

## CUT-TO-LENGHT LINE

# BUSINESS OCCASION

**CTL LINE FIMI**  
**2000 x 2,0 ÷ 6,0 mm**

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**Remark: pictures are only for reference**

PURPOSE



## MATERIAL SPECIFICATION

### Inlet Material

Material Type	Carbon steel		
Ultimate tensile Strength	Max	600	N/mm2
Ultimate Yield Strength	Max	400	N/mm2
Elongation	Max	20	%
Thickness	Min.	1,5	mm
	Max	6,0	mm
Width	Min.	500	mm
	Max	2.050	mm

### Coil data

Weight	Max	30.000	Kg.
Internal diameter	610 -760- 850 mm		
External diameter	Max	2.000	mm

### Outlet Material

### Sheet data

Length	Min.	1000	mm
	Max	8.000	mm
Width	Min.	800	mm
	Max	2.100	mm

### Sheet data

Sheet	Min.	500	mm
	Max.	6000	mm
Tolerance	+/-	0.5	mm
Weight	Max	6000	Kg
Stacking method	into pallet or without pallet		

## PERFORMANCE

LENGHT	CUT NUMBER/ MIN	SPEED OF THE LINE
1000	30	30
2000	25	50
3000	16.6	50
4000	12.5	50
5000	10	50
6000	8.3	50

**GENERAL DETAILS**
**Characteristics of the line**

Manufacturing year	1991		
Inlet Speed	0 –5	m/min	
Working speed	Max	50	m/min
Working direction	Right to left		
Line reference	centre		
Pass Line height	1.500	mm	about

**Electrical Characteristics**

Three phase voltage	400 V	50 Hz	
Auxiliary voltage	230 V	50 Hz	
Solenoid valve voltage	24 V	D.C.	

**Hydraulic Characteristics**

Hydraulic oil pressure	120	bar	
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**Pneumatic Characteristics**

Normal compressed air pressure	6	bar	
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**Standard Colors**

Fixed parts	Green	Ral 6011	
Mobiles parts	Cadmium Yellow	Ral 1021	
Carters	Cadmium Yellow	Ral 1021	
Hydraulic equipments	Galvanized		
Pneumatic equipments	Galvanized		
Electrical equipments	Grey	Ral 7035	
Line protection	Grey	Ral 7035	

**SCOPE OF SUPPLY**

<b>ITEM 01</b>	<b>UNCOILER GROUP + 3 STOCKING RAMP</b> <ul style="list-style-type: none"><li>• Entry coil car</li><li>• Uncoiler</li><li>• Frame with anticoil break</li><li>• Bending roll</li></ul>
<b>ITEM 02</b>	<b>ENTRY GROUP</b> <ul style="list-style-type: none"><li>• Coil opening table</li><li>• Frame with pressure roll</li><li>• Bending Roll</li><li>• Entry Pinch-Roll and Straightening</li></ul>
<b>ITEM 03</b>	<b>CENTERING SYSTEM AND SIDE TRIMMER</b> <ul style="list-style-type: none"><li>• Scrap conveyor</li><li>• Scrap Baller</li></ul>
<b>ITEM 03</b>	<b>LEVELLING</b> <ul style="list-style-type: none"><li>• Levelling machine</li><li>• Tachometer wheel.</li></ul>
<b>ITEM 04</b>	<b>CUTTING</b> <ul style="list-style-type: none"><li>• Flying shear.</li></ul>
<b>ITEM 05</b>	<b>STACKING</b> <ul style="list-style-type: none"><li>• Deflecting belt conveyor</li><li>• Scrap carriage</li><li>• Belt conveyors to the stacker</li><li>• Stacker.</li><li>• No. 1 stacking platform with flat plane and inline discharge</li></ul>
<b>ITEM 06</b>	<b>HYDRAULIC AND PNEUMATIC EQUIPMENT</b>
<b>ITEM 07</b>	<b>ELECTRIC EQUIPMENT</b>
<b>ITEM 08</b>	<b>EXISTING DOCUMENTATION</b>

**DESCRIPTION**
**ITEM 01 UNCOILER GROUP + 3 STOCKING RAMP**
**Entry coil car**

<i>Technical Characteristics</i>	
Motorization for traverse	Hydraulic motor
Lifting	Hydraulic Cylinder
Traverse run	Movable under floor level
Vertical stroke	Max to the mandrel
Saddle	"V" shaped saddle to support the coil.
Rolls motorization	Hydraulic Motor

**Uncoiler**

<i>Technical Characteristics</i>	
Type	Double uncoiler
Movable with regard to center line axes	± 100 mm
Uncoiler positioning	Hydraulic cylinder
Mandrel nominal diameter	610, 762 -850mm, mandrel with steps
Mandrel expansion	Hydraulic cylinder
Motorization	C.C. VVVF motor
Brake type	Hydraulic

**ITEM 02 ENTRY GROUP**
**Coil opening table**

<i>Technical Characteristics</i>	
Type	Telescopic with fixed opening tooth
Lifting movement	Hydraulic cylinder
Extension movement	Hydraulic cylinder

**Frame with pressure roll**

<i>Technical Characteristics</i>	
Pressure roll	steel.
Up & down movement	Hydraulic cylinder
Roll rotation	Hydraulic motor

**Pinch-Roll and Straightener**

<i>Technical Characteristics</i>	
Pinch roll	Motorized -by cc motor
Straightener	£ driven Rolls + 1 corrector

**ITEM 03 SIDE TRIMMER + SCRAP CONVEYOR**

<i>Technical Characteristics</i>	
Blades diameter	300 mm
Straightener	£ driven Rolls + 1 corrector
Scrap baller Diameter 800 mm	Idraulic Mouvement

**ITEM 03 LEVELLER**
**Levelling machine**

<i>Technical Characteristics</i>	
Rolls	15x75 No.15 levelling rolls diameter 80 mm.
Rolls cassette type	4-high : working rolls & back-up rolls
Upper levelling rolls	No. 7
Lower levelling rolls	No. 8
Rows of back up rolls, lower and upper.	No. 7
Driven shafts	15
Rolls cassette locking	By screws
Upper rolls positioning and control	by DC VVVF gear motors
Localized correction of lower back-up rolls	motorized
Main motorization	D.C. VVVF motor for levelling rolls rotation
Brake type	Pneumatic with brake disk

**ITEM 04 FLING CUTTING**
**ITEM 05 STACKING UNIT**

<i>Technical Characteristics</i>	
Number of Box	1
Sheet	500 x500 mm Min - 2000 x 6.000 mm max.
Functioning mode	CONTINUOS
Sheets stacking	With or without pallet/beams
Package discharge	In line

Head back-stop with positioning according to sheets length by means of A.C. motor.

Movable walls for sheet lateral guide, positioned according to material width by means of A.C. motor.

“Rackets” devices to support sheets during stacking driven by A.C. VVVF motor.

End back-stop.

**No. 2 stacking platform**

Stacking platform for package length max 3000 mm + 3000 mm .

Lifting movement by means of hydraulic cylinder.

Motorization by means of A.C. VVVF motor.

Motorized lateral discharge operator side.



**ITEM 06 HYDRAULIC AND PNEUMATIC EQUIPMENT**

Hydraulic power pack located nearby the line).  
 Hydraulic electro-valves are grouped onto single stand mounted aboard each single machines.  
 A tray is fitted underneath each hydraulic manifold to collect accidental oil leakage.  
 Pneumatic valves mounted aboard each single machine.

**ITEM 07 ELECTRICAL EQUIPMENT**

*Generalities*

**Low voltage power supply network**

Three-phase voltage	380 V
Frequency	50 Hz

**Climate & Environment Conditions**

Operation environmental temperature	- 5° + 40°C
Storage Temperature	- 5° + 45°C
Relative humidity	35 - 80%
Climate	Continental
Altitude	Lower than 1000 m on the sea level

**Standards and Characteristics**

The design, manufacture and testing as well as the documentation of the electrical equipment shall be in accordance with:

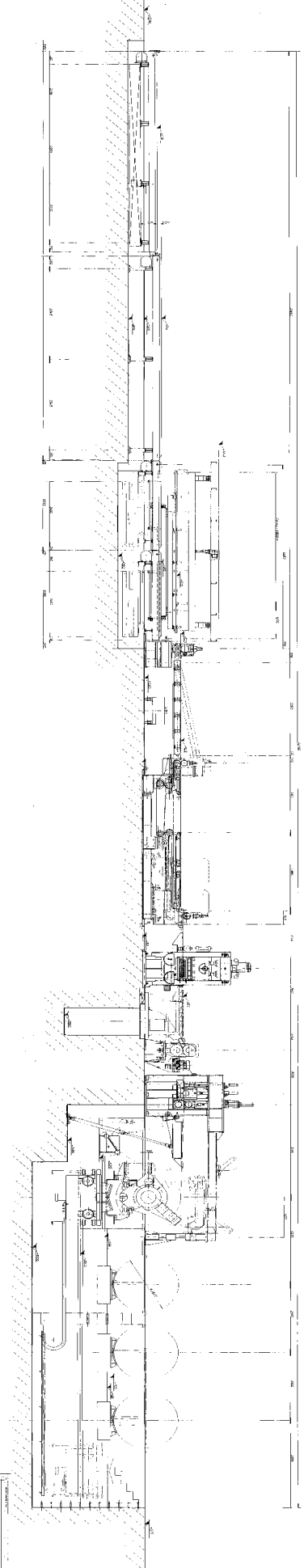
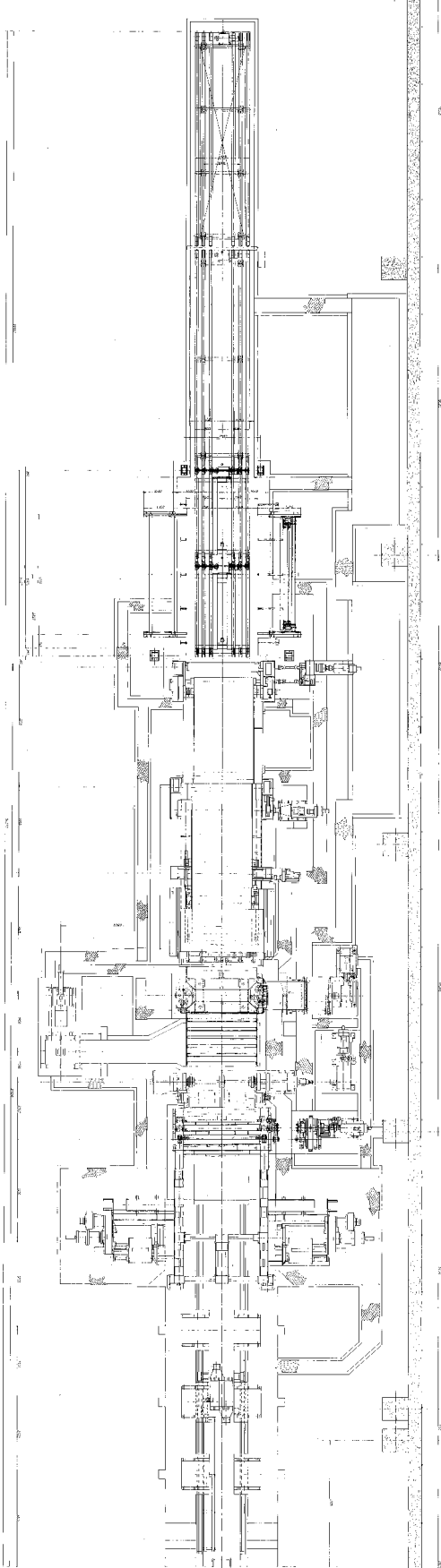
- ISO International Standard Organization
- IEC International Electro technical Commission
- EN European Norm
- SI International System of unit

**ITEM 08 EXISTING DOCUMENTATION**

Document	Language	CD copies
<b><i>During Basic Design stage:</i></b>		
Pass-line drawing	Italian	1
Lay-out drawing		1
Guideline foundation drawings with lists of the embedded materials		1

**PICTURES**


FOUNDATION



## COMMISSIONING AND SUPERVISION DURING ERECTION

ACTIVITIES	RESPONSIBILITY		
	BUYER	FIMI	N.A
<b>INSTALLATION</b>			
RESPONSIBLE OF INSTALLATION	X		
SUPERVISORS		X	
SKILLED PERSONNEL	X		
TRAVELLING COSTS AND DAILY ALLOWANCES	X		
ACCOMMODATION	X		

<b>CONSTRUCTION WORK</b>			
FOUNDATIONS	X		
INSTALLATION ACCORDING TO LAYOUT	X		
DRILLING OF ANCHOR BOLT HOLES / POCKETS FOR ANCHOR BOLTS	X		
BASE LINES AND LEVELS	X		
VERIFICATION OF ALIGNMENT AND LEVELS OF EQUIPMENT (if included in the scope of supply)		X	
GROUTING	X		
WIRING WORKS	X		
PIPING WORKS	X		
FLUSHING OF HYDRAULIC OIL PIPING	X		

<b>TOOLS AND ERECTION MATERIALS</b>			
JACKS, WINCHES, LIFTING STRAPS, CRANES	X		
COMMON TOOLS FOR PERSONNE	X		
SPECIAL TOOLS	X		
WELDING TOOLS	X		
WELDING MACHINES	X		
ELECTRODES/WIRES AND WELDING GASES	X		
EXTENSION CABLES	X		
POWER SUPPLIES DISTRIBUTION (BEFORE THE CABINET)	X		
HYDRAULIC FLUID	X		
COMPRESSED AIR	X		
WATER	X		
LUBRICATING FLUIDS	X		
LUBRICATING FLUIDS, INITIAL FILLING	X		
CONSUMING MATERIALS	X		

ACTIVITIES	RESPONSIBILITY		
	BUYER	FIMI	N.A

ON SITE UNLOADING, STORAGE AND ASSEMBLY OF EQUIPMENT ON FOUNDATIONS			
TRUCKS UNLOADING	X		
STORAGE AND PROTECTION (AS APPLICABLE)	X		
REMOVAL OF EQUIPMENT FROM CONTAINERS/ CRATES AND TRANSFER ON FOUNDATIONS	X		
ASSEMBLY OF EQUIPMENT ON FOUNDATIONS	X		
INSTALLATION TOOLS	X		

ERECTION EQUIPMENT			
OVERHEAD CRANES (LIMITED, IF AVAILABLE AT SITE)	X		
MOBILE CRANES (AS NECESSARY)	X		
FORKLIFTS (LIMITED, IF AVAILABLE AT SITE)	X		

GENERAL			
INSTALLATION-SITE CLEANING	X		
SAFETY EQUIPMENT	X	X	
PERSONAL PROTECTION EQUIPMENT		X	
FIRST AID EQUIPMENT	X		
FIRE FIGHTING EQUIPMENT	X		
FIRE SECURITY AT WORKSITE	X		
WORKS SECURITY	X		
MEDICAL HEALTH	X		
WORKSITE LIGHTING	X		
DRESSING ROOM/OFFICE FOR FIMI S.P.A. SUPERVISORS	X		

COMMISSIONING			
FIRST FILLING OF GEAR BOXES AND HYDRAULIC POWER UNITS	X		
COMMISSIONING RESPONSIBILITY		X	
MECHANICAL OPERATORS		X	
ELECTRICAL OPERATORS		X	
PERSONNEL SUPPORT (AS NEEDED)	X		
FIRST PLANT ENERGIZING (CABINETS AND MACHINE)		X	
CHECK OF MAIN ELECTRICAL CONNECTIONS		X	
HYDRAULIC POWER UNITS (HPUs) START-UP / TESTING		X	
PLANT START-UP AND INITIAL PRODUCTION TEST	X	X	
ACCEPTANCE TEST (IF ANY)	X	X	
TRAINING		X	

**ON SITE ASSISTANCE FOR START-UP**

The supply includes a total amount

0	Man / days
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for the verification of alignment and completeness of installation, commissioning and start-up of the Cut to Lenght Line **excluding the ancillaries.**

The intervention will be in two steps:

**Verification of alignment (step 1):** once the equipment has been assembled, levelled and aligned, one mechanical specialist will arrive to the site to check the correct alignment of the entire equipment and give instructions to the customer for final grouting, wiring and piping works.

**Commissioning, start up and acceptance testing (step 2):** once wiring and piping works are completed, FIMI S.P.A. will send field engineers (normally one mechanical and one electronic) to start up the machine, train the operators, supervise initial production tests and acceptance tests.

**The number of required technicians that take part to each stage of all the activities and the schedule of interventions are mutually agreed, between FIMI S.P.A. and the Buyer, at a later stage.**

In case of necessity to extend the permanence of the technicians for a period, exceeding the days foreseen here in this contract for reason due to **FIMI S.P.A.** the additional days will be at FIMI s.p.a. care (not additional charge).

**In case of necessity to extend the permanence of the technicians for a period, exceeding the days foreseen here in this contract for reason due to the Buyer, the additional days will be separately invoiced at the cost of:**

1000	€/days per person
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**Travel costs, board, lodging in a suitable hotel and local transport are included in the scope of supply**

**Travel costs** includes flight ticket, airport from/to transportation and excess baggage penalties (if required for technical instrumentation).

## EXCLUSIONS

All that is not specified in our offer, and mainly:

- Sound-proof cabinets and devices for the line or single machine according to local, regional, State Laws and Regulations
- Environmental safety devices according to local, regional, State Laws and Regulations.
- Civil works
- Foundations
- Foundation plates with foundation plates supports, underground passages coverings
- Coverings in-between the machines and profile of foundation; coverings to be shaped at site according to profile of foundation
- Galleries and service boards
- Line basements over floor level and operator platform
- Compressor for compressed air
- Oil and grease for first filling
- Bridge crane and Hoists for erection at site (Buyer's supply)
- Air conditioning system
- Grounding system
- Lightning protection system
- Fire detection and fire-fighting systems
- Lights and sockets
- Communication and telephone system
- Video and cameras system
- Electrical Integration for the equipment in option
- Electric power supply with distribution transformers, protections and power centers
- Connection, protections and cables from our cubicle to low voltage distribution
- Strapping machines
- Load cells, operator terminal, label printer and system approval
- Spare parts
- Wearing parts
- Material for line test i.e. coils and packaging materials
- Development software of the PLC (Programmable Logic Controller)
- Development software of HMI (Human Machine Interface)
- Any taxes and/or import duties
- Everything, which is not stated in the present offer.

*The constructor reserve the right to modify the specification of the machine in order to improve the performances or other opportune reason.*

**GENERAL TERMS OF SALE APPLICABLE TO THE DELIVERY OF OUR MACHINES AND PLANTS****1 CONTRACT**

All Sales Contracts entered into by the Supplier incorporate these Conditions in so far as such conditions are not modified by any special terms or conditions agreed to in writing between the parties. An order from the purchaser is deemed to be accepted only after confirmation in writing by the Supplier. Any variations proposed by the Purchaser at a later date than the date of the Contract shall be valid only if accepted in writing by the Supplier. The Purchaser shall not assign his rights under the Contract without the previous written consent of the Supplier.

**2 SCOPE OF SUPPLY**

The scope of the supply shall be specified in the Technical Specification of the Contract. The supply of services and materials not provided for in the Contract will be invoiced separately and the invoices relating thereto will be payable on sight, unless otherwise agreed to in writing.

**3 PRICES AND TERMS OF PAYMENT**

- a) The prices, unless otherwise agreed in writing, are quoted ex-Supplier's factory and all payments are to be made to any of the Supplier's bank accounts in Italy. The said prices are quoted net of Italian Value Added tax and of any other taxes, duties or levies which may be payable in the case of supplies outside of Italy. Any additional expenses (e.g. for packing, shipping, import permits etc.) shall be borne solely by the Purchaser. If, notwithstanding the above provisions, it is expressly agreed that certain of the above expenses are included in the Purchase price and are thus to be borne by the Supplier, the latter shall have the right to amend the Purchase price accordingly if between the date of the Contract and the date of payment there has been an increase in such expenses.
- b) Delayed payments shall automatically bear interest at the rate of 1.4 per month from the due date, without formal notification to the Purchaser being required and without prejudice to the Supplier's right to terminate the contract and/or to claim damages. The Purchaser shall not be entitled to withhold payment of any amount payable under the contract to the Supplier if the Purchaser has not complied with the contractual terms of payment and the "solve et repete" doctrine shall apply in this connection.
- c) Where it is agreed that payment is to be effect by means of drafts, bill of exchange or endorsements, all duties and other expenses in connection with such instruments shall be borne by the Purchaser and the said instruments must be released before the delivery of the goods. In case of default the Supplier may terminate the contract without prejudice to his right to claim damages.
- d) If the Supplier agrees to vary the terms of payment stipulated in the contract by accepting payment by means of drafts, bill of exchange or endorsements, such variation shall not constitute a novation of the contract. In the event of such variation being agreed, the Purchaser undertakes to bear the costs of the discounting or financing operations and any commissions and associated expenses which may become payable.
- e) If delivery of the supplies is postponed either at the Purchaser's request or due to causes beyond the control of the Supplier's, the Supplier may at his discretion adjust the contract price to recuperate any additional expenses resulting from such postponement.

**4. ERECTION AND START-UP**

Unless otherwise agreed in writing, the erection and start-up of machinery or equipment is not included in the Contract. For these services the Supplier will provide the Purchaser at the appropriate time with the applicable ANIMA rates and such services will be invoiced separately. If erection is included in the contract, the Supplier's erectors shall work a 40 hour week (8 hours a day, Saturdays excluded), unless otherwise agreed in writing. During erection work the Purchaser shall be responsible for providing the necessary safety measures. The Supplier shall not be liable for any direct or indirect damages to goods or persons which may occur during erection work, or be caused by it. The Purchaser shall be responsible for obtaining any entry visas or work permits which may be required for the Supplier's personnel. The Purchaser shall also provide for the free entry into its country of all materials and tools required for the erection work. Furthermore, Supplier provides for erection and setting at work of equipments purchased in whatever period of the year, **except** for December and August. As soon as the buyer informs about:

- foundations achieved;
- available energies;
- raw materials ready for general tests and inspections;

the supplier binds himself in reaching the spot by 25 work days to carry out necessary setting at work services. If erection and start up are carried out by the Purchaser, at least one of the Supplier's supervisors must be present throughout the work and its services shall be invoiced to the Purchaser at the above mentioned ANIMA rates. In the absence of such supervision, the Supplier accepts no responsibility whatsoever for the proper operation of the machinery or equipment.

**5. PROPERTY**

The risk in all goods shall pass to the Purchaser upon delivery, but the property of the goods delivered shall remain vested with the Supplier until such time as the Supplier shall have received payment of the purchase price in full, whether or not agreement shall have been reached between the Supplier and the Purchaser for deferred payment terms. The Purchaser shall accordingly not be entitled to resell the goods nor to use any part thereof as security, until the purchase price has been paid in full. In the event of any legal action being brought by third parties which affects the goods in any way, the Purchaser shall promptly inform the Supplier thereof by letter, telex or telegram to enable the Supplier to take the appropriate steps forthwith. Non-compliance with the obligations contained in this clause shall give the Supplier the right to terminate the contract, such termination to be notified to the Purchaser by registered letter, without prejudice to any right of the Supplier to damages.

**6. DELIVERY**

Unless otherwise agreed in writing, delivery shall be made ex-Supplier's factory in Viganò. Dates or periods for delivery stated in the contract are approximate and not binding unless the parties agree to guaranteed delivery dates in the Contract. In such a case the delivery period shall start to run from the date of receipt of the first down payment specified in the contract and for the purposes of compliance with such terms, delivery shall be deemed to have taken place when notice is received by the Purchaser that the Goods are ready for shipment. The Supplier shall have the right to make partial shipments and to claim partial proportional payments. The delivery terms, whether guaranteed or otherwise, shall not apply if

- a) The Purchaser is late with payments.
- b) The Purchaser has failed to comply within the time specified, with any requirements requested by the Supplier to enable the latter to perform his obligations under the contract.
- c) The Purchaser has failed, upon the Supplier's request, to indicate within the time specified his approval of any drawings or plans sent to him by the Supplier.
- d) After the Contract is signed or the Supplier confirms the acceptance of the Order, the Purchaser request construction modifications, or any postponement of deliveries provided for in the contract.

Any variations or amendments requested by the Purchaser shall not relieve it from his obligations to comply with the terms of the contract, at the times specified therein. Any delays due to such events shall not entitle the Purchaser either to cancel the contract or to claim damages.

**7. TRANSPORTATION**

The goods shall travel at the Purchaser's risk, whether or not it is the Supplier who chooses the forwarding agent or carrier and whether or not under the terms of the contract the costs of transportation are borne by the Supplier. Should shipment of the goods or any part thereof be delayed by the Purchaser, the goods shall be stored at the Purchaser's risk and any storage expenses incurred shall be borne by the Purchaser. In such cases the warehouse receipt shall substitute the delivery documents for payment purposes.