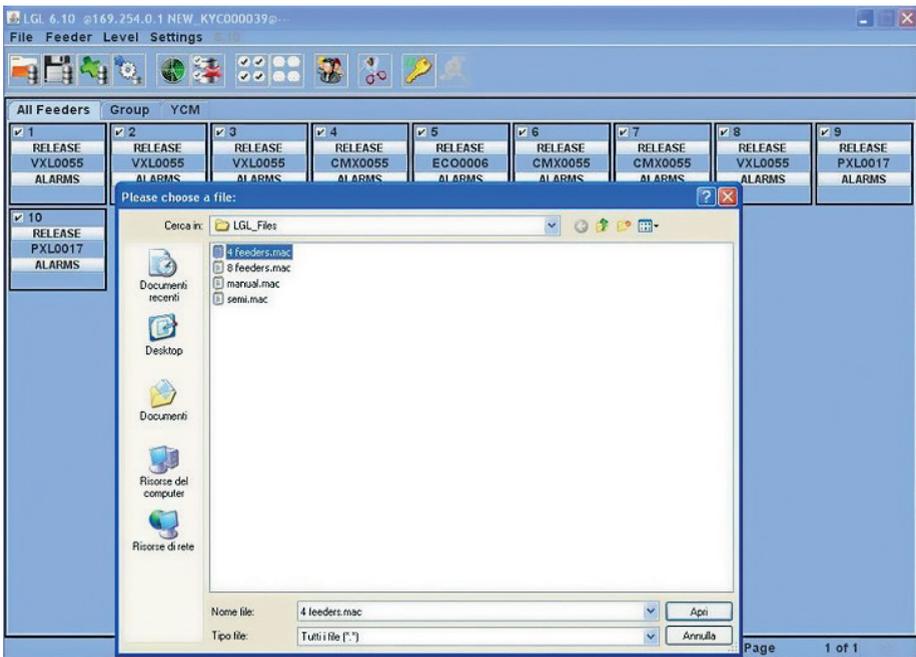
6.2 OPENING OF AN EXISTING CONFIGURATION

Many different machine configurations can be created depending upon different patterns. These configuration can be saved and re loaded anytime.

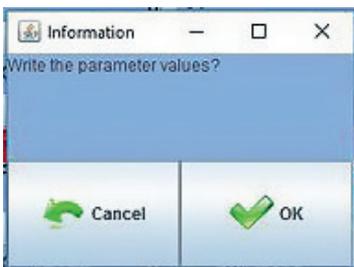
In order to open an existing configuration, press icon:



Choose the .mac desired file (here 4 feeders.mac) and press **OPEN**.



The following screen appears:



6 - CONFIGURATION

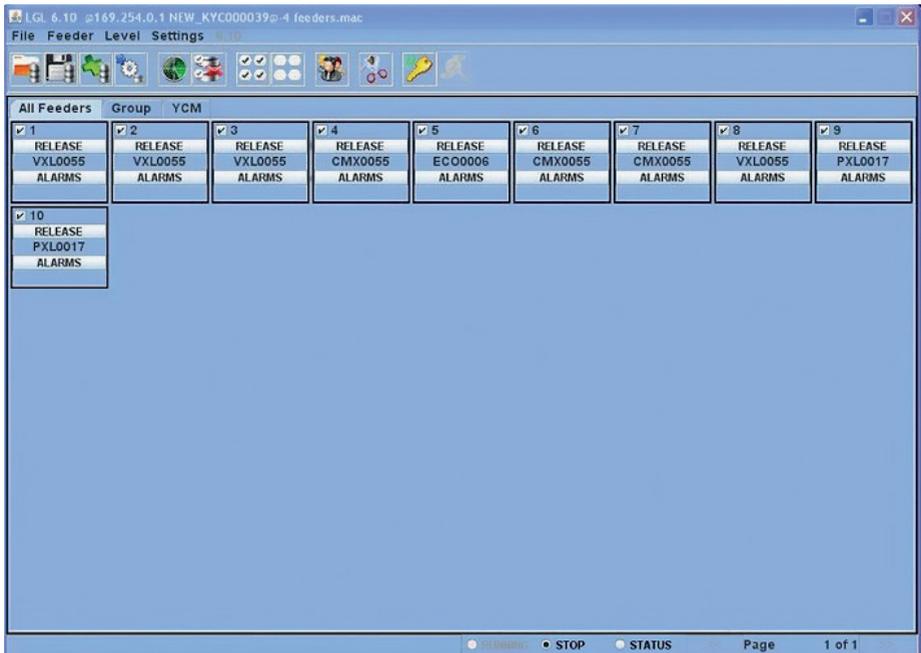
Press OK to load the configuration with its parameters. The parameters of the user table will be written in each feeder (different parameters for each different group of feeders).

Press CANCEL to load the configuration without parameters.

In this case the parameters will have to be set by the operator, if different from the ones already in the feeders before opening the configuration.

We suggest to check them.

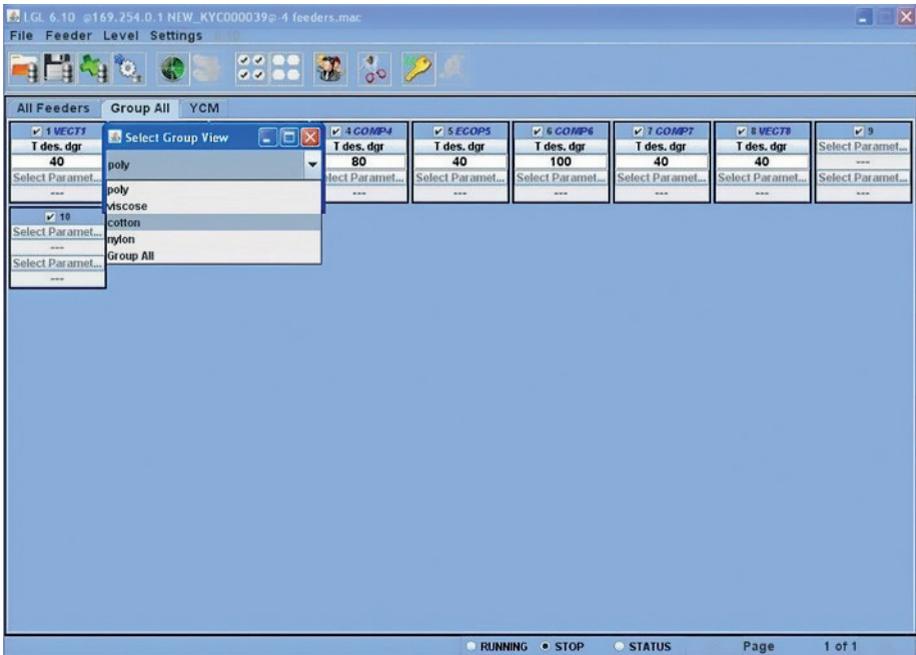
The configuration name 4 feeders.mac will appear top left in the screen.



Click on **VIEW GROUPS** icon:



6 - CONFIGURATION



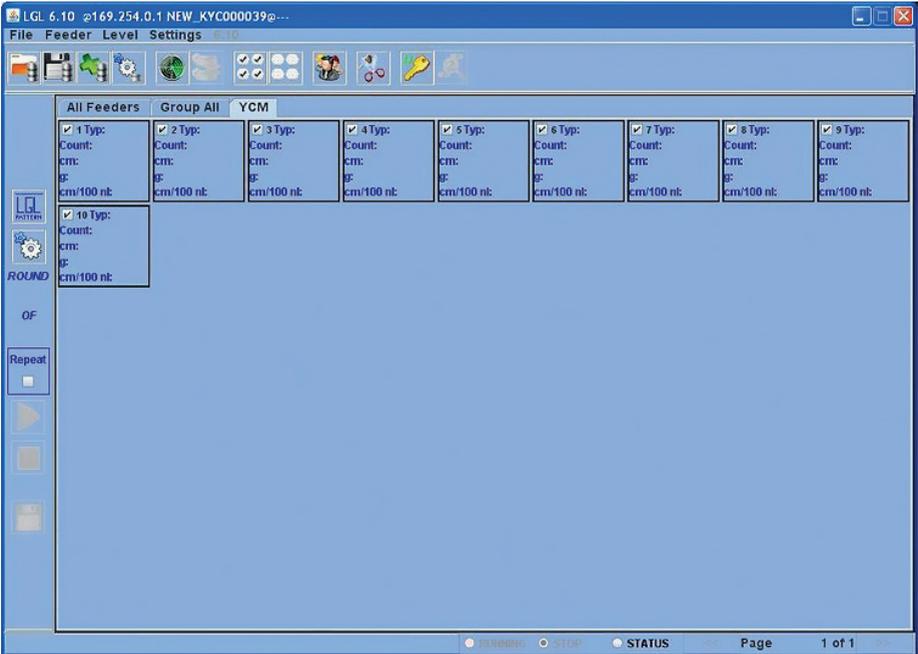
A drop down menu shows the groups list. Choose the group to be displayed and press **VIEW GROUP**.

All feeders of the selected group will be displayed on the screen. Feeders belonging to other groups will not be displayed on the screen. In order to display other feeders, other groups must be selected. Only one group at a time will be displayed.

7 - YCM

7.1 YCM FEATURE: YARN CONSUMPTION

Press YCM tab. The following picture will appear:

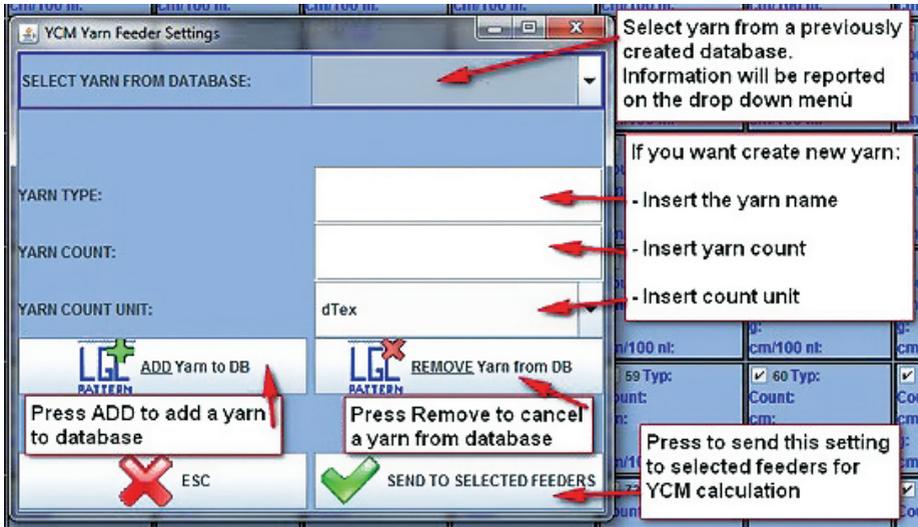


On the screen select the feeders from which the yarn consumption information is required.

If you want YCM with weight calculation click on icon:

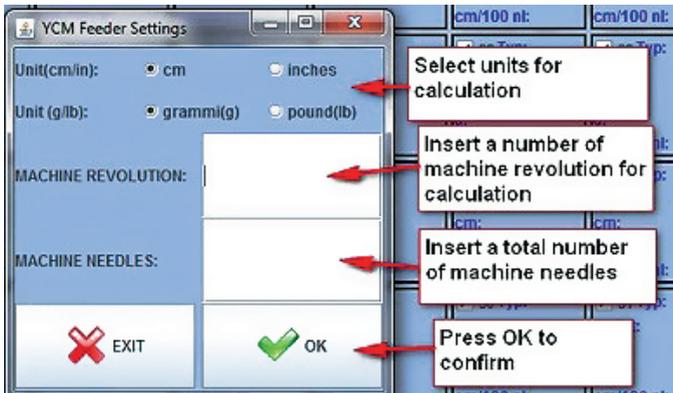


7 - YCM



Info : 1 (g) = 0.0022046341 (lb)

Press the icon:



Press "OK" button.

The arrow on the main screen becomes green (System enabled).



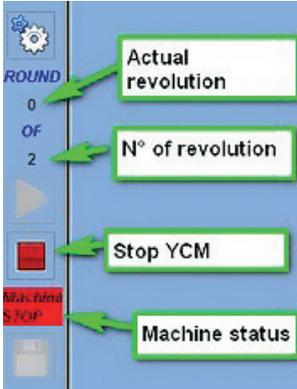
7 - YCM

Press green arrow.

If you want a continuous calculation, select “Repeat”



On the main screen the following information is given in real time:



When calculation is over, “OK” string will appear.

Then the yarn consumption will be displayed on the screen for each selected feeder.

Note: if the continuous calculation mode is required, the operator must check the REPEAT tab. This function allows an automatic repeat of the calculation for the next revolutions, until the check is removed or the STOP button is pressed.

At the end of the YCM calculation, it is possible to display the fabric composition by pressing icon:



It is possible to save the yarn consumption information on a file, and then convert this file in a Microsoft excel file or Open office one.

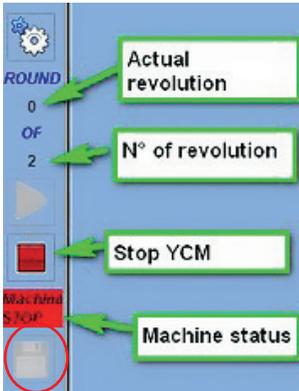
Once the yarn consumption information have been collected, click on icon:



7.2 YCM TABLE SAVING

Yarn consumption table saving.

It is possible to save the yarn consumption in one file and convert it to EXCEL. Once the reading process is over, press save button in the circle.



A .lbd file will be saved in the desired folder.



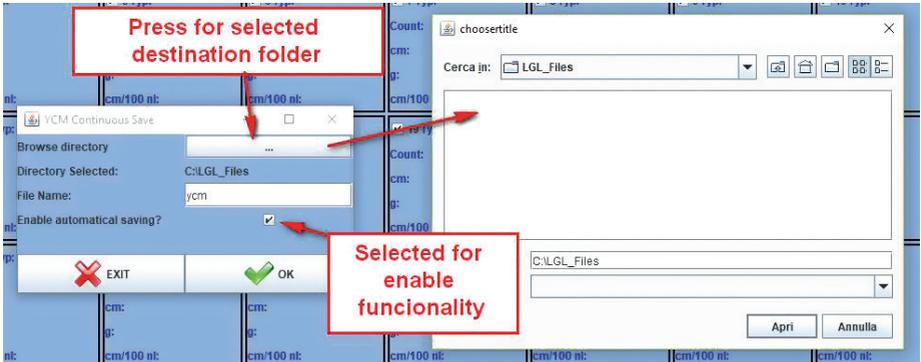
By pressing  button (available from Globalknitting version 10.25), it is possible to save many yarn consumption files automatically one after the other.

For example if one pattern is 5000 revolution long and the machine knits 3 patterns, it is possible to save each 5000 revolution pattern in a separate file.

In the end the system will monitor 15000 revolution by creating three separate files, each one with the information about each single pattern. This function is useful to monitor yarn consumption on the long run in order to calculate yarn stock correctly:



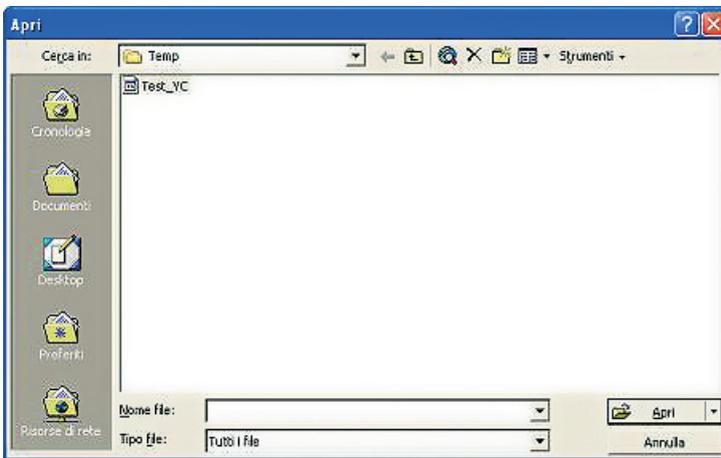
7 - YCM



Each .ldb file will be saved adding date and time to the chosen file name.

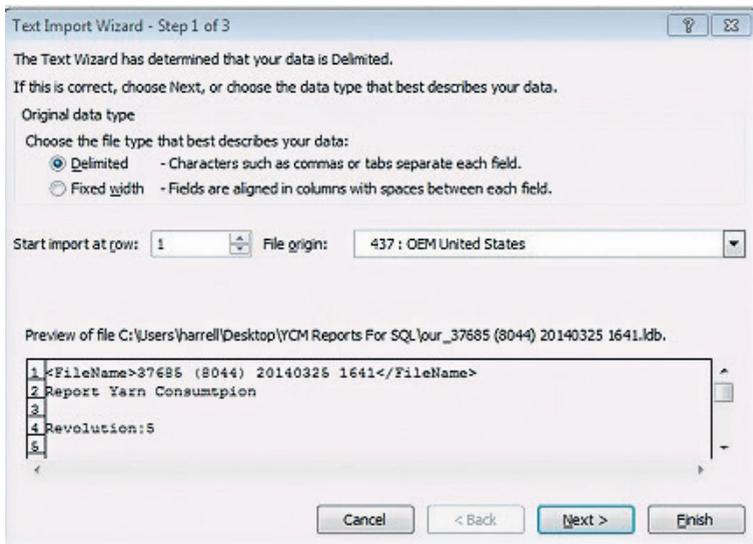
7.3 IMPORT THE YARN CONSUMPTION FILE INTO OPEN OFFICE

Open "Excel", from "File" menu, choose "open" Select the file to be loaded.

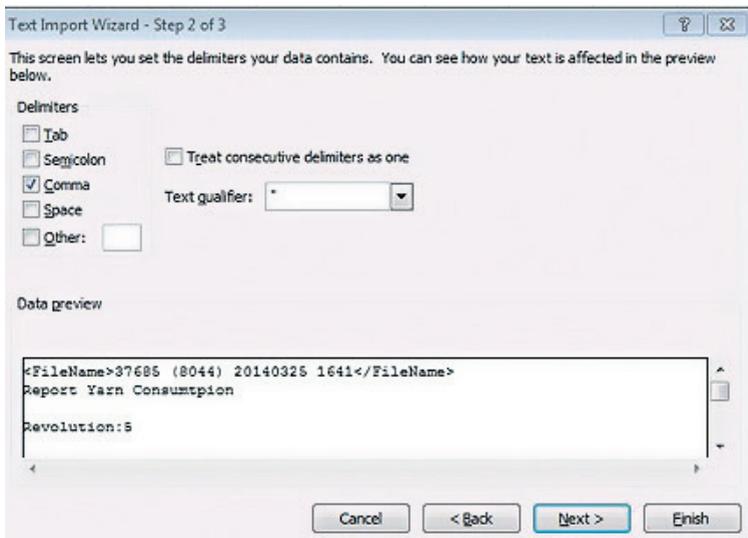


In "file type" select "all files".

7 - YCM



Press “**Open**” and upper picture will appear Press “**NEXT**”.



Put a mark on “comma” Press “**END**”. You will get as a result a file like the one displayed at the end of chapter 7.5.

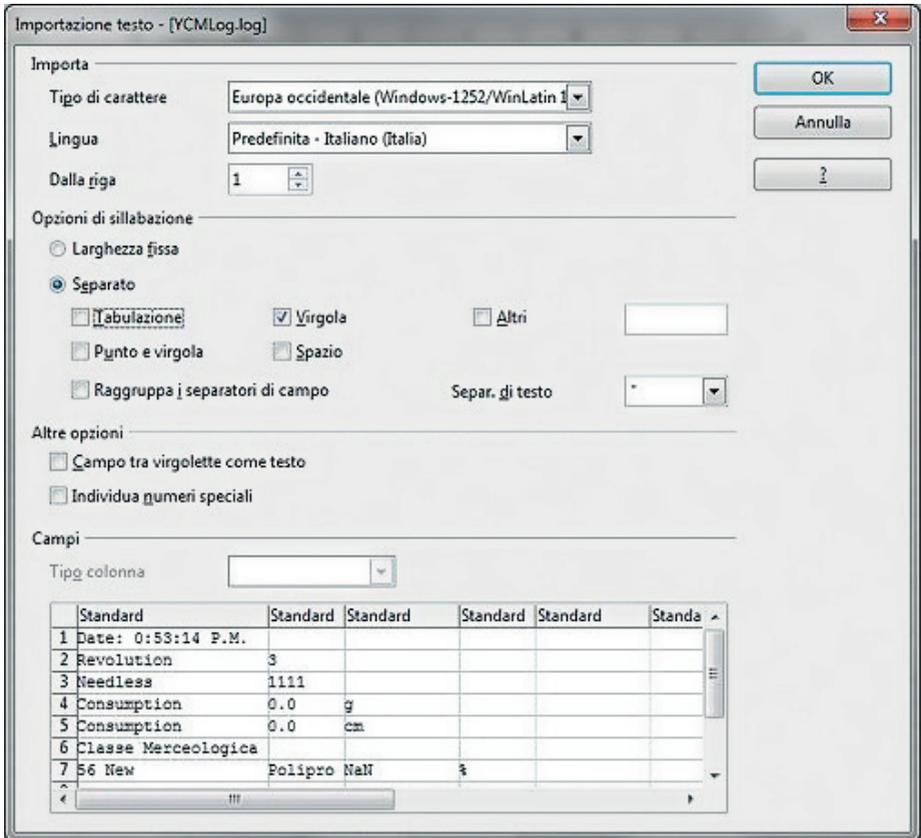
7 - YCM

7.4 IMPORT THE YARN CONSUMPTION FILE INTO OPEN OFFICE

Press "calc" program.

For "FILE" menu choose "**OPEN**" Select the file to be loaded Press "**OPEN**".

Picture below will appear:



Select "separation" and put a mark on "Comma".

Press "**OK**".

7.5 YCM EXAMPLE

We will get yarn consumption information from a pattern made by one front yarn and two back yarns with a repetition once every four feeders.

Feeder 1 and feeder3 process the front yarn, feeder2 back yarn1 and feeder4 back yarn2.

We assume front yarn is a polyester 75dTex, back yarn1 is a nylon 156dtex and back yarn2 is a cotton Ne5. The following procedure explains how to insert the information in the KYC system and how to get the desired results.

7.5.1 Create machine configuration

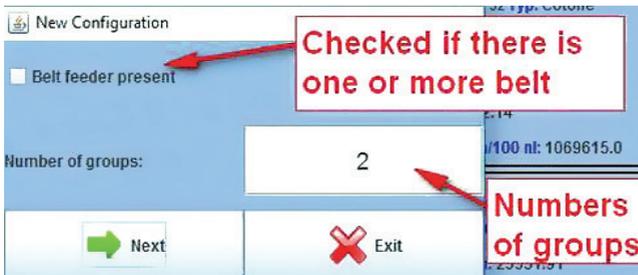
This operation allows to:

- Create groups of feeders feeding the same yarn
- Associate yarn type and count to each group

Click on **CREATE GROUPS CONFIGURATION** icon:



Choose the number of groups you want. 3 in this case.



See chapter 7.5 for belt feeder yarn consumption

7 - YCM

Give a name to each group of feeders. Normally each group processes one yarn.



At the end press **NEXT**.



In order to select first group FRONT,
move with arrow:

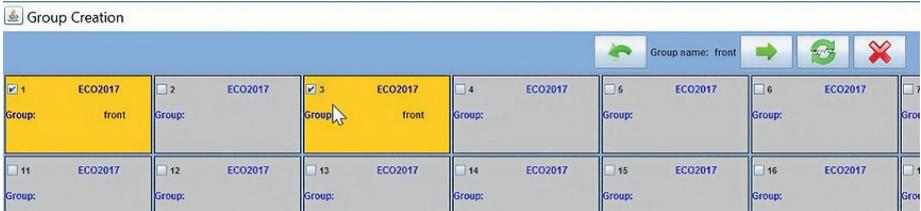


If needed,
go back with arrow:



7 - YCM

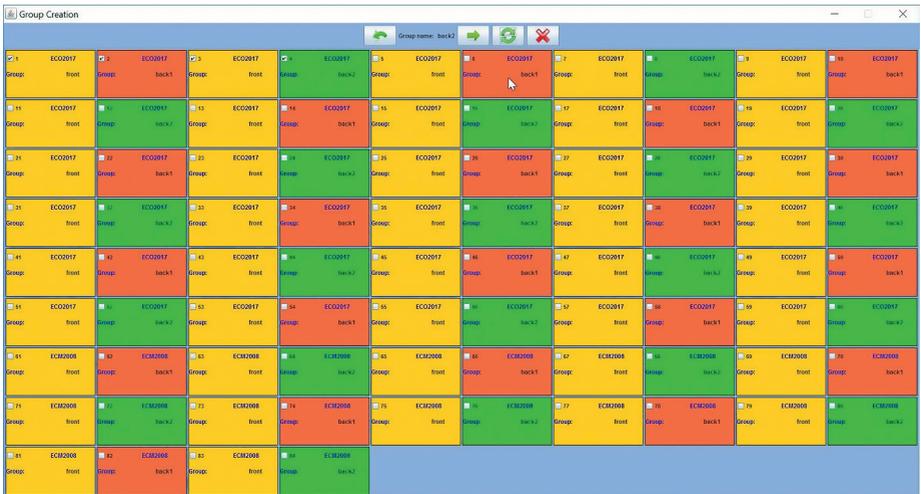
Select feeder number 1 and feeder number 3, as it is shown in the next picture. it is important to select the feeders belonging to the first single repetition.



Pass to the second group BACK 1 and then to the third group BACK2 and do the same thing with each one.

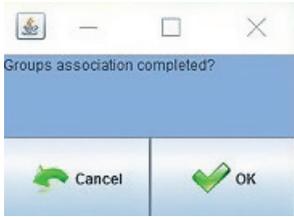


Press **REPEAT** icon



7 - YCM

Each feeder has been associated to its group.



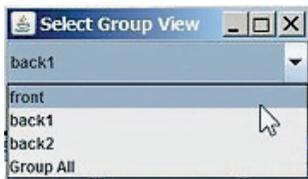
Press **OK**.
Now the groups are complete.



By clicking on icon the following drop down menu appears, with each group:



By clicking on the drop down arrow all groups are viewed



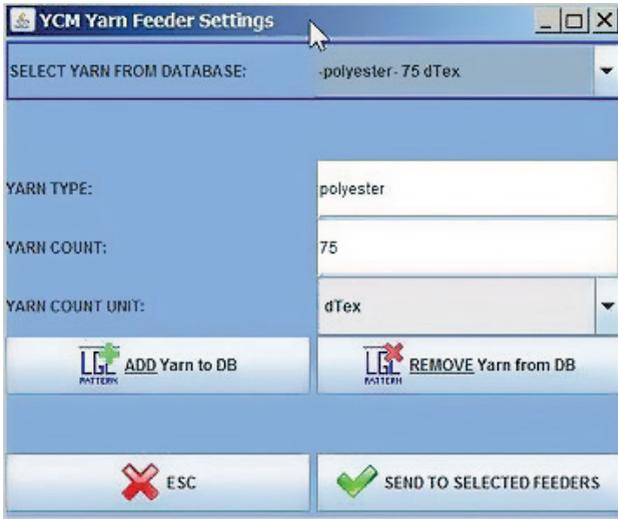
By choosing one group, for example FRONT, only feeders belonging to FRONT will be displayed on the screen (all the odd numbers).

Then pass to YCM tab and click on button.



7 - YCM

Here we can insert yarn type and count for each group of feeders.



The screenshot shows a software window titled "YCM Yarn Feeder Settings". At the top, there is a dropdown menu labeled "SELECT YARN FROM DATABASE:" with the selected value ".polyester - 75 dTex". Below this, there are three input fields: "YARN TYPE:" containing "polyester", "YARN COUNT:" containing "75", and "YARN COUNT UNIT:" containing "dTex". At the bottom of the dialog, there are four buttons: "ADD Yarn to DB" (with a green plus icon), "REMOVE Yarn from DB" (with a red minus icon), "ESC" (with a red X icon), and "SEND TO SELECTED FEEDERS" (with a green checkmark icon).

The operator can write YARN TYPE and YARN COUNT and he can select YARN COUNT UNIT from the available units.

Then he can add the yarn to the database:



in order to have it available for future use, and at the end he has to click on:



To send the yarn to all feeders of the FRONT group.

7 - YCM

The beolw picture shows the result, with FRONT group and its yarn loaded.



Click on **VIEW GROUPS** icon and select another group.



Repeat the operation for BACK1 and BACK2.



7 - YCM

LGL KNITTING 10.04 @169.254.0.1 NEWKYC00601@---

File Feeder Level Settings 10.04

All Feeders back1 YCM

| | | | | |
|---|---|--|--|--|
| <input checked="" type="checkbox"/> 2 Typ: Count: cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 6 Typ: Count: cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 10 Typ: Count: cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 14 Typ: Count: cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 18 Typ: Count: cm: g: cm/100 nt: |
|---|---|--|--|--|

YCM Yarn Feeder Settings

SELECT YARN FROM DATABASE: -nylon- 156 dTex

YARN TYPE: nylon

YARN COUNT: 156

YARN COUNT UNIT: dTex

ADD Yarn to DB REMOVE Yarn from DB

ESC SEND TO SELECTED FEEDERS

LGL KNITTING 10.04 @169.254.0.1 NEWKYC00601@---

File Feeder Level Settings

All Feeders back1 YCM

| | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <input checked="" type="checkbox"/> 2 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 4 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 6 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 8 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 10 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 12 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 14 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 16 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 18 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 20 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 22 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 24 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 26 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 28 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 30 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 32 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 34 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 36 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 38 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 40 Typ: nylon Count: 156 dTex cm: g: cm/100 nt: |
|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

BACK1

LGL KNITTING 10.04 @169.254.0.1 NEWKYC00601@---

File Feeder Level Settings

All Feeders back2 YCM

| | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <input checked="" type="checkbox"/> 4 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 8 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 12 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 16 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 20 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 24 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 28 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 32 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 36 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 40 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 44 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 48 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 52 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 56 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 60 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 64 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 68 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 72 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 76 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 80 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: | <input checked="" type="checkbox"/> 84 Typ: cotton Count: 5 Nec cm: g: cm/100 nt: |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

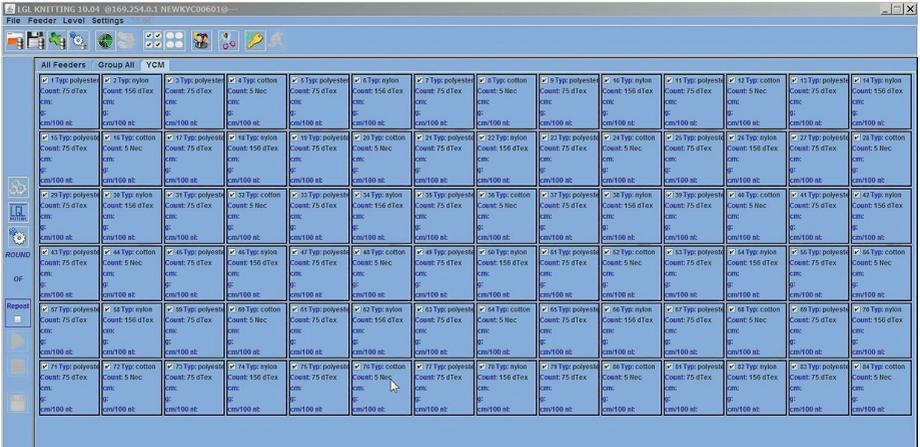
BACK2

7 - YCM

When all groups have got their yarn, select **GROUP ALL**, to have the feeders all at once on the screen



In the YCM tab each feeder is displayed with its own yarn.



The machine configuration is now finished, and it can be saved in order to be used again next time the pattern is processed again.

Press on the **SAVE MACHINE CONFIGURATION**



7 - YCM

Button like in the below picture.



The saved file must be .MAC.



7 - YCM

When the machine configuration has been saved, it is automatically loaded in the system and its name appears top left of the screen.



Now the system is ready to be used.

7.5.2 Get yarn consumption information

Press button in the YCM tab:



The system calculates the yarn consumption in a pattern taking its length in terms of number of machine revolution.

7 - YCM

Insert the number of machine revolution of the pattern and possibly the number of machine needles. Number of machine needles allows to get information about yarn consumption every 100 needles.

Select between centimeters or inches and between grams or pounds.

The System measures the centimeters(inches) of yarn consumed by each feeder, and by exploiting the yarn count it converts the centimeters(inches) in grams(pounds).



Press **OK**.

On the YCM tab the button gets green



Press it. The system will start counting the revolutions. Here it will count 10 revolutions. During the count a green bar will run in the bottom of the screen. The indication of the revolution count will increase in the left bar, where the MACHINE RUN writing is showing that the machine is actually running.

If the machine stops during the count for any reason, nevermind. The system will remember the data already stored and it will start counting from the point it stopped when the machine will be started up again.

7 - YCM

LG1 KNT11TC 1.0.04 @109_254.0.1 NEWKY00001@patcm1.inac

YCM

| | | | | | | | | | | | | | |
|--|---|--|---|--|---|--|---|--|--|---|--|---|--|
| 1 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 2 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 | 3 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 4 Type cotton Count: 5 Nec m: 0.0155 n: 1000 m: 34.03 | 5 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 6 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 | 7 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 8 Type cotton Count: 5 Nec m: 0.0155 n: 1000 m: 34.03 | 9 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 10 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 | 11 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 12 Type cotton Count: 5 Nec m: 0.0155 n: 1000 m: 34.03 | 13 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 14 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 |
|--|---|--|---|--|---|--|---|--|--|---|--|---|--|

Counting running, 5th revolution out of 10

Page 1 of 1

LG1 KNT11TC 1.0.04 @109_254.0.1 NEWKY00001@patcm1.inac

YCM

| | | | | | | | | | | | | | |
|--|---|--|---|--|---|--|---|--|--|---|--|---|--|
| 1 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 2 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 | 3 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 4 Type cotton Count: 5 Nec m: 0.0155 n: 1000 m: 34.03 | 5 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 6 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 | 7 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 8 Type cotton Count: 5 Nec m: 0.0155 n: 1000 m: 34.03 | 9 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 10 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 | 11 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 12 Type cotton Count: 5 Nec m: 0.0155 n: 1000 m: 34.03 | 13 Type polyester Count: 75 dTex m: 0.0155 n: 1000 m: 34.03 | 14 Type nylon Count: 150 dTex m: 0.0155 n: 1000 m: 34.03 |
|--|---|--|---|--|---|--|---|--|--|---|--|---|--|

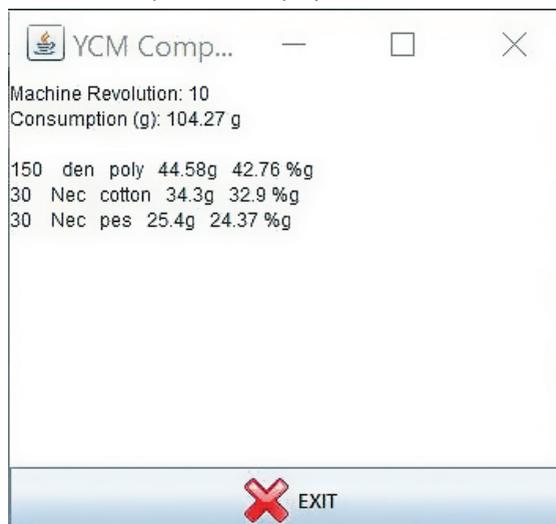
Counting ended. 10 revolution have been counted and the yarn consumption result is displayed on the screen under each feeder

Page 1 of 1

By pressing icon:



The fabric composition is displayed on the screen.



7 - YCM



By pressing  bottom of the screen the yarn consumption information can be saved.

LGL KNITTING 10.04 @169.254.0.1 NEWKYC00601@patter

File Feeder Level Settings

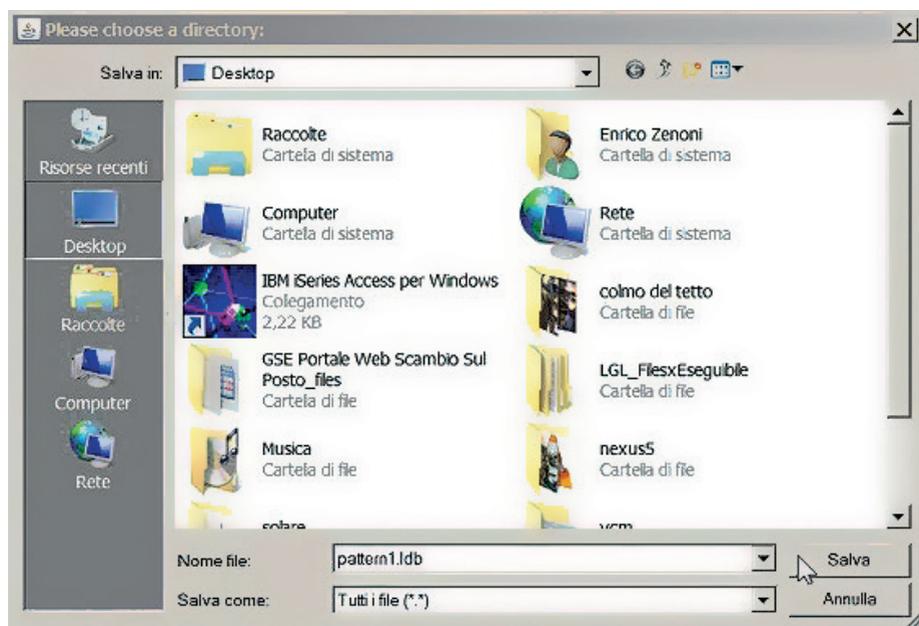
All Feeders Group All YCM

| | | | |
|---|--|---|--|
| <input checked="" type="checkbox"/> 1 Typ: polyester Count: 75 dTex cm: 8165.0 g: 0.62 cm/100 nt: 34.03 | <input checked="" type="checkbox"/> 2 Typ: nylon Count: 156 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 | <input checked="" type="checkbox"/> 3 Typ: polyester Count: 75 dTex cm: 7740.42 g: 0.59 cm/100 nt: 32.26 | <input checked="" type="checkbox"/> 4 Typ: polyester Count: 75 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 |
| <input checked="" type="checkbox"/> 15 Typ: polyester Count: 75 dTex cm: 8067.03 g: 0.61 cm/100 nt: 33.62 | <input checked="" type="checkbox"/> 16 Typ: cotton Count: 5 Nec cm: 9079.48 g: 10.74 cm/100 nt: 37.84 | <input checked="" type="checkbox"/> 17 Typ: polyester Count: 75 dTex cm: 7903.72 g: 0.6 cm/100 nt: 32.94 | <input checked="" type="checkbox"/> 18 Typ: polyester Count: 75 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 |
| <input checked="" type="checkbox"/> 29 Typ: polyester Count: 75 dTex cm: 8099.69 g: 0.61 cm/100 nt: 33.75 | <input checked="" type="checkbox"/> 30 Typ: nylon Count: 156 dTex cm: 8720.22 g: 1.37 cm/100 nt: 36.34 | <input checked="" type="checkbox"/> 31 Typ: polyester Count: 75 dTex cm: 7789.42 g: 0.59 cm/100 nt: 32.46 | <input checked="" type="checkbox"/> 32 Typ: polyester Count: 75 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 |
| <input checked="" type="checkbox"/> 43 Typ: polyester Count: 75 dTex cm: 7560.8 g: 0.57 cm/100 nt: 31.51 | <input checked="" type="checkbox"/> 44 Typ: cotton Count: 5 Nec cm: 9112.14 g: 10.78 cm/100 nt: 37.97 | <input checked="" type="checkbox"/> 45 Typ: polyester Count: 75 dTex cm: 8067.03 g: 0.61 cm/100 nt: 33.62 | <input checked="" type="checkbox"/> 46 Typ: polyester Count: 75 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 |
| <input checked="" type="checkbox"/> 57 Typ: polyester Count: 75 dTex cm: 7952.71 g: 0.6 cm/100 nt: 33.14 | <input checked="" type="checkbox"/> 58 Typ: nylon Count: 156 dTex cm: 9079.48 g: 1.42 cm/100 nt: 37.84 | <input checked="" type="checkbox"/> 59 Typ: polyester Count: 75 dTex cm: 7838.4 g: 0.59 cm/100 nt: 32.66 | <input checked="" type="checkbox"/> 60 Typ: polyester Count: 75 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 |
| <input checked="" type="checkbox"/> 71 Typ: polyester Count: 75 dTex cm: 7593.46 g: 0.57 cm/100 nt: 31.64 | <input checked="" type="checkbox"/> 72 Typ: cotton Count: 5 Nec cm: 8785.55 g: 10.39 cm/100 nt: 36.61 | <input checked="" type="checkbox"/> 73 Typ: polyester Count: 75 dTex cm: 7985.38 g: 0.6 cm/100 nt: 33.28 | <input checked="" type="checkbox"/> 74 Typ: polyester Count: 75 dTex cm: 8981.5 g: 1.41 cm/100 nt: 37.43 |

ROUND
OK
OF
10
Repeat
▶



Note: The button to save Machine configuration (red circle on TOP) and the button to save yarn consumption information (red circle BOTTOM) are different.



The file extension must be .ldb.

For each pattern two different files can be saved and used to create a patterns database: a ".mac" file with the machine configuration information and a ".ldb" file with the yarn consumption information.

An example of how a .ldb file looks like is in the following page.

See chapter 6.1 to open stored machine configurations.

See chapter 7.2 to open .ldb file with Microsoft Excel 2016 and 7.3 to open the file with Apache OpenOffice.

7 - YCM

YCM file saved and opened with EXCEL

<FileName>pattern 1 </FileName>

| | | |
|------------------------|-----------|----|
| Revolution | 10 | |
| Feeder for belt | 0 | |
| Amount of belt feeders | 0 | |
| Needles | 2400 | |
| Consumption | 276,48 | g |
| Consumption | 707627,75 | cm |

PRODUCT GROUP

| | | | | | | | | | |
|----------|-----------|-----------|----|-------|------|--------|---|-------|-----|
| 75 dTex | polyester | 332037,88 | cm | 46,93 | % cm | 24,91 | g | 9,01 | % g |
| 156 dTex | nylon | 187550,06 | cm | 26,51 | % cm | 29,26 | g | 10,59 | % g |
| 5 Nec | cotton | 188039,95 | cm | 26,58 | % cm | 222,32 | g | 80,42 | % g |

| Feeder | Consumption | cm-in | Consumption | g oz | Consumption | cm-in | % Feeder | Count | Type |
|--------|-------------|-------|-------------|------|-------------|-------|----------|----------|-----------|
| 1 | 8165,0 | cm | 0,62 | g | 34,03 | cm | 1,16 | 75 dTex | polyester |
| 2 | 8981,5 | cm | 1,41 | g | 37,43 | cm | 1,27 | 156 dTex | nylon |
| 3 | 7740,42 | cm | 0,59 | g | 32,26 | cm | 1,1 | 75 dTex | polyester |
| 4 | 8965,17 | cm | 10,6 | g | 37,36 | cm | 1,27 | 5 Nec | cotton |
| 5 | 7952,71 | cm | 0,6 | g | 33,14 | cm | 1,13 | 75 dTex | polyester |
| 6 | 8981,5 | cm | 1,41 | g | 37,43 | cm | 1,27 | 156 dTex | nylon |
| 7 | 7903,72 | cm | 0,6 | g | 32,94 | cm | 1,12 | 75 dTex | polyester |
| 8 | 8948,84 | cm | 10,59 | g | 37,29 | cm | 1,27 | 5 Nec | cotton |
| 9 | 8181,34 | cm | 0,62 | g | 34,09 | cm | 1,16 | 75 dTex | polyester |
| 10 | 9079,48 | cm | 1,42 | g | 37,84 | cm | 1,29 | 156 dTex | nylon |

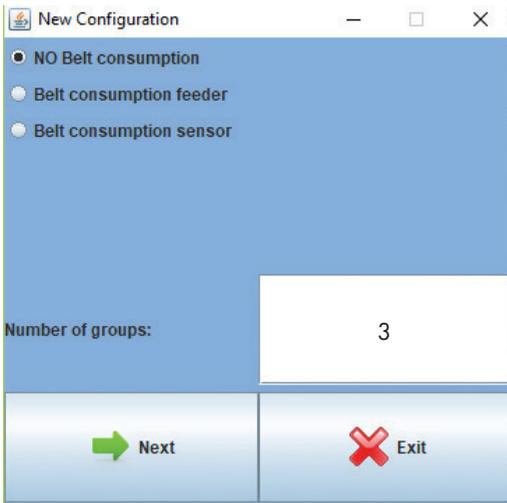
7.6 YARN CONSUMPTION OF BELT DRIVEN FEEDERS

We have the possibility to calculate the yarn consumption coming from the belt driven feeders. So we can have the complete measurement of all yarns going into a pattern.

There are two possibilities:

1. We add an LGL feeder behind a belt driven feeder, this feeder can be a new feeder in addition to the ones already installed on the machine, or a feeder that is already installed on the machine and that is not being used in that specific pattern. All LGL feeders in the market are able to be used for this purpose, they do not require any upgrade of any sort. The system will get the yarn consumption from this one feeder and it will multiply the value for the number of belt driven feeders involved in the pattern (since there is the belt all belt feeders consume the same amount of yarn). See paragraph 7.6.1.
2. We use a belt sensor connected directly to the KYC device. See paragraph 7.6.2.

Click on icon and select the Belt feeder present check:

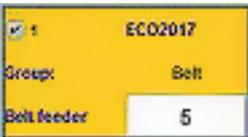


Number of groups: Belt feeder group is not included in this number, it comes in addition to this number.

7 - YCM

7.6.1 Belt feeder

If **Belt consumption feeder** has been selected, the BELT name will appear among the other groups names, and the system will allow to set the address of the feeder which is installed behind one belt driven feeder.

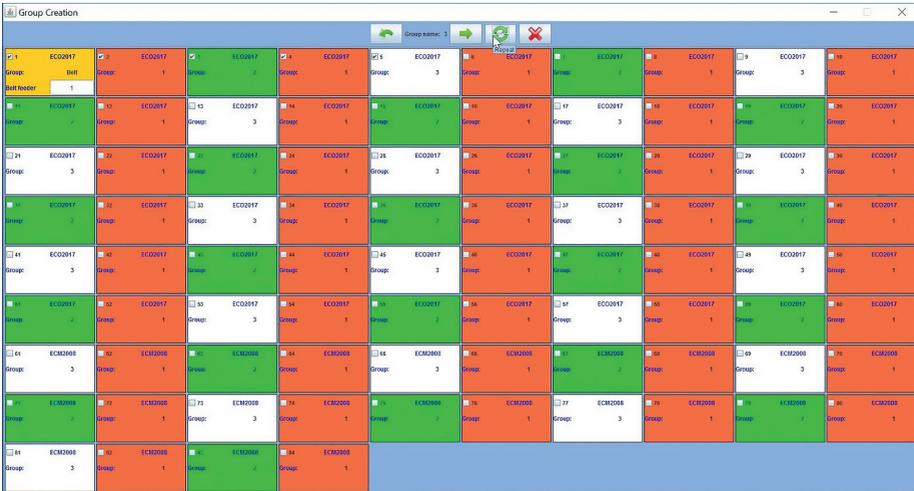


In the belt feeder square the operator needs to set the amount of belt driven feeders used in the pattern, so that the system will report the total amount of yarn consumed by all belt driven feeders together. Here the feeder address is 1 and the amount is 15.

the belt feeder will form one specific group, and it won't enter the normal repetition, as it can be seen in the next pictures.



7 - YCM

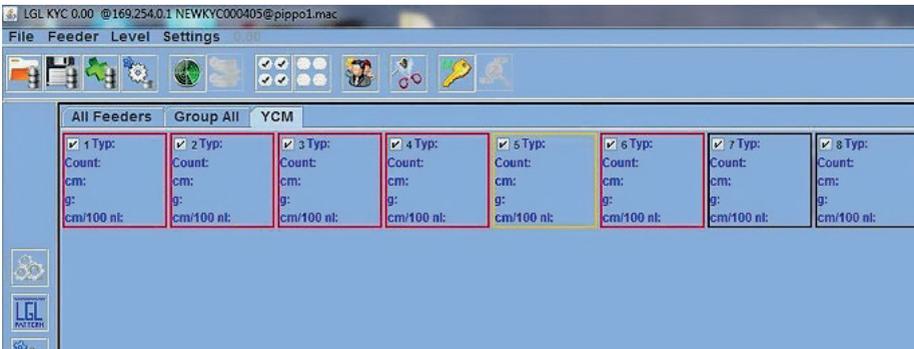


The belt driven feeder selected is number 1 only. There is the possibility to select more than one belt driven feeder. In any case none of them will enter in the REPEAT command

After the groups creation is terminated, there is always the possibility to save the configuration. The .mac file will be saved on the PC in the desired folder and will be loaded on the JAVA, appearing top left of the screen (Pippo1.mac in the following picture).

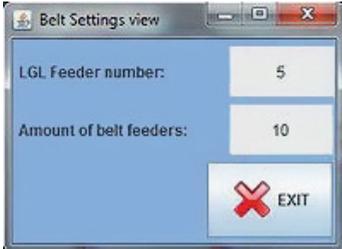


By clicking on the YCM tab, the feeder responsible for belt driven feeders yarn consumption will appear in a yellow square.

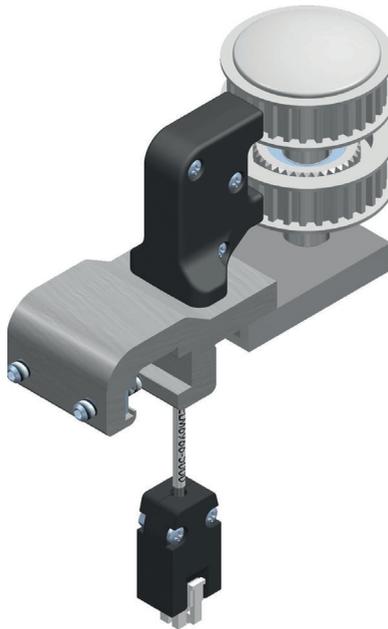




The button  will provide all information about belt driven feeder address and quantity of belt feeders involved in the pattern.

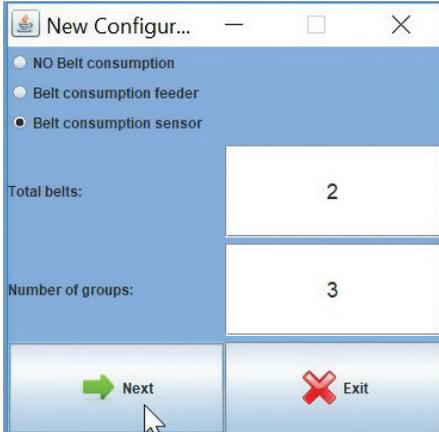


7.6.2 Belt sensor



7 - YCM

If **Belt consumption sensor** has been selected, the following screen will appear:



total number of belts (maximum number of belts supported by the sensor: 2)

number of feeders groups, not including belts

In the example 2 belt groups and 3 feeders groups have been chosen. Press NEXT. The following screen is related to the belt groups:



Select the belt groups and press NEXT Belt group 1 corresponds to the top belt on the sensor

Belt group 2 corresponds to the bottom belt on the sensor.

Select the belt or the belts actually connected to belt feeders.

7 - YCM

For each selected belt group, following information are required (here shown for belt group number 2):



| | |
|-----------------------|------|
| Rename belt group 2 | b2 |
| Belt feeder cfr cm: | 14,5 |
| Repetition belt group | 42 |

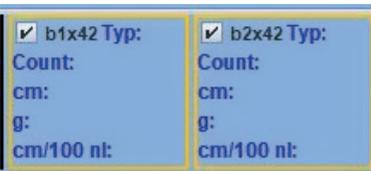
➔ NEXT

Name of the group

diameter of the belt driven feeder wheel

number of belt driven feeders involved in the pattern

By pressing NEXT, groups configuration goes on normally (see chapter 6). The operator must give names to each of the 3 feeders groups and select the related feeders. At the end of the procedure the feeders will be shown in the YCM page together with the two belt groups. Each belt group will be shown as a feeder square with its perimeter in yellow colour.



| | |
|--|--|
| <input checked="" type="checkbox"/> b1x42 Typ: | <input checked="" type="checkbox"/> b2x42 Typ: |
| Count: | Count: |
| cm: | cm: |
| g: | g: |
| cm/100 nt: | cm/100 nt: |

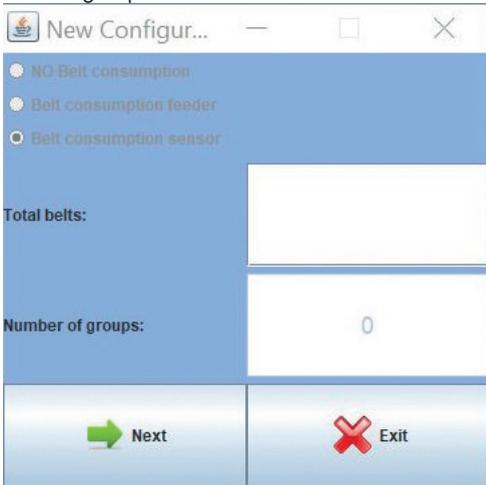


In the YCM page bottom left the button  allows to set belt feeders groups also on the machines where LGL feeders are not installed. The Belt sensor and the KYC device must be installed of course.

Open global knitting program, access the YCM page and click on the button.

7 - YCM

The following screen appears, where it is possible to set belt groups but it is not allowed to set feeders groups:



At the end the program will report only the belt groups, like in the following picture:

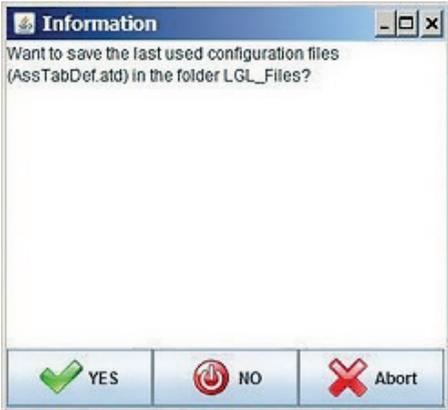


Note:  can be used also to add belt sensors to an existing machine configuration from the YCM page.

8 - APPLICATION CLOSE

8.1 APPLICATION CLOSE

When you close the application, this picture appear:



By pressing **"YES"**, the last configuration file is saved and when the application starts again, the file is immediately available.

By pressing **"NO"** the configuration in use is not saved.
Press **"Abort"** to go back to the main window.



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