

Organisation and operative modalities

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The Company Policy of C.M. Europa Stampi

"To Believe for Growing: A necessary Choice"

C.M. Europa Stampi S.r.I. operates in an organized system where professionalism, experience, determination and efficiency are the everyday ingredients that allow us to achieve the satisfaction of our customers.

The world challenge of globalization today must push us to constantly improve to achieve the following objectives:

- reduced production time
- compliance with contractual terms
- improved services
- continuous improvement to the quality/price ratio;
- increase in our shares of penetration in the major world markets

For this purpose we especially intend to take advantage of the following operating strategies:

- increase the motivation, involvement and growth in the skills and professionalism of personnel;
- more agreements with business partners
- improve the internal distribution of data and information, stimulating people to use it in managing their tasks and achieving their objectives;
- stimulate a systematic internal dynamic of improvement;
- identify, quantify and monitor quality objectives using appropriate indicators;
- adapt and constantly innovate infrastructures, and take precautions with the work environment to improve personnel safety and product quality.
- constantly search for the methods of production to reduce processing times.
- encourage by every possible means the standardization of our products, aimed at reducing product implementation times and costs.

For the above, managers of the corporate functions that report directly to the Management are required, within the boundaries of their area of responsibility, to identify their objectives, in line with corporate aims, and monitor them to ensure they are achieved.

The Management, supported by the Quality Assurance function, undertakes to intervene so that the quality management criteria, principles, methods and strategies adopted, are constantly implemented and upheld by personnel.



General Information

C.M. Europa Stampi s.r.l.

Via Torretta, 50							
40012 Calderara di Reno (Bologna - Italy)							
Tel:	0039/051/729277						
Fax:	0039/051/729267						
E-mail:	info@cmeuropastampi.it						
Internet:	www.cmeuropastampi.it						
VAT-no.	IT00506661206						
Registered at the C.	C.I.A.A. ¹⁾ with no. 177571						
Registered at the Co	ourt of Bologna with no. 27359						
No. of omployeee	22 in data May 2015						
No. of employees:	33 In date May 2015						
Covered area:	2800 m ²						

¹⁾ Chamber of Commerce, Industry, Agriculture and Small Industry



Our History

C.M. Europa Stampi was founded in March 1966 as a result of the experience gained in the mechanical sector by Mrs Cremonini. The first works of 500 m² was situated in Trebbo di Reno (BO).

The business of C.M. Europa Stampi focuses on the design and manufacture of dies and injection moulds.

The Policy of C.M. Europa Stampi is that of offering our Customers a product boasting the very latest die-casting and injection technology, as well as providing an optimum ratio as regards technology employed/investment required and a high standard of Customer service.

The market has appreciated such policy, allowing C.M. Europa Stampi to make its mark and increase sales.

In July 1991, C.M. Europa Stampi moved to Calderara di Reno, in a works of 2800 m² where it was able to install extremely modern design and manufacturing technology such as: CAD software offering precision and detail and CNC machines, enabling dies and moulds of great complexity and quality to be produced, for presses of up to 3500 tons and overall weight of up to 35 tons.

The leading-edge technology employed by C.M. Europa Stampi has allowed the company to further increase its turnover and supply businesses in the automotive and electronics sector.

The picture shows a typical HPDC-tool manufactured by C.M. Europa Stampi:





Organisation Chart





Flow chart





Yielding Capacity

C.M. Europa Stampi is equipped with advanced technologies and qualified personnel enabling the Company for the production of dies of remarkable complexity in order to serve presses up to 3.500 tons, with complete weights up to 35 tons.

The following table provides a summary of the C.M. Europa Stampi personnel set-up and production capacity divided between Departments or Offices with current number of figures; a list of machinery and equipment from the various Departments and/or Offices is given further on.

Department	Personnel	No. of machines	Developed hours per year	Notes
Technical Department	5	*	9.000	Headman: (1) Tool-Design: 2 +1 Modelling: 2
Milling	6	8	34.000	CAM department: 1
Erosion	2	5	19.000	Sink erosion (EDM): 2 Wire cutting: 2 Sink drilling:1
Fitting & Maintenance	10	8**	20.000	
Warehouse	1	none	2.000	
Test and Metrology	1	2	2.000	
Production Management	1	none	2.000	
Sales and Marketing	2	none	4.000	
Estimate Department	1	none	2.000	
Purchasing	1	none	2.000	
Quality Assurance	1	none	2.000	
Administration and Finance	2	none	4.000	
Total ***	33		102.000	

* for the technical dept. equipment please see the proper list.

** includes just machines for deep-drilling, grinding, radial drilling and lathes; the detailed list of all machinery and equipment from the Fitting Department appears in a separate list.

*** all outsourcing for specialized manufacturing (i.e. tool frames, core-pins, tool guidance, etc..) has to be considered in addition



Technical Department

The detailed equipment regarding Workstations & Software for 3D-Design and detail drawing is shown in the following table:

Producer	Software	Module	No. of Workstations	OS	Data Interface
PTC	Pro / ENGINEER	3D Solid	5	Windows	NEUTRAL IGES STEP
PTC	PTC CREO 3D Solid		5	Windows	NEUTRAL IGES STEP
CAD-CAM STRÄSSLE	Euklid	3D Surface	2	Windows	VDA IGES
SIEMENS	NX	NX 3D Solid		Windows	IGES STEP PARASOLID
AUTODESK	AutoCad	2D	5	Windows	DXF
DASSAULT Systemes	Catia V5	-	1	Windows	only for Data interface
TTF	Project Reviewer	ct Reviewer 3D Viewer		Windows	CATIA V4-V5 PRO-E Unigraphics IGES

Work Shop - CAM

The detailed equipment regarding Workstations & Software is shown in the following table:

Producer	Software	Module	No. of Workstations	OS	Data Interface
SESCOI Taglio	WORKNC	CAM 5 axis	2	Windows	IGS, VDA
Microsystem	FIKUS	EDM Wire Erosion	1	Windows	IGES DXF

All workstations are finally connected by Ethernet Network



Data Exchange - FTP

Data without size-limits can be exchanged through our FTP site using a common Internet explorer. Of course an own login is provided for each costumer or supplier.





Milling Department

The Milling Machine Department is fitted with CNC machines connected to CAM software; as regards computer equipment in particular, the Milling Machine Department) is equipped with:

- 1 Three-dimensional CAM for the execution of the tool paths
- 4 Computer for the management between CAD-CAM and CNC machines

The detailed equipment is shown in the following table:

				atic Tool	des icturing	ı Milling	ing	peed
Producer	Model	Machine Type	Working area	Automa change	Electro Manufa	Rough	Finish	High s milling
Parpas	DIAMOND (20000 g/l') CNC: Heidenhain TNC 530	Gantry 5-axis	2400 x 1700 x 1000					
Soraluce	FP-600 Iso 50 (5000 g/l')	Moving support 5-axis	6000 x 2000 x 1200					
CB Ferrari	D23-E550 Iso 45 (24000 g/l') Elexa E540	Portal 5-axis	1700 x 1300 x 800					
FPT	STINGER HSK A63 (15000g/l') CNC: Heidenhain TNC 640	Portal 5-axis	1750 x 1400 x 800					
HURCO	DCXi 32 Iso 50 (6000 g/l') CNC: WINMAX 9	Portal	3200 x 2100 x 920					
Hermle	C 800 V HSK A63 (15000g/l') CNC: Heidenhain TNC 430	Fixed bed	800 x 600 x 500					
Rambaudi	Ramcenter 800 iso 40 (10000 g/l') CNC: Selca 3045	Portal	1000 x 800 x 400					
CB Ferrari	A 17 CNC Elexa E 500	Shelf	1000 x 470 x 400					



Electron Discharge Machining Department (EDM)

The following table provides details of the machines used in the Electron Discharge Machining Department:

Producer	er Model ^M		Working area	Notes
ONA	HS 700	Sink erosion	2300 x 1300 x 700 Tank dimensions	C-axis 120 Amp.
Charmilles	Roboform 810 CNC 120 A.	Sink erosion	2200 x 895 x 400 Tank dimensions	C-axis
Charmilles	Robofil 690	Wire cutting	800 x 600 x 400 Cutting field	automatic wire thread.
Charmilles	Charmilles Robofil 510		700 x 400 x 400 Cutting field	automatic wire thread.
SIELT	Drilling Syntesis 2F CNC	Sink drilling	Table: 1600 x 1000 1000 x 750 x 540 Drilling field	Ø drilling 0,3÷3mm

EDM Department includes no.1 CAM computing workstation for wire cutting path.

Drilling and Grinding Department

The detailed list of machinery and equipment in this Department is as follows:

Producer	Model	Machine type	Q.ty	Working area	Notes
IMSA	MF 1000 B2	CNC Deep hole drilling	1	800 x 1000	with rotating table
SAS	TL 1600	Radial Drilling	1		
SAS	TL 2000	Radial Drilling	1		
Favretto	TC 1000	Tangent Grinding	1	500 x 1000 x 500	
Favretto	MD 160	Tangent Grinding	1	850 x 1800 x 750	



Turning and Fitting Department

The detailed list of machinery and equipment in the Fitting Department is as follows:

Producer	Model	Machine type	Q.ty	Working area	Notes
Wagner	200 CNC SIEMENS	Parallel turning machine	1		CNC SIEMENS
Monofap	175	Parallel turning machine	1		with Heidenhain quote display
Monofap	350	Parallel turning machine	1		with Heidenhain quote display
FAMU		Drilling with movable table	3		with milling quotes display
Deckel	KF1	Pantograph	1		with quote display
Deckel	KF2	Pantograph	1		with quote display
	Special working benches	Polishing	4	with rotating and inclinable tables	Polishing devices (ultrasound, sparked paste)



Test and control department

Amongst the instruments available to the Inspection and Metrology Department, it is worth noting two 3D control machines:

Producer	Model	Machine type	Q.ty	Working area	Notes
Hexagon	Romer Absolute Arm 752061	Laser Skanner cnc control system	1	2.0 Mt	(*)
D.E.A.	Range 1102	Three- dimensional CNC control machine	1	1010 x 660 x 660	(*)
Nikon		Enlarged profile display	1		
Mitutoyo		Microscope	1		with micrometric movable plate
		Checking plane	1		In granite

(*) Our D.E.A. measuring machines are equipped with software "**Surfer NT**" to allow dimensional control using directly a 3D model supplied by the Customer.

In addition the Inspection and Metrology Department has the equipment for effecting control and calibration of workshop control instruments such as gauges, micrometers, comparators.

Internal movement

Producer	Model	Machine type	Q.ty	Working area	Notes
-	-	Roof Crane	1	25 tons	Fitting Dept
-	-	Roof Crane	1	12 tons	Fitting Dept.
-	-	Roof Crane	1	7 tons	Milling Dept
-	-	Roof Crane	1	5 tons	Milling Dept
-	-	Fork lift	1	2.5 tons	



Management of Production Flow

Planning

The necessary activities to execute each individual job are planned in a document called Job Schedule. This is a GANNT chart that displays the allocation of the necessary resources over time matching them to work load capacities to hit the delivery dates required by the Customer. Copy of this document is supplied to the Customer

Example taken from a time schedule:

Riepilogo

2-FACH

ID	a	Nome attività		italiano	Cod.Com.	ura	Inizio	%	Fine	aprile maggio giugno luglio agosto :
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5		3D-model arriva	ils from customer	finitivo	S135E00	##	mer 13/04/11	0%	mer 13/04/11	KE-
6	\checkmark	lay-out PRO-E		Layout	S135E00	##	ven 15/04/11	100%	ven 15/04/11	progettazione
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12		order steels inse	rt	grezzo	S135E00	##	lun 02/05/11	0%	lun 02/05/11	-progettazione
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14		CONSTRUCTION &	CAD 2D	NE 2D	\$135E00	##	mar 03/05/11	0%	ven 03/06/11	
15		lay-out finishing		· Pro-E	S135E00	##	mar 03/05/11	0%	mar 10/05/11	progettazione
16		fixed side 3D-sol	id	e fissa	S135E00	##	mer 11/05/11	0%	ven 13/05/11	progettazione
17		fixed side insert	2D drawing	isa 2D	S135E00	##	lun 16/05/11	0%	mar 17/05/11	progettazione
18		fixed side bolster	2D drawings	ssa 2D	S135E00	##	mer 18/05/11	0%	gio 19/05/11	progettazione
19		fixed side 2D dra	wings accessories	isa 2D	S135E00	##	mar 31/05/11	0%	mar 31/05/11	progettazione
20		moving side 3D-	solid	mobile	S135E00	##	lun 16/05/11	0%	mer 18/05/11	proventazione
21		slide block 3D-so	blid	carrelli	S135E00	##	gio 19/05/11	0%	gio 19/05/11	progettazione
22		moving side inse	rt 2D drawing	pile 2D	S135E00	##	gio 19/05/11	0%	ven 20/05/11	progettazione
23		slide block 2D dr	awing	elli 2D	S135E00	##	lun 23/05/11	0%	mar 24/05/11	propettazione
24		moving side bols	ter 2D drawings	pile 2D	S135E00	##	mer 25/05/11	0%	gio 26/05/11	progettazione
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Job status

Particolare: VW-DECKEL LI

The Job Schedule is steadily updated to reflect current job status and is made available to Customer at request. Affected departments use the Job Schedule to create their planning documents for internal use.

Attività estern

Pagina 1



Engineering

The basic information for engineering work is supplied by the Customer who provides casting drawing and die-casting machine specifications as well as any in-house standards relating to components and materials.

The engineering process consists of several stages:

The first stage is a preliminary study (die layout) aimed at defining the main elements of the die and its design concept. Engineering then submits the preliminary study to Customer for their approval.



The second stage begins after Customer approves die layout. This is the die development phase, when both mechanical detail design and die impression design (modelling) are generated.





- The third stage consists in partial design validation for die mechanical parts (CAD 2D) and impression area (CAD 3D).
- The fourth stage consists in initial sample approval and geometrical measurements, which are submitted to Customer for final project sign-off.



Die development is performed in close cooperation between C.M. Europa Stampi and Customer and is a flexible process that allows modifications to be evaluated and incorporated into die design at any time. Effective revision management is ensured by change indexes that are updated as required to keep track of engineering changes.





C.M. Europa Stampi will also use 3D design (mathematical model or modelling) provided by Customer as a starting point for the engineering process.



Upon job completion, C.M. Europa Stampi maintains all related documents during 10 years after project sign-off date (Customer's approval of initial sample).

Design and production control

C.M. Europa Stampi has implemented self-checking procedures and partial validation procedures for the die; more specifically, it checks electrodes and castings of the sample tests on DEA measuring benches.

All controls are carried out by C.M. Europa Stampi according to procedure as it follows :

Checkpoint	provided acc. to procedure	Notes
Incoming data		dimensional comparison between 2D and 3D data; feedback regarding cast-part engineering
Tool design		multiple checkpoints before starting with manufacturing
Incoming materials and tool parts		dimensional and material conformity, documentation and certificates
Electrodes manufacturing		checked features: sparkling gap, reference points, 3D-comparison, consumption,
Production		self-check (various) during manufacturing
Tool functionalities		Check and optimisation; see also costumer's check-list
Final design and product		possible updates after manufacturing; costumer's check-list, supplied documentation

→ included



Materials and Heat Treating

Materials of main tool parts

Die components are manufactured from adequate materials as indicated in the table below, such to ensure the best reliability/cost ratio:

Component		Material		Heat treatment
	Number	DIN	AISI	ficut troutmont
Bolster	1.2312 1.2738	40CrNnMoS86	P20	Pre-hardened ~300 HB
Inserts & slide-blocks (*)	1.2343 1.2344	X38CrMoV5-1 X40CrMoV5-1	H11 H13	Hardening 44÷47 HRC, Stress Relieving before tryout;
Guidas for slida black	1.2312	40CrNnMoS86	P20	Nitriding NT4
	1.2343	X38CrMoV5-1	H11	Hardening 44÷47 HRC – Tennifer treatment
Ingate bushing and Sprue	1.2343 1.2344	X38CrMoV5-1 X40CrMoV5-1	H11 H13	Hardening 44÷47 HRC + Nitriding NT4
Tool support	1.1730		C45	-
Ejector plates	1.1730		C45	-

(*) The steel supplier and in detail the steel type is generally defined by the customer. If this information is missing, C.M. Europa Stampi comes back with a own proposal. The costumer will always find the chosen steel type clearly specified in our offers.

Inserts & slide-blocks (front parts) are manufactured solely from materials accompanied with certificate and related documents. C.M. Europa Stampi maintains all submitted certificates which are available for review at request.



Heat Treat Processes

Heat treating is performed by Sub-suppliers specialising in each specific heat treating process who certify process compliance with material manufacturers' specifications. Hardened and stress-relieved materials designated for the manufacture of shaping elements undergo strict incoming inspection both upon receipt of annealed materials and after the hardening process at C.M. Europa Stampi.

Upon receipt, materials undergo micro-structural analyses and are inspected for conformity to SEP1614 standards.

Sub-suppliers to C.M. Europa Stampi are required to submit hardness certificates and to document their heat treating processes. Micro-structural analyses before and after hardening are performed by C.M. Europa Stampi at a certified supplier.

Material Certificates

C.M. Europa Stampi maintains all submitted certificates regarding incoming material, heat treatments and material testing, which are available for review at request, according to following table:

	Available	e certificat	es & stand	ard materia	al testing	Option	al material	testing
Tool part	Material certificate	Hardening cycle with diagram	Microstructure before Hardening	Microstructure after Hardening	Stress relieving	Ultrasonic test	Chemical Analyses	Charpy test
Inserts & slide- blocks						0	0	ο
Bolster								



 \rightarrow included

→ at Customer's request, C.M. Europa Stampi can provide additional material testing



Some examples for submitted certificates

Steel certification:

			C)	For Optin		PT		
		Tes	st (Certi	ifica	ite		
		ORV	48	[®] Sl	JPR	EN	IE	
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Hardening cycle certification (Nipre® + Salt tempering):





Sub-suppliers

C.M. Europa Stampi cooperates with qualified Sub-suppliers included in the List of Approved Vendors and continuously monitors their quality performance in terms of product/service supplied.

At Customer's request, C.M. Europa Stampi will utilize Sub-suppliers other than those included in the Approved Vendor List.

C.M. Europa Stampi's Approved Vendor List is available to all Departments/Activities who deal with Sub-suppliers for technical or commercial matters.

Control of machines and instruments

C.M. Europa Stampi has implemented procedures relating to the preventive maintenance of machine tools; these make reference to manufacturers' directions; such procedures provide for an annual check that when executed feed and operating movements fall within the tolerance limits set by the manufacturer.

C.M. Europa Stampi has implemented procedures relating to the calibration of measuring instruments that are all identified and recorded in a special register. With particular regard to the three-dimensional measuring benches, it has taken out maintenance and calibration contracts with the respective manufacturers.



Business Conditions

Offer validity

Estimate validity for the supply of complete equipment is 1 month starting from the date of the offer.

Changes

Each modification required by Customer is evaluated by "C.M. Europa Stampi" and a modification offer is provided. The development of die works will go on if the modification does not affect works in progress; on the contrary, works will be temporarily suspended until confirmation of modification estimate.

Warranty

"C.M. Europa Stampi" guarantees the equipment with Customer approved drawing and using approved materials and certified treatments. Moreover we guarantee perfect die functioning until die coming out from the factory and assure maintenance operations to Customer as long as die life.

Delivery Terms

Delivery terms are to be agreed at the order and start from that moment.

In case of modification with works already in progress, a new delivery date is to be agreed. If the new delivery date is not established, we will decide about new terms.

In the case that a new delivery date might not be set, new terms are to be considered dependent on company workload, but in any event will be subject as little delay as possible.





Dies for pressure die-casting and injection moulds for plastics

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