

SLITTING LINE

# GUIDA- SLITTING LINE

## 1000 x 0,2 ÷ 2,0 mm

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**INLET MATERIAL SPECIFICATION**
***Uncoiling Intlet Material***

<b>Material Type</b>		Galvanized,HRC-CRC-Stainless Steel	
Ultimate Tensile Strength	Min.	600	N/mm2
	Max	800	N/mm2
Ultimate Yeld Strength	Min.	210	N/mm2
	Max	520	N/mm2
Thickness	Min.	0.2	mm
	Max	2.0	mm
Width	Min.	150	mm
	Max	1000	mm
<b>Coil data</b>			
Weight	Max	12.0	T.
Internal diameter		500 – 600	mm
External diameter	Min.	914	mm
	Max	1500	mm

**OUTLET MATERIAL SPECIFICATION**
***Rewinding Outlet Material***

<b>Coil data</b>			
Weight	Max	12.0	T.
Internal diameter		400-500-600	mm
External diameter	Min.	800	mm
	Max	1500	mm
Width	Min.	150	mm
	Max	1000	mm

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

Working speed	Max.	0 – 125-250	m/min
Working direction	Left to Right		
Line reference	Center		
Pass Line height	1200 mm		
Uncoiling	From the top		
Recoiling	From the top		
Working condition	Min. + 5°C Max. + 40°C		

**Characteristics of circular blades shear**

Shaft Diameter	160 mm
Blades Diameter	250 mm
Cutting Heads available	2

**Electrical Characteristics**

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

**Hydraulic Characteristics**

Hydraulic oil pressure	120	bar
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**Ambiental Condition**

Ambient temperature	Min +5 °C Max +25 °C
Humidity	Max Average 85 %
Altitude above sea level	< 1500m

**Pneumatic Characteristics**

Normal compressed air pressure	6	bar
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SCOPE OF SUPPLY

POS	DESCRIPTION
01	CHARGE COIL CAR
02	UNCOILER OVERHANG MANDREL
03	PRUSSURE ROLLS
04	COIL OPENING GROUP 1
05	TELESCOPIC TABLE
06	PINCH ROLL
	BUTTING SHEAR /GUIDING GROUP
07	OVERPASSING TABLE
08	ENTRY SIDE GUIDES
09	FEEDING PINCH ROLL
10	SLITTING SHEAR WITH AUTOMATIC CUTTING TOOL'S HEAD CHANGE OVER SYSTEM
11	SIDE SCRAP WINDER
12	OVERPASSING TABLE
13	SADDLES
14	TENSIONING GROUP
15	STRIPS SEPARATOR INLET TABLE
16	FELT PRESS
17	TENSONING UNIT
18	OVERPASSING TABLE
19	RECOILER
20	SEPARATOR SHAFT
21	HOLD DOWN PRESSURE ARM ON RECOILER
22	EXIT COIL CAR
23	HYDRAULIC CONTROL SYSTEM
24	ELECTRICAL CONTROL SYSTEM
25	TURN STYLE

## PICTURES

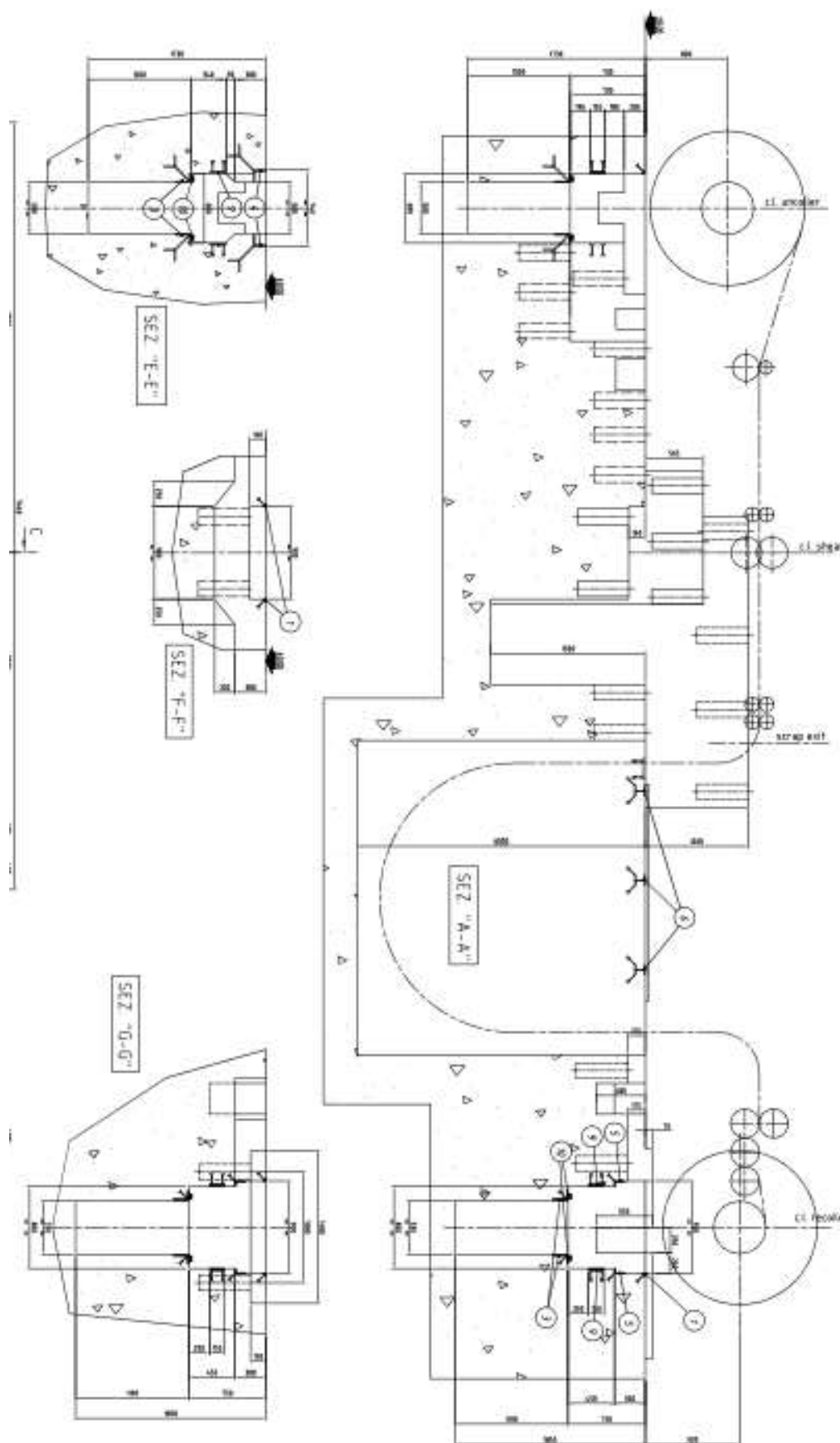




## PICTURES





**PASS LINE & LAY OUT**


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## DOCUMENTATION

Document	Language	CD copies
<b>During Basic Design stage:</b>		
Pass-line drawing	English	1
Lay-out drawing		1
Guideline foundation drawings with lists of the embedded materials		1
<b>Before delivery:</b>		
Quotation of recommended wearing and spare parts	English	1
<b>After line supply:</b>		
Handling instructions	English	1
General Safety Specification		1
Line manuals		1
Maintenance manuals		1
Assembly drawing of each machine, part list	English	1
Hydraulic, pneumatic and lubrication schemes with relevant component lists		1
Electric drawings		1
Control desks and electric cubicles lay-out		1
PLC software backup		1
Licence of run time software of Human Machine Interface		1

## EC DECLARATION

This offer is intended as supply of complete line, built, installed and launched by FIMI Spa.

For this supply Fimi will issue certification according to ANNEX II A to Directive 2006/42 / EC.

## ON REQUEST

## COMMISSIONING AND SUPERVISION DURING ERECTION

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

CONSTRUCTION WORK			
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		X	
GROUTING	X		
WIRING WORKS	X		
PIPING WORKS	X		
FLUSHING OF HYDRAULIC OIL PIPING	X		

TOOLS AND ERECTION MATERIALS			
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		

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 (HPU <sub>s</sub> ) 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 (**excluding travel**) of

0	Man / days
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for the verification of alignment and completeness of installation, commissioning and start-up of the tube mill **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
- 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.

**8. WARRANTY**

- a) Subject to the provisions hereof the Supplier undertakes to repair and make good any defect or failure which may arise within six months from the date of start-up or within 12 months from the date of the notice that the goods are ready for shipment, whichever is later.  
The Supplier shall bear the cost of replacing any defective parts, which shall become his property thereafter.  
The labour cost for the replacement of such parts shall be borne by the Purchaser.
- b) For equipment not manufactured by the Supplier, the applicable warranties shall be those given to the Supplier by his suppliers.
- c) Any claim or request for intervention must in order to be valid be made in writing on the day on which the defect or failure becomes apparent to the Purchaser or on the following day, and the Purchaser shall enable the Supplier or his representatives to carry out the necessary inspections and repairs. In this connection the Purchaser shall make available all the equipment and auxiliary personnel that the Supplier's representatives may require, as well as any accessory work (masonry work etc.).
- d) The Supplier shall not be liable for damage or injury to persons or goods resulting in any way from any defect in the goods, machinery or plant supplied under the contract. The Purchaser shall not be entitled to make any claim against the Supplier in respect of loss resulting from any shut down of the plant or from indirect or consequential damages.
- e) The warranty shall cease to be applicable if the Purchaser has in any way modified the goods, machinery or plant without the written consent of the Supplier; if the erection and/or start-up has been carried out without the Supplier's supervision (as mentioned in Clause 6); in any defect is due to material supplied or work carried out by the Purchaser or to improper use or maintenance (e.g. excessive loads, unsuitable materials, polluted water, etc.).
- f) Furthermore, the warranty shall cease to be applicable if the Purchaser is late with any payment due to the Supplier, even if such payment is related to another supply contract.

**9. SUSPENSION OR TERMINATION OF CONTRACT**

If the Purchaser shall make default in or commit a breach of any of its obligations to the Supplier, the Supplier shall have the right forthwith to suspend any supply under any order then subsisting. If the default or breach continues, the contract to which it relates and any other contract subsisting between the Supplier and Purchaser may be terminated by the Supplier by giving 15 days written notice of termination to the Purchaser. In the event of such termination the Supplier shall be entitled:

- a) To retain any payment made by the Purchaser up to the date of termination by way of indemnity.
- b) To claim further damages.  
Should at any time:
- (i) any event occur or proceedings commence as the result of which, under the laws of the country in which the Purchaser is incorporated or carries on business and/or the constitution of the Purchaser, the Purchaser must or may be placed wholly or partially in liquidation; or
- (ii) the Purchaser compound with its creditors or enter into any similar arrangement or have a Receiver or Trustee (or person with a similar function) appointed over all or any part of its assets or take or suffer any similar action in consequence of debt; or
- (iii) the Purchaser lose the whole of its paid up capital the Supplier shall be entitled, without prejudice to any right which he may have, to claim damages against the Purchaser, to require the Purchaser to furnish such guarantees as the Supplier may consider appropriate or to terminate the contract forthwith.

**10. FORCE MAJEURE**

The Supplier shall not be liable for any delay or for any consequence of any delay in the production, delivery or commissioning of any of the goods if such delay shall be due to fire, strike, lock-out, dispute with workmen, flood, accident, delay in transport, shortage of fuel, default of any sub-contractor, inability to obtain material, embargo, act or demand or requirement of any government department or local authority or as a consequence of war or of hostilities (whether war be declared or not) or to any other cause whatsoever beyond the Supplier's reasonable control. If any such delay occurs, the Supplier shall have the right either to claim an extension of the time for performing its obligations hereunder by such period (not limited to the length of the delay) as the Supplier may reasonably require to complete the performance of its obligations or to terminate the contract, without thereby incurring any liability for damages to the Purchaser, by giving 15 days written notice of termination to the Purchaser.

**11. JURISDICTION**

The contract shall be governed by and constructed in accordance with the laws of Italy. The Purchaser on entering into the contract submits to the jurisdiction of the Law-court of Milan.

Any registration expenses shall be borne by the Purchaser.

As agreed upon that the supplier is the owner of the goods supplied as per contract till the last payment on the base of the regulations better specified in the art. 1523 and following of the Italian civil code.

**12. REGISTRATION OF THE CONTRACT**

In particular, in accordance with the provisions of art.1341 of the Civil Law, he approves the clauses n°3 (price & Payment), n°5 (Property), n°6 (Delivery), n°8 (Warranty), n°11 (Jurisdiction).

PURCHASER'S SIGNATURE