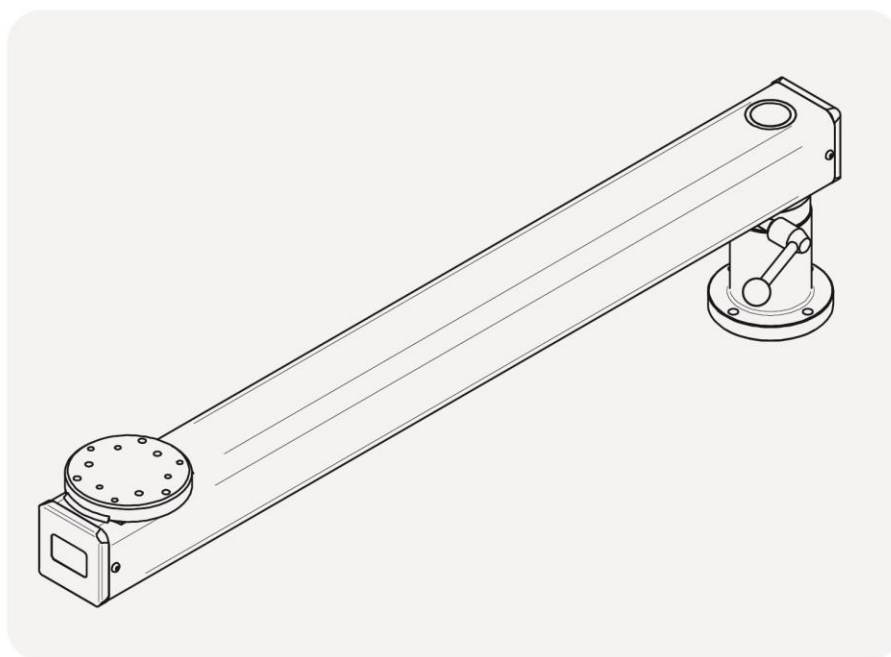

INSTRUCTION MANUAL

EXTENSION 1000

3arm[®]
Handling emotions

RASCAMAT[®]



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2 ABOUT THIS MANUAL

This document is the Extension 1000 instruction manual.

- ORIGINAL MANUAL -

Intellectual/Industrial Property:

Intellectual/Industrial property information Tecnospiro Machine Tools, S.L. (company) reports that all of the contents in this document, including, by way of example, the texts, images, graphic designs, brands, trade names and social belong to society or is incumbent on exclusive use (in later intellectual/Industrial property). It is forbidden the copy, reproduction, distribution, public communication and use, total or partial, of the intellectual/Industrial property, in any shape or form, even quoting the source, without the express consent and in writing by the society. You will also be deemed infringed the rights of the society on the Industrial/intellectual property, in the case of use of any content which, by its nature, is similar to the Industrial/intellectual property.

2.1 CONSIDERATIONS

- ✓ Before using the equipment, make sure you read this instruction manual and follow the safety and operating instructions fully.
- ✓ All the instructions contained in this manual refer to the individual device; the end user is responsible for analysing and applying all the necessary safety measures required for the intended use.
- ✓ This manual must be kept near the device throughout its working life so it can be consulted in the future.

- ✓ If any part of this manual seems unclear, confusing or imprecise, please do not hesitate to contact us.
- ✓ The contents of this manual may be subject to change without prior notice.
- ✓ If the manual is lost or damaged, contact TECNOSPIRO MACHINE TOOL, S.L. so we can provide you with a new one.
- ✓ This document, or any part thereof, may only be reproduced or provided to third parties with the express written authorisation of TECNOSPIRO MACHINE TOOL, S.L.
- ✓ Some illustration details in this manual may differ from specific device configuration and should be understood as being representative of the standard product.

✓ Paragraphs indicating assembly, adjustment, installation and maintenance steps are indicated by brown shading.

✓ Paragraphs containing important information are indicated by grey shading.

2.2 VERSION

Document	Revision date
Extension 1000 Instruction Manual	16/05/17

3 SAFETY INFORMATION

3.1 SCOPE OF APPLICATION

This section contains very important information concerning safe operation of the device. It is intended for any persons involved in any of the stages of the life cycle of this device (transport, assembly and installation, start-up, adjustment-training, operation, cleaning, maintenance, troubleshooting and disassembly/taking out of service).

3.2 WARNINGS AND GENERAL CONSIDERATIONS

- ✓ The device described in this document has been built using current technology and in accordance with applicable technical standards on safety. However, misuse or improper set-up by the end user may result in a risk of injury.
- ✓ The device must only be used if it is proper working order, and all safety rules and instructions in this document must be obeyed.
- ✓ Any problem that could affect the safety of the device must be corrected immediately.
- ✓ No modifications must be made to the device without due authorisation from TECNOSPIRO MACHINE TOOL, S.L.
- ✓ The device must only be used for the intended purpose; any other use is strictly prohibited. All use other than that indicated here will be considered

misuse and is prohibited. The manufacturer assumes no liability for damage that may result from such misuse. The user shall be solely liable for all such risk incurred.

- ✓ The device has been designed for use in conjunction with 3arm® and ROSCAMAT® products and compatible 3arm® and ROSCAMAT® accessories. The manufacturer assumes no liability for damage that may result from use of the equipment for other purposes.
- ✓ The installer, owner and/or end user are responsible for determining whether the product is appropriate for each specific use, as well as determining the installation site and concretely defining the task to be performed with this product, within the limits set forth in this manual.
- ✓ Do not use it for any purpose not covered in this manual.
- ✓ The operator may only operate the device after having received applicable instructions for its use.
- ✓ Do not exceed the working load limits indicated in this manual and on the identification label on the structure of the device.
- ✓ It is recommended that only one operator use the device at one time; any other use must be evaluated by the installer / end user.
- ✓ The operator must only use the device to perform safe movements, moving together with the device at all times and thus reducing the risk of uncontrolled or involuntary movement.
- ✓ Even though the parts that present the greatest risk of possible shearing or

pinching are protected and enclosed, moving and jointed parts must not be handled during use.

- ✓ The working area of the device and its closest area of influence must comply with conditions of workplace safety, health and hygiene; the installer / end user are responsible for conducting a study to ensure safety.
- ✓ The presence of others in the device's working area must be restricted as much as possible in order to avoid any risk to safety; if any other use is intended, a supplemental study of the risks arising from the working mode must be conducted.
- ✓ It is important for users who work as operators of this device to be familiar with and have sufficient training in the use of this product or similar equipment.
- ✓ In any event, the operator must read and understand this manual before using the device, regardless of their prior knowledge, training or experience with similar equipment; the sections on installation, operation and safety are especially critical.
- ✓ If unsure about device usage or maintenance procedures, please contact your 3arm® and/or Roscamat® distributor.

3.3 EXCLUSIONS



The device is not intended for the following uses:

- ✓ Operation under severe conditions (for example, extreme environmental conditions such as applications

involving freezing or high temperatures or corrosive or dusty environments).

- ✓ Loads greater than the working load limit
- ✓ Outdoors installation
- ✓ Manipulation of any components or functions of the device aside from those specified in this manual.
- ✓ Use by persons with any type of disability, or by animals

3.4 SYMBOLS AND ICONS

	<p>Danger: General danger symbol. This symbol is generally accompanied by an additional symbol or a more detailed description of the danger.</p>
	<p>Risk of pinching</p>

3.5 DECLARATION OF CONFORMITY

If the device is integrated into an installation, the installer/end user must draw up an EC declaration of conformity in accordance with the applicable directives.

3.6 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment for this device is limited to safety footwear during all stages of the life cycle.

The installer / end user is responsible for specifying the personal protective equipment needed, depending on the intended application of the device, in order to satisfy the essential requirements for health, safety and hygiene

Operators must not wear loose clothing, rings or bracelets/wrist watches, as these may be caught in the partly completed machinery's mechanisms.

Hair must be tied up/back to prevent it getting caught in the partly completed machinery's moving parts.

3.7 LEVEL OF TRAINING FOR PERSONNEL WHO WORK WITH THE DEVICE

All persons who work with the device must read and understand the documentation in the chapter on safety.

4 GENERAL DESCRIPTION AND TECHNICAL INFORMATION

The Extension 1000 extends the work area of the ROSCAMAT® or 3arm® device. Its base permits 360° rotation and can be locked in any position.

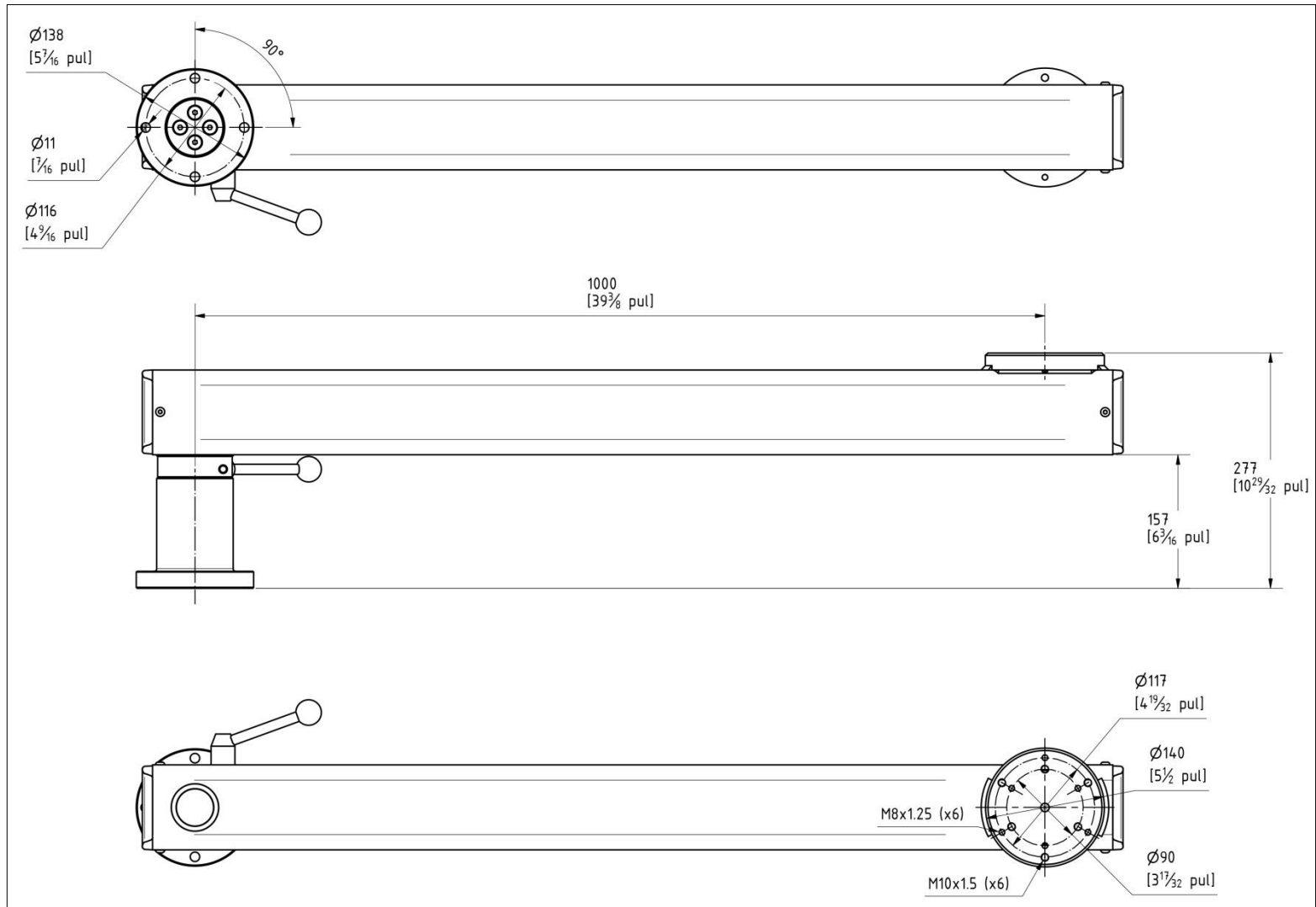
Its free end is provided with the threaded holes needed to mount a compatible ROSCAMAT® or 3arm® device [See 3ARM – ROSCAMAT COMPATIBILITY TABLE page 14].



SET-UP

- ✓ The device is not a complete machine; it requires additional compatible equipment (Roscamat® or 3arm® devices) to perform a task. The installer is responsible for analysing and identifying possible risks associated with the application chosen.

5 GENERAL DIMENSIONS



6 TECHNICAL SPECIFICATIONS

GENERAL TECHNICAL SPECIFICATIONS		
Load limit ¹		147 Kg (324 lb)
Maximum moment ²		1444 Nm (1065 lb ft)
Empty weight ³		32 kg (70.5 lb)
Working conditions		
	Temperature	+15–45 °C (59–113 °F)
	Relative humidity	Max. 70%
	Environment	Industrial environments

7 IDENTIFICATION PLATE

The adhesive label on the mounting base identifies the Extension 1000 and indicates the following characteristics:

Manufacturer (name, address and company name), date of manufacture, serial number, model, load limit, maximum moment and empty weight.

<p>TECNOSP/RO MACHINE TOOL SL</p> <p>POLIGON INDUSTRIAL PLA DELS VINYATS, B ES08250 SANT JOAN DE VILATORRADA BARCELONA (SPAIN) Telf. +34 938764359 - 3arm@3arm.net www.rosamat.com - www.3arm.net</p>	Model Modelo	<input type="text"/>
	Serial Serial	<input type="text"/>
	Year Año	<input type="text"/>
	Load (max) Carga (max)	<input type="text"/>
	Moment (max) Momento (max)	<input type="text"/>
	Empty weight(max) Peso vacío (max)	<input type="text"/>
	Max. Pressure Presión máxima	<input type="text"/>

If the Extension 1000 was acquired as part of an assembly, for example a 3arm® arm for weightless operation together with an Extension 1000, the corresponding identification label will indicate the following features:

Manufacturer (name, address and company name), date of manufacture, serial number, model and empty weight.

<p>TECNOSP/RO MACHINE TOOL SL</p> <p>POLIGON INDUSTRIAL PLA DELS VINYATS, B 08250 SANT JOAN DE VILATORRADA BARCELONA (SPAIN)</p>	Model Modelo	<input type="text"/>
	Serial Serial	<input type="text"/>
	Year Año	<input type="text"/>
	Empty weight(max) Peso vacío (max)	<input type="text"/>

¹ Load limit: Maximum load sustained under the anticipated conditions. It is defined as a load evenly balanced on the mounting base. The load limit of the device acquired is indicated on the identification label.

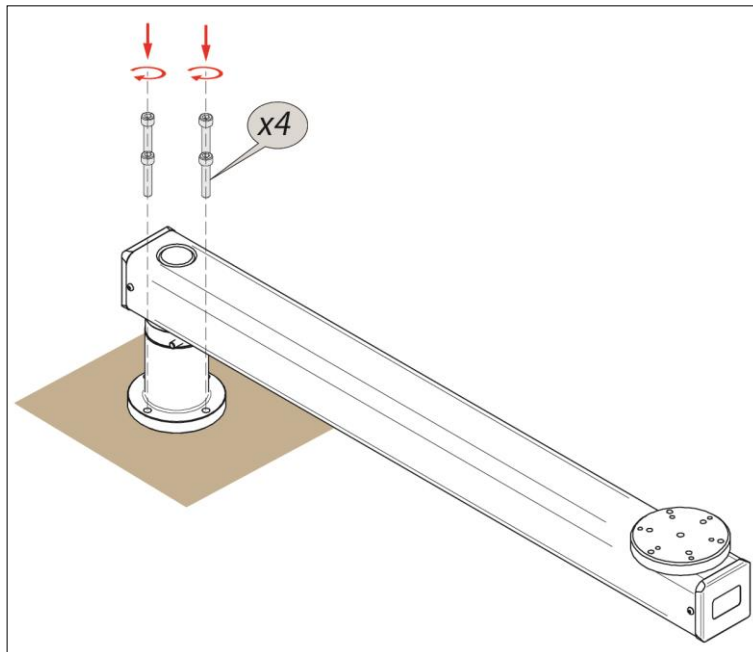
² Maximum moment: Maximum moment applicable at 1000 mm from the centre of the base of Extension 1000 Radial Arm base. The Maximum Moment value for the configuration acquired is indicated on the identification label.

³ Empty weight: Refers to the weight of the Extension 1000 Radial Arm itself.

8 INSTALLATION

1. Remove the Extension 1000 from its original packaging and place it on a horizontal, level, stable and sufficiently robust surface.
2. Anchor the Extension 1000 using 4 bolts suited to the installation site selected (alternative methods may be used if approved by the installer).

If necessary for safety reasons, assign two operators to perform this task.



GENERAL INSTALLATION CONSIDERATIONS

- ✓ The work bench or location for installation must be a horizontal surface, which prevents drifting and shifting. It should also be sufficiently stable and robust.
- ✓ The installation steps below will depend on how the device is anchored and the alternatives available in the chosen installation site. Nevertheless, the installer, owner and/or end user are responsible for determining whether the product is appropriate for each specific use, as well as for determining the installation site and concretely defining the task to be performed with this product, within the limits set forth in this manual and in the Declaration of Conformity.



INSTALLATION SITE

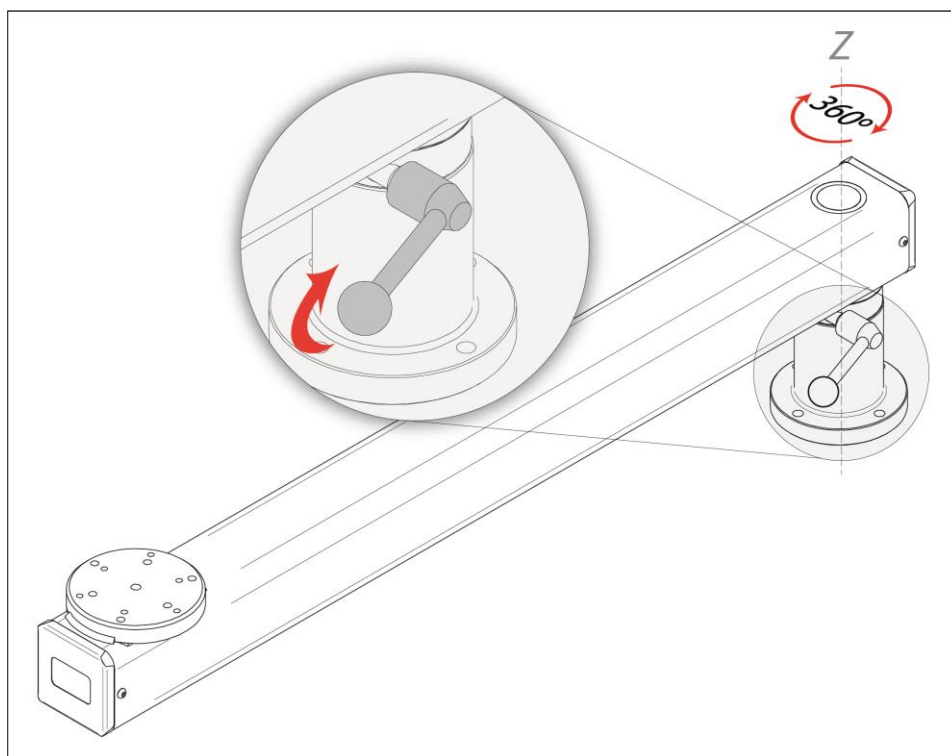
Do not install the device in areas such as:

- ✓ outdoor areas
- ✓ areas with corrosive atmospheres
- ✓ areas with extreme temperatures (very high or very low)
- ✓ areas with high humidity
- ✓ **dusty areas**

NOTE: For ceiling-mounted installation, consult your 3arm® and/or Roscamat® distributor.

9 MOVEMENTS

360° Z-axis movement, lockable in any position via the locking lever.



10 GUIDELINES FOR PACKAGING, TRANSPORT AND DISASSEMBLY

10.1 PACKAGING

Follow the instructions below when packaging the Extension 1000 to change its location or to ship it for repair and maintenance.

10.1.1 Preparations

Take the Extension 1000 out of service.

Using securing straps will prevent movement during transport and hence possible damage to the equipment.

10.1.2 Choice of packaging

When transporting over long distances, the production installation components must be packaged so that they are protected from atmospheric conditions.

10.1.3 Inscription on packaging

Follow the specific provisions of the country where transport is taking place. For completely closed packages, a label must be placed on the package indicating which end is up.

10.1.4 Packing procedure

Place the Extension 1000 on manufactured wooden pallets. Using tie-down straps, secure the components to keep them from falling. Attach all technical documentation that must accompany the Extension 1000.

1.1 TRANSPORT

The following information must be considered when transporting the device.

- ✓ External dimensions according to the segment (width x height x depth), approx. In mm:
1272x407x332
- ✓ Total weight (according to segment): 38 kg

1.2 DISASSEMBLY

- ✓ The equipment must be taken out of service by properly trained and authorised personnel.
- ✓ The Extension 1000 must be disassembled according to safety, waste disposal and recycling instructions.
- ✓ Protect the environment. The equipment must be disposed of following standards and directives in force in the areas of safety, noise prevention, environmental protection and accident prevention.

11 3ARM – ROSCAMAT COMPATIBILITY TABLE


Description	SERIES – 3arm®					
Radial arm extension 1000	S1	S2	S3	S4	S6	M3
	●	●	●	●	●	●

Description	SERIES – ROSCAMAT®						
Radial arm extension 1000	200	400	500	Dragon	Mosquito	Tiger	Shark
	●	●	●	●	●	●	●

12 TABLA COMPATIBILIDAD ACCESORIOS

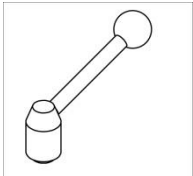
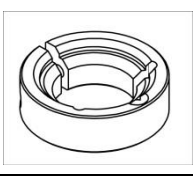
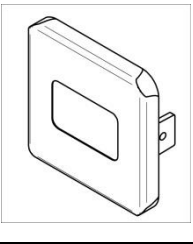
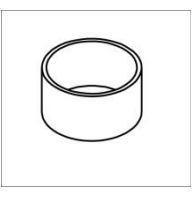
	EXTENSION 1.000
EXTENSION 500	X
CARRO	X
COLUMNA FIJA	●
ELEVADOR 500	X
COLUMNA 2000 D63	X
CARRIL SUELO	●
GUIA LINEAL	X

● = compatible
 X = incompatible

 **COMPATIBILITY**

✓ The device has been designed for use in conjunction with 3arm® products and ROSCAMAT® tapping machines, and with compatible 3arm® and ROSCAMAT® accessories. The manufacturer assumes no liability for damage which may result from use of the equipment for other purposes.

13 SPARE PARTS

REFERENCE	DESCRIPTION	PICT.
AC060606	ELESA LEVER GN212-3-28-M10-E	
ER000803	AL BEAM CLAMP	
ER001303	BEAM END CAP 1,000	
CO017006	BUSHING PAP5030 P10	

DECLARATION OF INCORPORATION

Per Machinery Directive 2006/42/EC, Annex II B

The manufacturer:

Company: TECNOSPIRO MACHINE TOOL, S.L.
Address: P.I.Pla dels Vinyats I, s/n nau 1
City: Sant Joan de Vilatorrada - 08250
County: Spain - EU

Declares that this product:

Designation: EXTENSION
Model: EXTENSION
Type: EXTENSION 1000
For Serial number: 001-001 – and later

Confirms with Machinery Directive 2006/42/EC

We also declare that the technical documentation for this partially complete machinery has been prepared pursuant to the requirements of Annex II B. This documentation will be released to the competent market oversight authorities with a duly substantiated application.

The start-up of the partially completed machinery is prohibited until it is assembled and set up, with the aid of other parts, as a machine that satisfies the provisions of the European directive on machinery and has an EC Declaration of Conformity pursuant to Annex II A.

Harmonised reference standards:

Standard	Description
EN ISO 12100:2012	Safety of machinery. General principles for design. Risk assessment and risk reduction

Documentation officer: Mr Ramon Jou Parrot of TECNOSPIRO MACHINE TOOL, S.L

Sant Joan de Vilatorrada, Friday, 1 July 2016



TECNOSPIRO
MACHINE TOOL S.L

Ramon Jou Parrot, Chief Engineering Officer