

Quality Manual Procedure No. 4.4 / 2

EVALUATION AND CLASSIFICATION OF SUPPLIERS

Revised by:	Kareem Hany		Date :	19/01/2014	Valid from 20/01/2014
Approved by:	Sayed Soliman		Date :	19/1/2014	



1. Purpose:

1. To make a list of the reliable suppliers.
2. To draw up rules for qualifying the suppliers according to the required quality degree of the product supplied and to its characteristics.
3. To apply the ZMC strategy to the long-term oriented co-operation, to the JIT, to the ZERO DEFECT and to the costs.

2. Field of application:

This procedure is valid for MCMC plant.

3. Responsibilities:

Responsibilities are described in the procedure details.

4. Reference documents:

- ECC Procedures no.:
ECC-CQ-PRO-94005.B.
ECC- CQ-PRO-94006.B.
ECC-CQ-PRO-98001.B.
- Operating Instructions no.:
ZMC3770SQPQ650.
ZMC3770SQPQ651.
- Suppliers Evaluation Form ZMC3770EVP001.

5. Procedure details**5.1 Evaluation of Suppliers and Product Homologation****5.1.1. Evaluation of Suppliers**

MCMC suppliers are to be certified according to the procedure ECC-CQ-PRO-94005.A.

PURCH MGR will perform evaluation of suppliers twice per year (at the end of June & at the end of December) using the form ZMC3770EVP001. - Issue no.5 dated 23/12/04. He shall also set a RANKING LIST of suppliers based on above evaluation

5.1.2. Finished Products Homologation

Every product regularly supplied to MCMC must be homologated; only certified suppliers may get the homologation.

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The purpose of the homologation is to verify whether the products comply with the specified requirements, once these products are supplied on an industrial scale.

*The homologation will lose its validity in case changes occur to materials, suppliers processes or design. The homologation of new product is made according with the procedure **ECC-CQ-PRO-98001.B***

5.1.2.1 Check of the Initial Sample

*In addition to the procedure **ECC-CQ-PRO-98001.B** paragraph 5.3 is specified as follows:*

- **Request for Initial Sample**

To the potential supplier must be sent a request for an initial sample. The quantity (usually among 5 and 10 pieces) can change depending on type of product and on tests foreseen.

For critical products The request must be complete with a copy of the MATERIAL SPECIFICATION, drawing and any other document reporting characteristics to be respected.

*The potential supplier must send the sample **numbered** with enclosed **quality and conformity certificate**. This certificate must be complete with all the values measured by the supplier on each characteristic.*

- **Checking of the Initial Sample**

At the incoming of the first sample must be carried out the following controls:

1)Correspondence between the quantity of the sent samples and the quantity of samples requested

2)Presence of the Quality and Conformity Certificates with the list of all the test effected by he supplier

- **Testing**

MCMC laboratories should perform the tests of the characteristics certified by the supplier using the instruments of its own laboratories or external laboratory

- **Test Results.**

*a)If all the characteristics analysed are conforming to the specifications, MCMC decides to give the approval & issues a **REQUEST FOR THE PILOT LOT**.*

b) If one or more characteristics don't result according to the specification, the SQ arranges a meeting with the supplier to decide the corrective actions.

5.3 Evaluation of Supplies Quality

The quality of the products regularly supplied to MCMC has to be systematically appraised at the delivery according to the indications given in the procedure n. 8 "Materials Acceptance".

An exception is made only for "**self-certified**" supplies (see par. 5.4).

Any "non-conformity" due to the supplier, wherever found by MCMC, gives rise to an **information about nonconformance** to be duly forwarded to the supplier, who has to arrange for testing, corrective and preventive actions.

When a report or notification of non-conformities (due to the supplier) found by MCMC or one of its customers is issued, the **supplier quality index (SQI)** is worsened as per the equation in the W. I. NO. ZMC3775SQPQ030. The supplier quality index is calculated monthly according to the a.m. equation and this causes the following effects:

SQI		Class	Effect
From (included)	to		
<5		A	If maintained for minimum 10 consecutive supplies or six consecutive months, the self certification procedure (point 5.4 below) is effected.
5	10	B	The relationship continues
11	18	C	The supplier has to submit a corrective actions programme to be then audited by MCMC.
> 18		D	A control on the following 2 supplies(at least) is performed. Inspective visits to supplier' facilities are to be organised and self certificationis to be reconsidered.

5.4 Self-Certification

When a **self-certification** relationship is set up, the products received under this term are not controlled by MCMC at the delivery, but they are directly sent to the production or assembly line, or to the customer, since it is the supplier to certify the product compliance with the requested characteristics and to show the recordings whenever it is necessary, as provided for in the document in enclosure n. 1.

These products can be subjected to such tests as "**skip-lot**", whose frequency is decided by SQ (a negative result of these tests causes the same actions taken towards non-self-certified suppliers).

The self-certification can be obtained according to what specified in the procedure **ECC-CQ-PRO-94006B**.

5.5 **Quality Documentation**

This paragraph specifies the required MCMC's quality documentation concerning the "PURCH" activities as follows:

- **List of certified suppliers** arranged and updated YEARLY (prepared by S.Q.Resp. & kept by PURCH.
- **Material, acceptance and delivery specifications:** must be given to the suppliers at the beginning. Every purchase order must make reference to these documents.
- **Evaluation sheets and forms for visits at the supplier's (check list):** arranged and updated by QS.
- **Information about nonconformances and inspection reports:** the reports are to be forwarded to the supplier through PURCH.
The quality data recorded determine the supplier quality index, monthly updated in the " Supplier Quality Report" .

5.6 **Enclosures**

Encl. 1 Self-certification of the Product Delivered by the Supplier

Enclosure 1**PRODUCT SELF-CERTIFICATION ISSUED BY THE SUPPLIER**

The signing-up of this document bind the supplier to guarantee the quality standards of the product supplied according to what fixed in the "Acceptance specification" by MCMC herewith enclosed and to what specified below.

1. FIRST CERTIFICATION (first sampling stage)

A supplier that is certified for the first time or modifies its Control planning shall submit a full certification based on the controls foreseen for all the products supplied.

This certification should assure the requested quality level and satisfy all the following points at least.

2. SUPPLIES HOMOLOGATION CERTIFICATION

All the first samplings and pre-series, with no exception, are to be supplied with the documents concerning:

- 1) dimensional controls*
- 2) chemical composition*
- 3) mechanical tests*
- 4) electrical tests*
- 5) reliability tests*

The requested controls shall be applied according to the type of material and on the basis of the reference technical documents.

3. LOTS SELF-CERTIFICATION

In order to avoid papers and bureaucracy, the quality and conformity certificate is drawn up and presented only at the first sampling stage (see point 1) and all subsequent supply lots must be up to the quality defined and declared in this document as to:

- 1) dimensional controls*
- 2) chemical composition*
- 3) mechanical tests*
- 4) electrical tests*
- 5) reliability tests*
- 6) other tests that could be specifically requested for in the technical documents.*

Enclosure 1

4. PRODUCTS IDENTIFICATION

- 1) *supplier name*
- 2) *supplier address*
- 3) *ZMC code of the product contained*
- 4) *ZMC description of the product contained*
- 5) *quantity contained*
- 6) *production lot number*
- 7) *date of manufacture*
- 8) *Quality Control issue (stamp and/or signature)*

5. TRACEABILITY

Any product supplied to MCMC should be identified so that to allow both the supplier and MCMC to find it out with certainty in case problems arise, thus determining the cause for the failure.

6. COMPLIANCE WITH TERMS OF DELIVERY AND OTHERS

- 1) *The delivery of ordered products shall take place according to the terms agreed upon*
- 2) *The packaging shall be up to our specifications*
- 3) *The product integrity during the transportation shall be assured*
- 4) *The materials shall be duly protected in the way most suitable to prevent them from oxidising during a minimum time of six months*
- 5) *In case of conflicts or complaints, the supplier shall present the relative certification within 48 hours from ZMC request.*

For any other point see “DELIVERY SPECIFICATIONS”

7. VALIDITY

This kind of product certification shall be valid until when the present document is cancelled or somehow altered; in such case, the supplier has to be informed in written form.

*QA Supplier
Management*

*Supplier Quality
MCMC*

Enclosure 1

LIST OF AMENDMENTS

Edn.	Rev.	New Edn.	New Rev.	Amendt. Date	Page Amended	Line Amended / Added	Reason for modifs.
1	1'03	2	1'04	22/12/04	2/7	Paragraph 5.1.1 Lines 3-5 added	ISO Audit'04

 Electrolux COMPRESSORS	PROCEDURE FOR CLASSIFICATION OF SUPPLIERS	ECC-CQ-PRO-94005.B
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1. Purpose

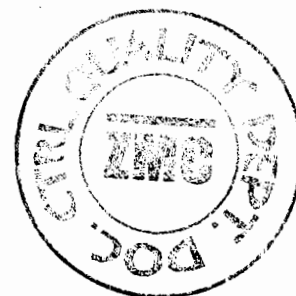
Define a classification of ECC suppliers based on their potential capability to get a quality level of their products which meets ECC requirements.

2. Field of Application

This procedure is valid for ECC-factories.

3. Terms and Abbreviations

ECC/P	Central Purchasing
ECC/CQ	Central Quality
P	Local Purchasing
Q	Local Quality



4. Responsibility

Quality Departments are responsible of the proper application of this procedure as well as Purchasing Offices.

5. Description

5.1 General


All ECC suppliers have to be classified, according to their potential, and included in one of the three categories below:

- A - Acceptable
- B - Restricted
- C - Unacceptable

A manufacturer can supply an ECC plant only if classified "A" or, at least, "B" but an improving plan must be agreed.

Issued by:	Brons <i>Brons</i>	Date: 05.11.98	Valid from 01.12.98
Approved by:	Schlemmer <i>Schlemmer</i>	Date: 10.11.98	

Distribution list ECC: -CQ, -MNF, -P, -TECH
 Factories: Q

 Electrolux COMPRESSORS	PROCEDURE FOR CLASSIFICATION OF SUPPLIERS	ECC-CQ-PRO-94005.B
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5.2 Methods

- (a) Assessment of Quality System according to ECC-CQ-W-XX032 (Quality System Assessment Questionnaire).
- (b) Quality System of the supplier is certified ISO 9001 or ISO 9002 by a credited organization. Supplier is classified "A" automatically.
- (c) Quality System of the supplier has been assessed by another Electrolux Division.

5.3 When

5.3.1 New supplier

A never known new supplier must be classified "A" (or at least "B"), with one of the methods above mentioned, to be considered as ECC supplier.

5.3.2 Existing suppliers

a. Non classified.

It is obligatory to foresee a plan on yearly basis to be able to classify all suppliers already existing (but never assessed). If conditions occur for which it is not possible, or not recommended, to perform the assessment (e.g. a very small manufacturer, business very low, geographic location, etc.) it is possible not to assess this supplier after agreement between Quality and Purchasing. Supplier must be constantly monitored and its performances must be measured. Process Audit (ECC-CQ-W-XX002) is obligatory.

Supplier is classified "B".

b. Classified.

Suppliers which are classified "A" according to method (a) must be reassessed at least every 3 years except when they show low quality performances.


Suppliers which are classified "B" must be reassessed in order to verify the state of improving plan agreed.

6. Remarks

This procedure is obligatory for "Common" suppliers and new suppliers which are supposed to be utilised for two, at least, of the European ECC plants.

7. Documentation

The documents and recordings must be stored according to the requirements of product safety regulations by Q and ECC-CQ.

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8. Applicable Documents

- ECC-CQ-W-XX002: Audit of process, engineering and product
- ECC-CQ-W-XX032: Quality system assessment, questionnaire

!
!

1. Purpose

This procedure describes the responsibility and steps to release:

- New suppliers;
- New components;
- New processes;
- Moved production;
- New tools;
- Change of components, including material;
- Change in process;
- Change in tools.

Component release means the homologation before the introduction into production of the delivery to the Customer. The design release has to be already done by R&D or if necessary it has to be done with co-operation of SQA following the under mentioned method.

2. Field of Application

This procedure is valid for the EC – factories and JV.

3. Terms and Abbreviations

EC	... Electrolux Compressors	CQ	... Central Quality
SQA	... Supplier Quality Assurance	TECH	... Technologies
Q	... Local Quality Management	PROD	... Production
P	... Local Purchasing Management	JV	... Joint Venture
R&D	... Research and Development		

4. Description & responsibilities

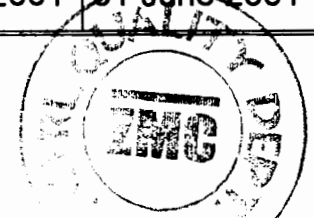
4.1 General

Purchasing is responsible to contact the supplier to request the preliminary offer, based on up to date documents. For a new supplier should be established its profile including information about technical, commercial, logistics and quality aspects (with form ECC-CQ-F-xx005.x) before starting with the negotiations, including the verification about the quality system certification:

- *supplier is not certified*, an assessment by EC-CQ and SQA on Quality Management System in description and application will be performed.
- *supplier is certified*, a "process, engineering and product" audit will be performed by EC-CQ and SQA.

Issued by:	R. Missio / S.R.Uliana	Date:	18 May 2001	Valid from
Approved by:	H. Schlemmer	Date:	18 May 2001	01 June 2001

Distribution list EC: -CQ, -P, -R&D, -B
Factories: PLANT Mgr, Q, P



In case of positive analysis, the potential supplier will be invited by P for a discussion and for starting the release process including the following items:

- EC Quality Policy
- components and materials use conditions
- requirements based on up-to-date documents
- sequence of sampling and release steps
- delivery and trial dates
- number of products
- lot size
- packing
- logistic requirements
- terms of delivery and payment

4.2 Sequence of sampling steps

SQA is responsible for components and materials examination for each sampling step, which is indicated on the "Sampling plan for release" (form ECC-CQ-F-xxx39.x).

For each step it has to be defined, who has to do, what has to be checked and for when, on form "Examination plan" (form ECC-CQ-F-xxx40.x)

After testing the results from all involved departments (e. g. Q; TECH; PROD) are collected and discussed under the responsibility of SQA, which has to issue the "Examination sample report" (form ECC-CQ-F-xxx41.x).

If the results are positive, the next step may begin.

4.3 Initial Sample (step 1)

(number of pieces 10 - 100)

Positive Results:

P informs the supplier and the date for the pilot lot is fixed.

Negative Results:

The initial sample is repeated. P arranges corrective actions and date for improved samples delivery.


4.4 Pilot Lot (step 2)

(number of pieces 100 - 2500)

If the initial sampling is positive the pilot lot is started.

During the check of the pilot lot, SQA gives a priority to the improved measures that have been carried out.



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Positive Results:

Purchasing informs the supplier and the date for the pre-series is fixed.

Negative Results:

The pilot lot is repeated. P together with Q arrange corrective actions and date for improved samples delivery.

4.5 Pre-series (step 3)

(number of pieces 2500 - 20000)

If the pilot lot has turned out to be positive, the pre-series is started. The components and materials to run the pre-series must be produced with definitive tools. SQA should be present during pre-series production to perform a process audit to the supplier plant.

Positive Results:

Pre-series is linked to process audit positive results. The serial production has not to start until all non-conformities are solved.

Negative Results:

The pre-series is repeated. P together with Q arranges corrective actions and date for delivery of improved samples.

4.6 Process audit (step 4)

The process audit to supplier plant should be performed during the pre-series production. If not possible, it must be done before the serial production start. SQA will perform the process audit, if necessary, with co-operation of the others factory functions (e.g.: P, R&D, Tech,.....)
 For applicable documents and forms see paragraph n°9.

Positive Results:

Release for serial production is given. At the same time, the statistical quality control according to the test concept and the monthly supplier evaluation will be started.

Negative Results:

SQA has to follow the corrective actions plan till all of them are solved.



**Remark:**

If the initial step is repeated for 3 times, pilot series and pre-series for twice or only once for serial production, the release process will be stopped. Based on the importance of the material tested, the influence on quality, life and reliability of the finished product, SQA decides about running all three steps or leaving out the **pilot lot (step 2)** in order to reach a quicker release.

5. Release.

Production, Technology, Purchasing/Logistics and Quality functions have to be involved for final release. All function responsible have to sign the "Release for serial production" form (form ECC-CQ-F-xxx42.x).

The release of common parts and components (that will be used in more than one plant) should be co-ordinated by EC-CQ.

6. List of Suppliers.

SQA is responsible for the release and withdrawal of suppliers. All released suppliers should be listed and this list is the basis to place the orders.

7. Confirmation of Orders.

If the purchasing department places written orders it requires a confirmation of order by the supplier. The department needs the confirmation for administrative reason.

8. Documentation

The recording of the controlled characteristics and the evaluation of the lots are stored by SQA office for three years.

For safety components (e.g. motorprotectors, covers, etc.) the storing time is at least 10 years.

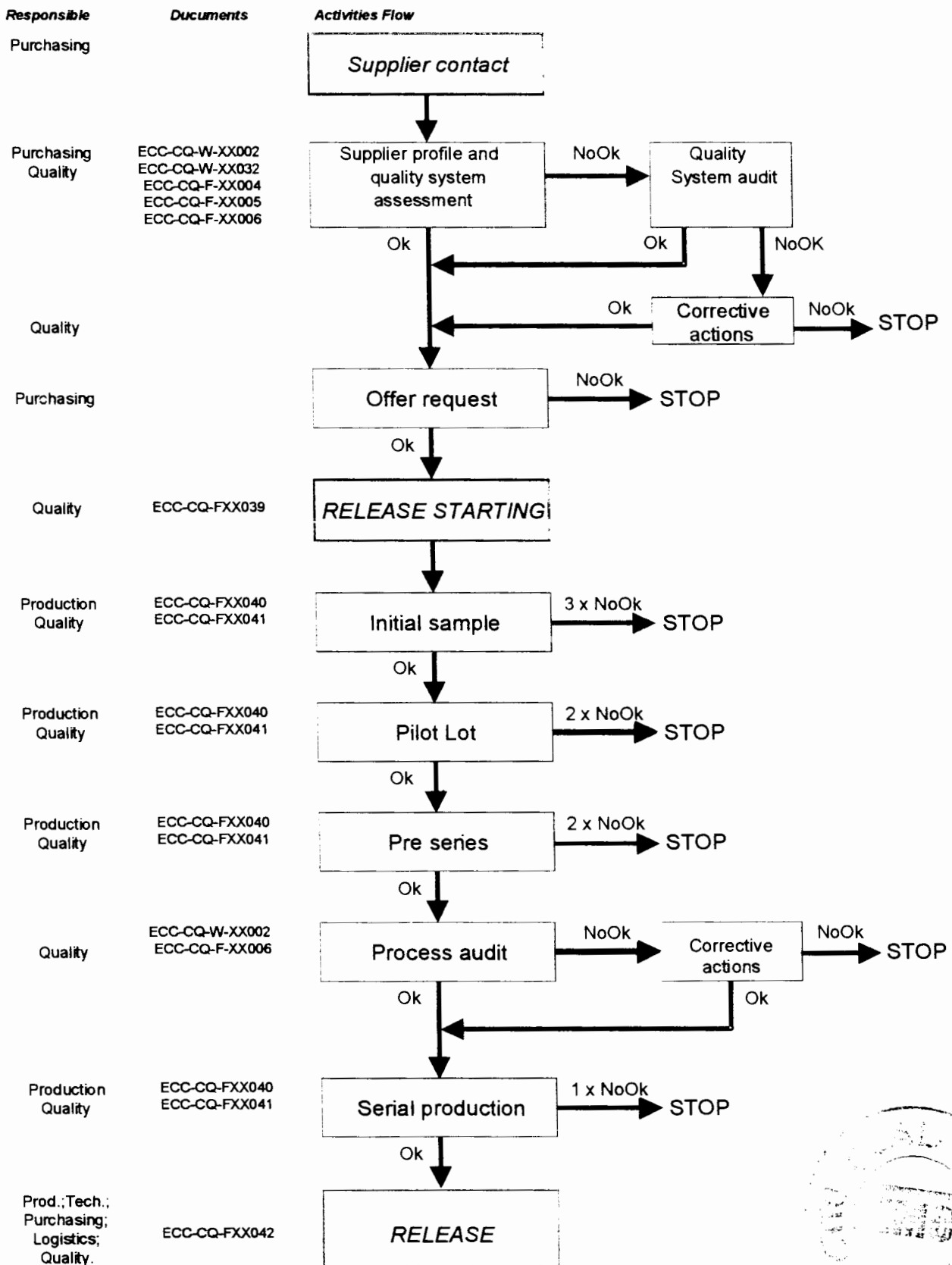
9. Applicable Documents

- ECC-CQ-F-XX004.X: Quality system assessment report.
- ECC-CQ-W-XX032.X: Quality system assessment, questionnaire.
- ECC-CQ-W-XX002.X: Audit of process, engineering and product.
- ECC-CQ-F-XX005.X: Supplier profile.
- ECC-CQ-F-XX006.X: Supplier report, audit of process, engineering and product.
- ECC-CQ-F-XX039.X: Sampling plan for release
- ECC-CQ-F-XX040.X: Examination plan



ECC-CQ-F-XX041.X: Examination sample report
ECC-CQ-F-XX042.X: Release for serial production

10. Flow scheme of release activities.



 Electrolux COMPRESSORS	SUPPLIERS SELF-CERTIFICATION	ECC-CQ-PRO-94006.B
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1. Purpose

To describe the process to realise the self-certification for a supplier.

2. Field of Application

This procedure is valid for ECC-factories.

3. Terms and Abbreviations

ECC/P Central Purchasing
 ECC-CQ Central Quality
 P Local Purchasing
 Q Local Quality



4. Responsibility

Local Quality: is responsible for the proper application of this procedure; is responsible for proposing the supplier to self certification.

Local Quality and Purchasing: are responsible for the approval and signature of the self-certification format.

5. Description

5.1 General

Self certification means that products received by the ECC manufacturing plants are not checked at incoming and they are sent directly to general store or to production lines.

Supplier is completely responsible for the conformity of the product to the requirements.

issued by:	Brons <i>BWB</i>	Date: 05.11.98	Valid from 01.12.98
Approved by:	Schlemmer <i>[Signature]</i>	Date: 10.11.98	

Distribution list ECC: -CQ, -MNF, -P, -TECH
 Factories: Q

 Electrolux COMPRESSORS	SUPPLIERS SELF-CERTIFICATION	ECC-CQ-PRO-94006.B
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5.2 Conditions to reach self certification

Following are the conditions to be satisfied by the supplier:

1. supplier's Quality System has been assessed and released by ECC, or other Electrolux Company, or supplier's Quality System is certified conforming to ISO 9001 or ISO 9002 standards;
2. process has been released according to ECC-CQ-W-XX002 "Audit of process engineering and product";
3. product has been released;
4. at least, for ten consecutive deliveries (or for six consecutive months) no problem has been detected neither by ECC (at incoming inspection or in assembly line) nor by customer.

If the above mentioned steps are satisfied, self certification can be assigned in accordance with the supplier itself.

A certificate will be sent to supplier signed by Plant Quality and Purchasing Managers. Information, copy of declaration format, to ECC-CQ.

5.3 Why self certification

For ECC.

Supplier self certification is a goal to be pursued because it means:

- to have qualified suppliers, if considering the big effort spent to this activity;
- reduction of inspections at in-coming;
- more time available to dedicate to suppliers which are not in self certification and have a very low quality level;
- low stocks of products waiting to be controlled and thus leaner lead time (possibility to organise the production according to just-in-time criteria);
- costs reduction for internal failure;
- higher responsibility for the supplier and thus an higher confidence in his performances.

For supplier.

- A more tight relationship with ECC due to the big effort done together to reach the goal;
- Reduction of raw material stocks;
- A better quality level of his performances;
- A guarantee for assignment of new supplies (because of the quality acknowledgement);
- Self certification form must be considered a pride to be shown to other customer (this means a better image on the market).

6. Remarks

If non-conforming parts are detected in assembly line, supplier will have to react immediately and sort the stocks either at ECC manufacturing plant or at home.

 Electrolux COMPRESSORS	SUPPLIERS SELF-CERTIFICATION	ECC-CQ-PRO-94006.B
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On the contrary ECC manufacturing will provide to sorting. In this case, time cost will be charged back by Purchasing Office plus an extra charge due to time wasted and plus the risk that non-conforming parts have been sent to customers.
If non-conformities occur twice, self certification can be removed and goods incoming inspection introduced again, after communication to supplier.

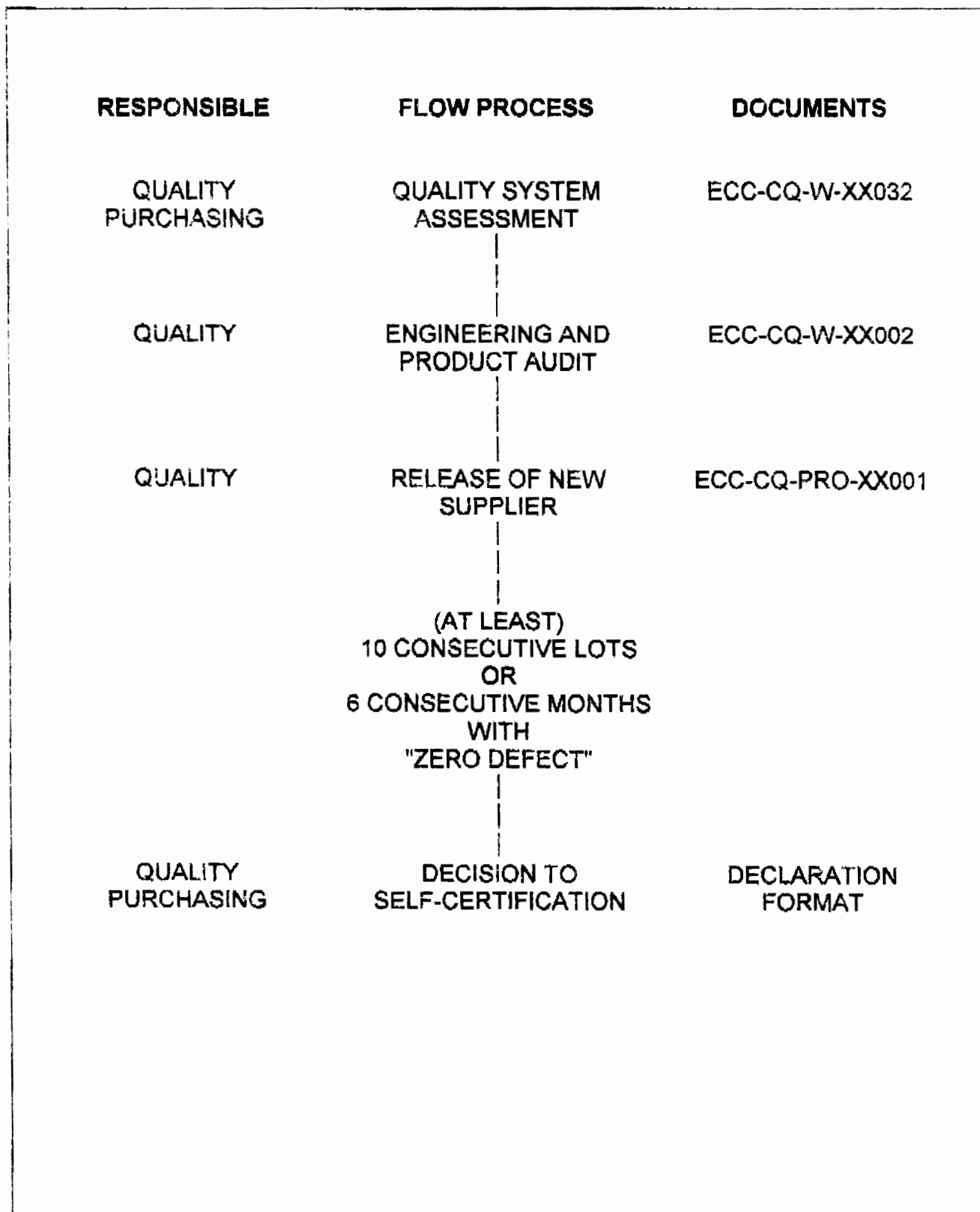
7. Documentation

The documents and recordings must be stored according to the requirements of product safety regulations by Q and ECC-CQ. !

8. Applicable Documents

ECC-CQ-W-XX002: Audit of process, engineering and product !
ECC-CQ-W-XX032: Quality system assessment, questionnaire !
ECC-CQ-F-XX025: Supplier self-certification award !

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ZMC Compressors	Operating Instructions	ZMC3770SQPQ650
	<i>Calculation of Supplier Quality Index</i>	<i>Issue No. : 4</i>

- In order to evaluate the suppliers, ZMC monthly elaborates the quality index of suppliers (SQI) basing on the following formula:

$$SQI = (PPMvs . 0.2) + (RLP . 1) + (CLN . 3)$$

- Where:


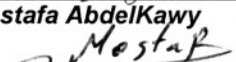
PPMvs : PPM value shifting $[(\frac{PPM\ Line\ Reject - PPM\ Target}{PPM\ Target}) \times 100]$

RLP : Rejected Lots Percentage $(\frac{Rejected\ Lots}{Total\ Incoming\ Lots} \times 100)$

CLN : Claims Number

- The evaluation is stated under the following criteria:

SQI	Evaluation
< 5	A
5 - 10	B
10 - 18	C
> 18	D

Issued by:	Ramy Faxid 	Date: 24/01/2011	Valid from
Approved by :	Mostafa AbdelKawy 	Date : 24/01/2011	Feb.'11

ZMCشركة مصر لصناعة الكباسات (ش.م.م.)
Misr Compressor manufacturing Co.(S.A.E)**PURCHASING DEPARTMENT**

ZMC3770EVPU001

SUPPLIER EVALUATION

ISSUE NO:05

SUPPLIER :

PRODUCT :

DATE:

SER. NO.	EVALUATION POINTS	SCORE	MAXIMUM	REMARKS
1	PPM RATE		60	
2	DELIVERY DATE		60	
3	RESPONSE OF SUPPLYING NON PLANNED ORDERS		30	
4	AFTER SALE SERVICE		10	
5	AFTER SALE GUARANTEES (INCLUDING TECH. SUPPORT)		10	
6	REPUTATION		20	
7	COMMITMENT TOWARDS SUPPLYING CONDITIONS		10	
	TOTAL		200	
	PERCENTAGE		100%	

PURCHASING MANAGER

I.HARISI

DOC. NO: ZMC3770EVPU001	ISSUE NO:05	DATE:23/12/2004
VALID FROM :1/1/2005	ISSUE BY : <i>SHERIF.HK</i>	APPROVED BY : <i>I.HARISI</i>

	<h1 style="margin: 0;">Operating Instructions for Supplied Electrical Parts</h1>	Quality Department
		ZMC3770SQPQ651

Certificates for Electrical Parts

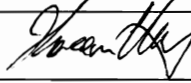

- *SQ shall ask for a copy of certificates for all electrical components from the certified suppliers, where SQ informs PURCH, and PURCH shall ask for the copy of the certificate from the supplier.*

Validity of Certificates for Electrical Parts

- *It is a must to check the validity of certificates for the certified suppliers; SQ shall check the validity of this certification once a year for each supplier.*

Periodic Check for Electrical Parts

- *For assuring the quality of electrical parts; SQ shall do a periodic check on the incoming supplied electrical parts, whereas this check is made to be once per year for each electrical part. Electrical parts which have a standard test in the incoming laboratory is checked according to specifications, and electrical parts which do not have a standard test in the incoming laboratory; a life test in the quality laboratory is applied to samples from the incoming shipments as if a new supplier is being released.*

Issued by:	Kareem Hany		Date :	19/01/2014
Approved by:	Sayed Soliman		Date :	19/01/2014

