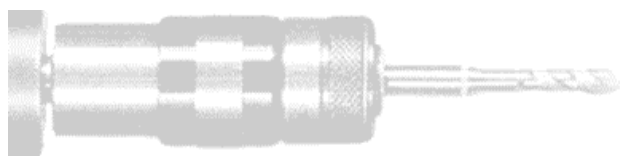
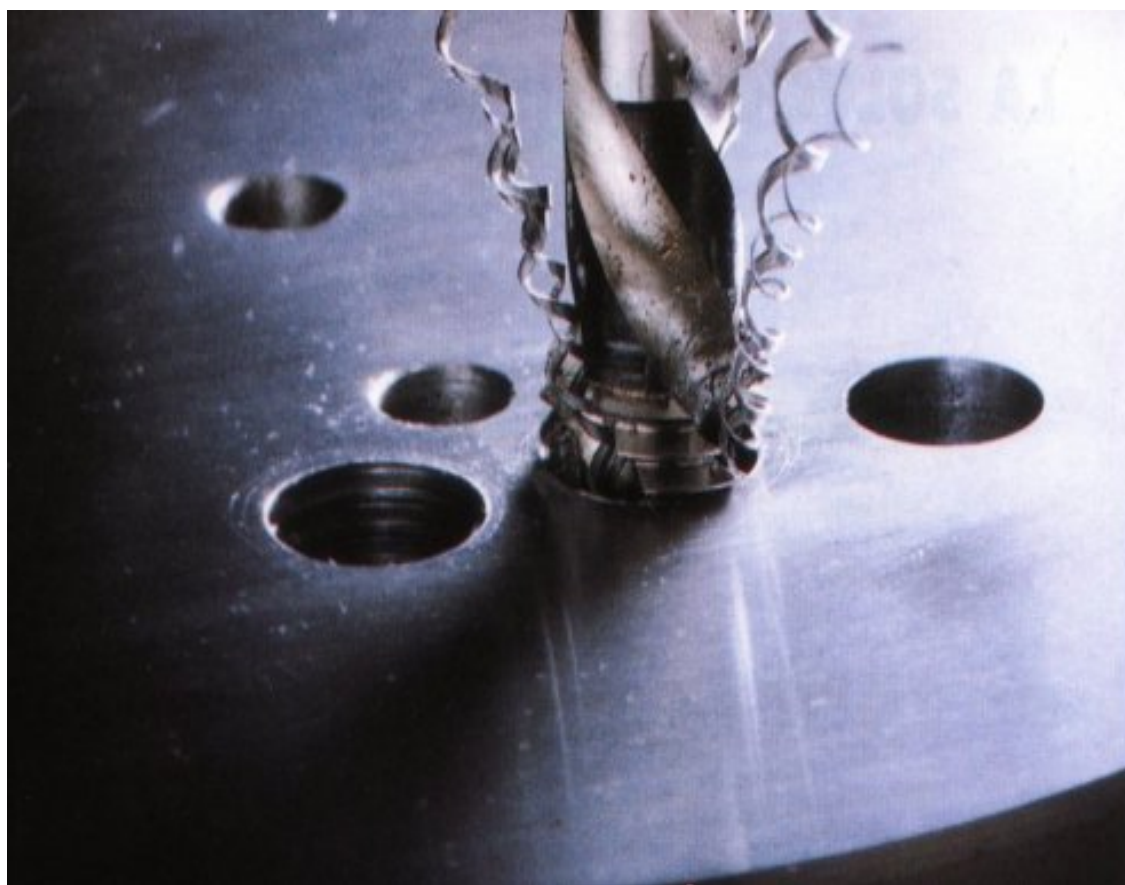


# ROSCAMAT®

*Technical & Commercial Document*

## **ARTICULATED TAPPING ARM MACHINES**



 DESCRIPTION

 OPERATION

 TECHNICAL DATA

Ref. CL/DESCGB



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# Chapter 1.- PNEUMATIC MODELS

## 1.1.RANGE 200 ( M2 to M14- motor 350 rpm / M2 to M10 - motor 750 rpm)

### ROSCAMAT 200

The machine itself consists of a radial arm joint to a pendular arm balanced by means of a pneumatic damper. The pendular arm fixes the headmember and the pneumatic motor, both of them, moving perpendiculararly to the working area. Thanks to the combination of all its elements, the machine describes a toroidal movement to the working area.

The tapholders are fixed to the motor by means of a quick change, and taps fixes directly to the tapholders (see page 16). With this simple method, we reduce the time of change of tooling with the consequent save of time, and increase of the productivity in all threading operations.

The model R-200 can be supplied with two motors, each one with a different speed but the same power of 300 W.

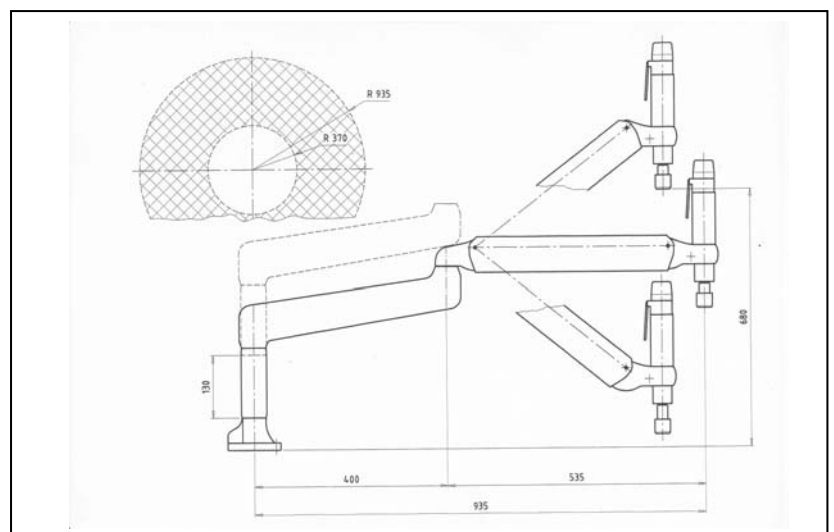


- 1.- Pneumatic motor
- 2.- Air&lube preparation unit
- 3.- Vertical head
- 4.- Quick-change and tapholder
- 4.- Tilting arm
- 6.- Machine base plate
- 7.- Intake connection
- 8.- Radia Arm
- 9.- Cross
- 10.-Air pipe

Motor	Max.Speed (rpm)	Max.Torque (Nm)	Ø Coupl.	Max.Thread Aluminium	Max.Thread Steel < 100 Kg
202A0100	350	36	Ø19	M16	M14
202B0200	750	17	Ø19	M12	M10

### TAPPING OF HIGH PIECES:

For working in high positions, hold the base casing, pull it up and turn it 90° to fix it. The machine will be 130 mm higher. Now, it is ready to work



## ROSCAMAT 200 VH (C13)

The ROSCAMAT-200 can be supplied with an articulated headmember of easy handling that can be set in four different positions 90° apart.

### Vertical Operations:

- ◆ Place the motor in vertical position, lock the handle (1) and the milled nut (2).

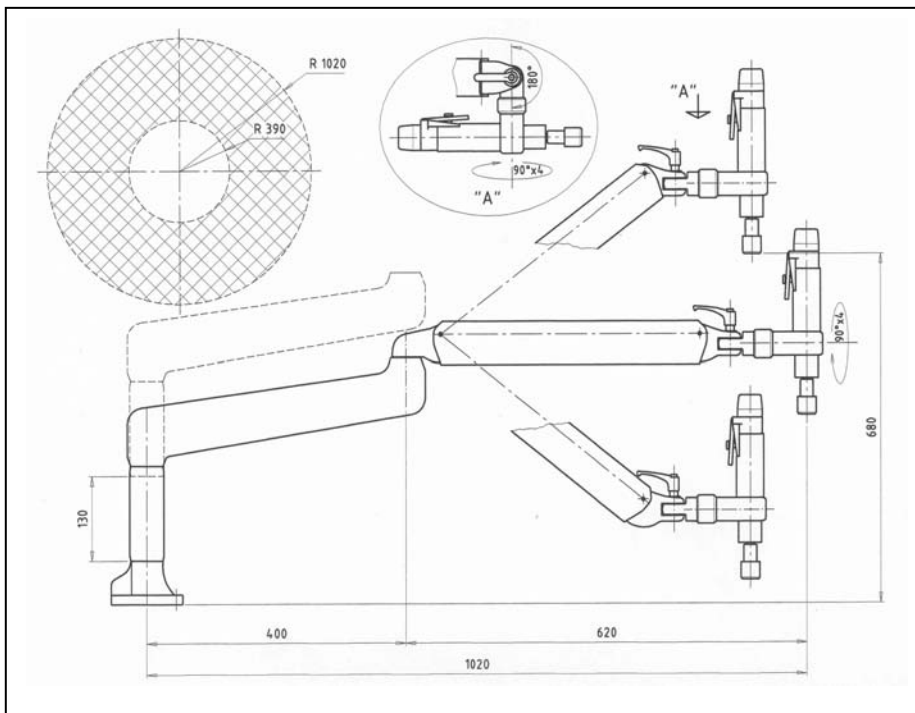


1.- Handle  
2.- Milled nut  
3.- Motor

### Horizontal Operations:

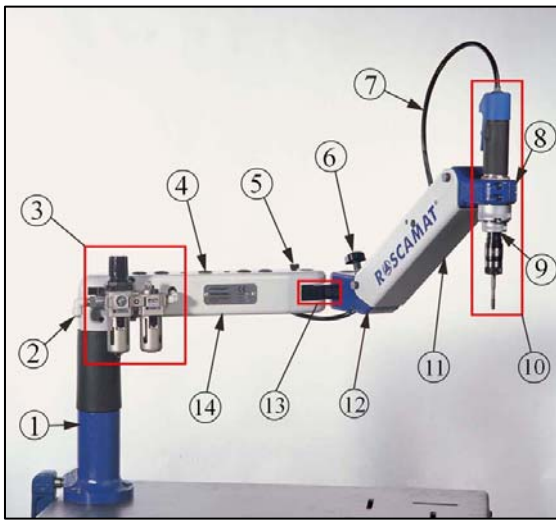
- ◆ Loosen the milled nut (2) to unlock the motor joint.
- ◆ Turn the head 90° until you reach the interlock, and tighten the milled nut (2).
- ◆ Unlock the handle (1), located in the upper side of the head.
- ◆ When moving the arm, the operator will have to manually maintain the perpendicularity to the working plane.

➔ **Do not lock handle (1) when working in horizontal operations.**



## 1.2.- THE NEW GENERATION (Ranges 400 & 500)

### ROSCAMAT 400 ( M2 to M24)



The machine consists on a pendular arm which remains weightless to a pneumatic spring. The arm is coupled to a 360-degree-turn radial arm by means of an intermediate joint. Through the base (1) and by means of three M8 screws the machine can be fixed to a table or workbench. Such attachment can also be obtained by means of a simple clamp.

The radial arm and the tilting arm revolve about themselves. The latter tilts therewith always maintaining the perpendicularity to the foot reference plane.

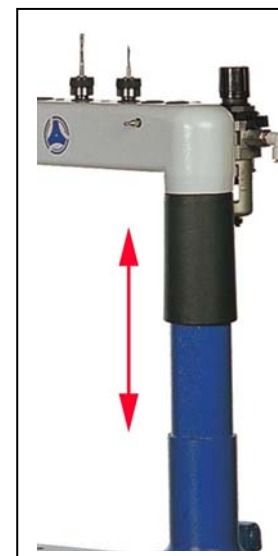
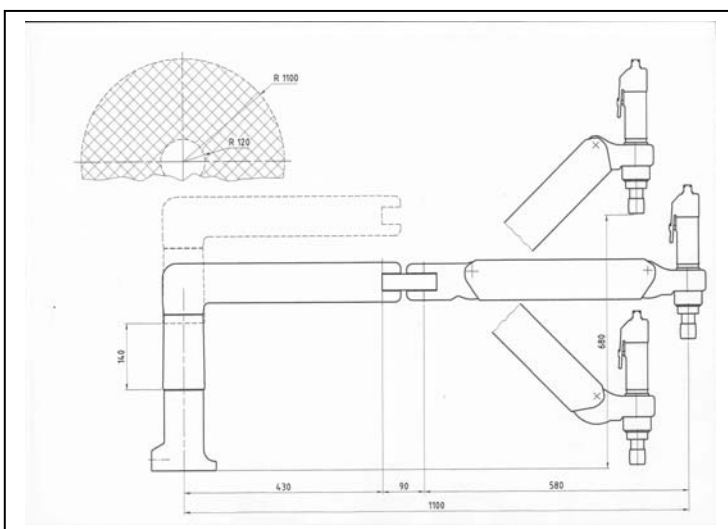
The machine incorporates an air servicing unit (filter + regulator + lubricator) for the correct operation of the motor.

The **modular system** consisting in a series of 7 quick-change modules (reducers) is provided for coupling to said motor. As a result of this output speeds (90, 170, 300, 550, 750, 1050, y 2100 r.p.m.) are available thus allowing to adapt the tap speed to every type of thread

The handle allows to balance the tilting arm and to position it at the operator's convenience.

1. Machine base plate
2. Intake connection
3. Air Group FRL
4. Tapholder nest
5. Brake handle
6. Damper regulating handwheel
7. Intake pipe
8. Headmember
9. Module
10. Motor
11. Articulated arm
12. Cross unit
13. Union
14. Radial arm

The modular system admits the quick-change tap holders with or without safety depending on the intended job (blind or through holes)

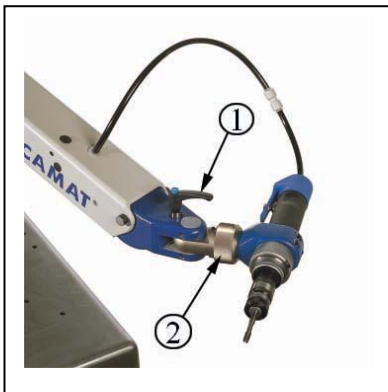


## ROSCAMAT 400 VH (C43)

The ROSCAMAT 400 can be supplied with an orientable headmember C43. This special headmember can be set in 4 different positions at 90° and tap in horizontal sites.

### Vertical Operations:

- ◆ Place the head in vertical position, lock the handle (1) and the milled nut (2).

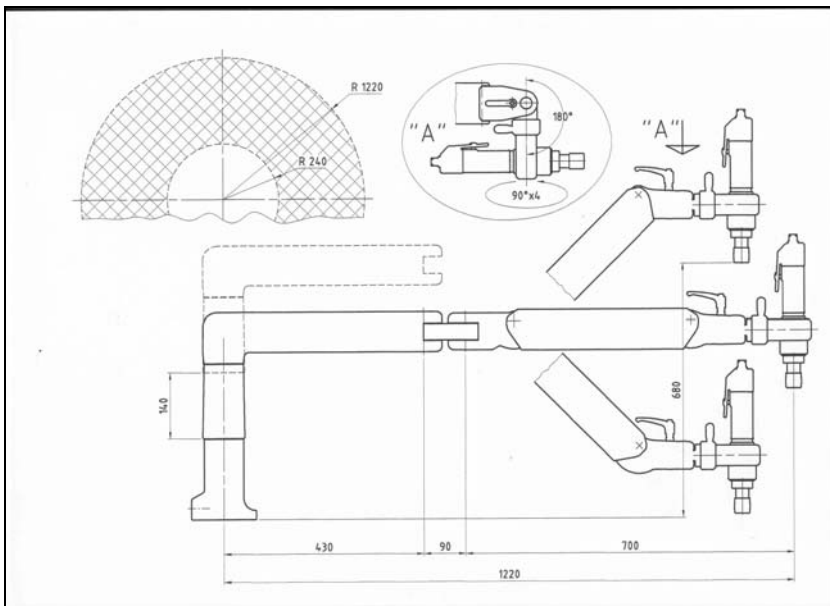


1.- Handle  
2.- Milled nut

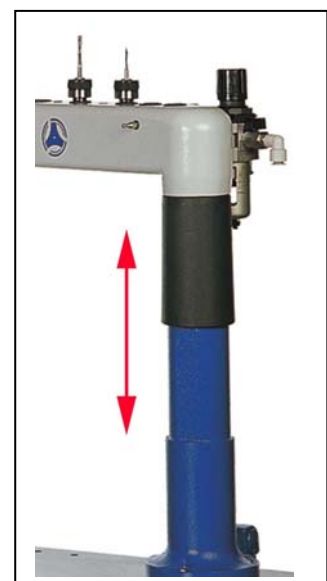
### Horizontal Operations:

- ◆ Loosen the milled nut (2) to unlock the joint of the motor.
- ◆ Turn the head 90° until you reach the interlock, and tighten the milled nut (2).
- ◆ Loosen the handle (1) in the upper side of the head.
- ◆ When moving the arm, the operator will have to manually maintain the perpendicularity to the working plane.

\* **Do not lock the handle 1 in horizontal operations.**



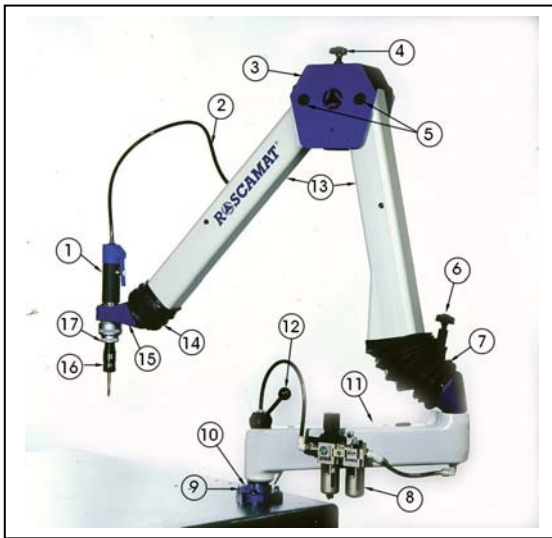
**LIFTER:** We can increase the working area in 140 mm. in order to work on different height levels.



***PNEUMATIC MODELS  
New Generation Range 400***



## ROSCAMAT 500 ( M2 to M24)



We can consider the usage of the machine ROSCAMAT-500 identical to the ROSCAMAT 400, but with the advantage of having much more working area, thanks to the length of the arms. This model only works in vertical position.

The machine consists basically of the following elements: RADIAL ARM, DOUBLE TILTING ARM and HEADMEMBER. The compressed-air motor is coupled to the latter.

Through the foot and by means of three M8 screws the machine can be fixed to a table or workbench. Such attachment can also be obtained by means of a simple clamp.

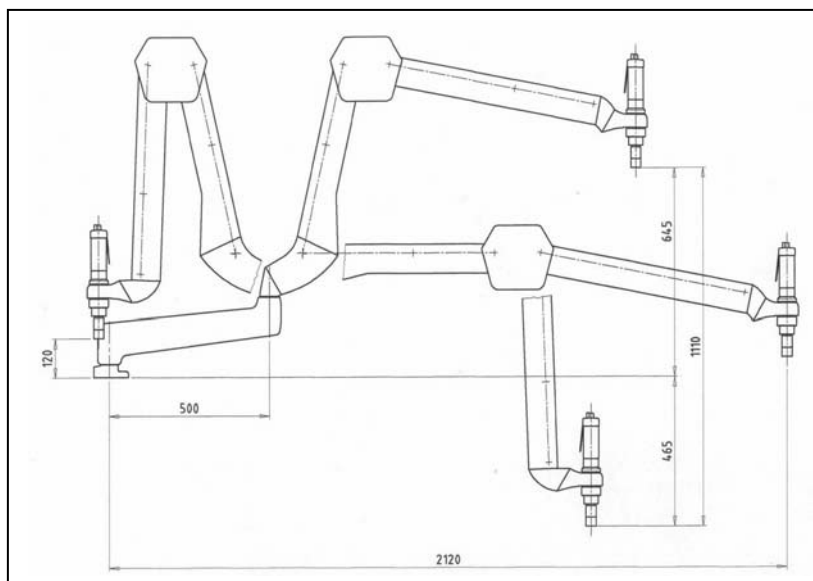
1. Motor
2. Air pipe
3. Upper hate
4. Front damper regulating handwheel
5. Caps
6. Rear damper regulating handwheel
7. Rear bellow
8. Air group FRL
9. Air inlet spigot
10. Machine base plate
11. Radial arm
12. Break handle
13. Tilting arms
14. Front bellow
15. Vertical Head
16. Tapholder
17. Module

The regulating handwheels allow to balance the tilting arms and to position them at the operator's convenience.

The machine incorporates an air servicing unit (filter + regulator + lubricator) for the correct operation of the motor.

The modular system consisting in a series of 7 quick-change modules (reducers) is provided for coupling to said motor. As a result of this output speeds (90, 170, 300, 550, 750, 1050 and 2100 r.p.m.) are available thus allowing to adapt the tap speed to every type of thread.

The modular system admits the quick-change tap holders with or without safety clutch depending on the intended job (blind or through holes).

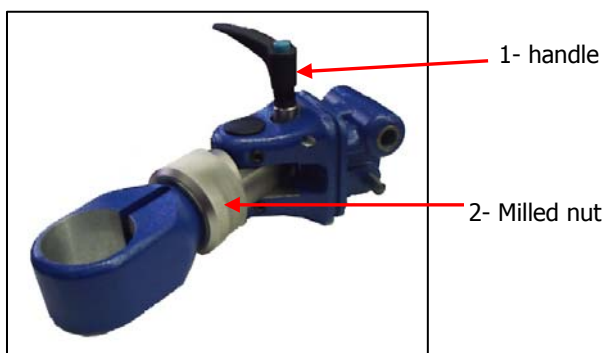


## ROSCAMAT 500 VH (C26N)

The ROSCAMAT 500 can be supplied with the orientable headmember C26N. It allows to set the machine in 4 different positions at 90°. The only difference between the machine model ROSCAMAT 400 C-43 and the ROSCAMAT-500 C26 N is the working area which is larger on the latter.

### Vertical Operations:

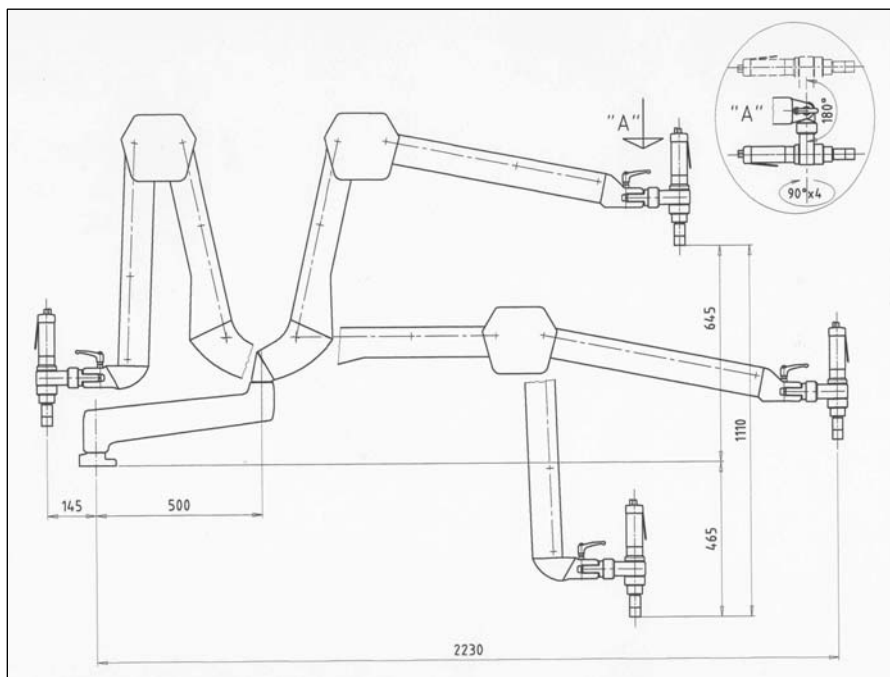
- ◆ Place the head in vertical position, lock the handle (1) and the milled nut (2).



### Horizontal Operations:

- ◆ Loosen the milled nut (2) to unlock the joint of the motor.
- ◆ Turn the head 90° until you reach the interlock, and tighten the milled nut (2).
- ◆ Loosen the handle (1) in the upper side of the head
- ◆ When moving the arm, the operator will have to manually maintain the perpendicularity to the working plane.

**\*Do not lock the HANDLE1 in horizontal operations.**





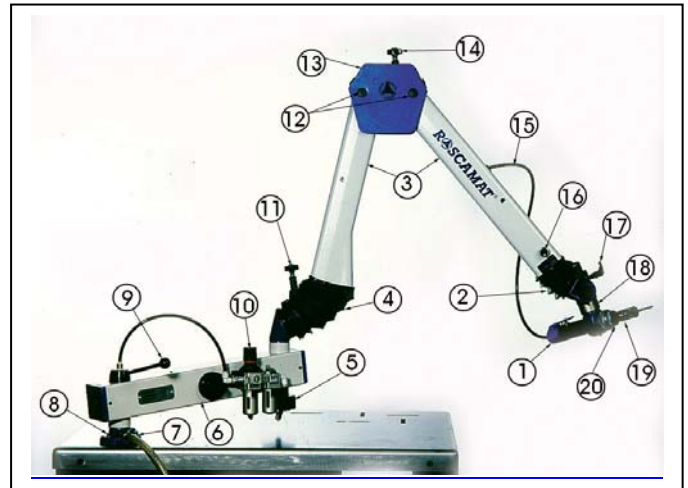
## ROSCAMAT 500 RH (M2 to M24)

This is the genuine unit to work in any position in space therewith always maintaining the perpendicularity to the desired plane irrespective of the arm position.

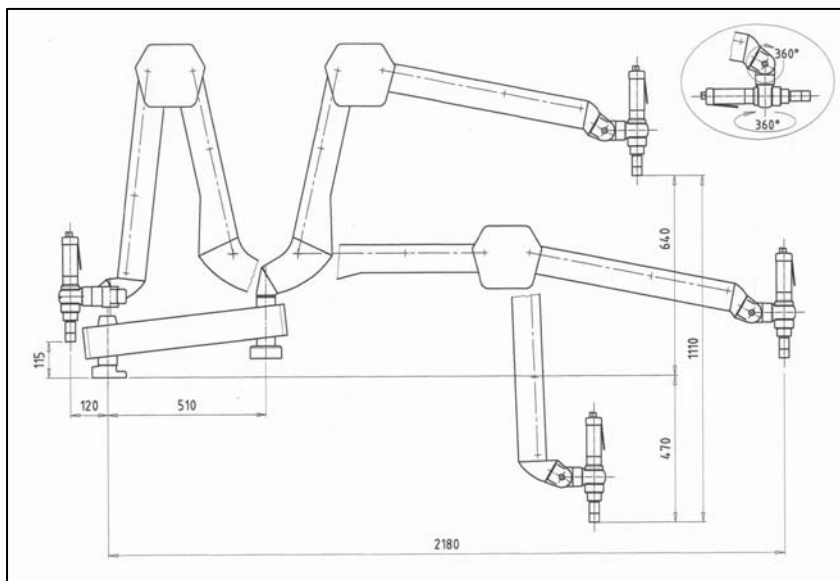
The machine consists of a radial arm supporting both articulated arms that can be regulated by means of the regulating handwheels

The multiposition head is a double swivel joint device allowing to lock and unlock both its swivel pins to thus position the head and keep it blocked in order to thus operate in any position in space. The head mechanism is formed by a cam system with an equaliser and disc springs applying a load of 1,000 Kg to two cone sets locking both pins.

The radial arm incorporates a chain drive, which is activated or deactivated by means of a face-toothed coupling according to the intended working position.



1. Motor
2. Front bellow
3. Tilting arms
4. Rear bellow
5. Arm locking knob
6. Radial arm
7. Air inlet spigot
8. Machine base plate
9. Break handle
10. Air Group FRL
11. Rear damper regulating handwheel
12. Caps
13. Upper hat
14. Front damper regulating handwheel
15. Air pipe
16. Arm locking control
17. Head locking handle
18. Multiposition head
19. Tapholder
20. Module



**PNEUMATIC MODELS**  
**New Generation Range 500**

## 1.2.1.- MACHINES WITH AUTOMATIC TAP LUBRICATION

All ROSCAMAT units, range R-400 and R-500, can be supplied with automatic tap lubrication system. There is a lubricant reservoir into the radial arm connected with a hydraulic cylinder. Through the regulating valve, can adjust the oil flow rate. The system is comprised of a regulating valve and a lubricant reservoir, and is actuated by the compressed-air system itself. When the motor level is accionated, the system impels the resident flow from the pump located inside the pendular arm.

When starting to tap the oil or liquid flow rate can be regulated for the purpose of lubricating the tap during the operation.



### DESIGNATION:

- ◆ ROSCAMAT 400 E
- ◆ ROSCAMAT 400 C43 E
- ◆ ROSCAMAT 500 RH E
- ◆ ROSCAMAT 500 E
- ◆ ROSCAMAT 500 C26 N E

*ROSCAMAT 400 E :  
Detail of the head with automatic tap lubrication system.*

For an optimum performance of the machines, the following conditions shall prevail:

<b>Main pressure</b>	<b>6 - 8 bar</b>
<b>Compressor</b>	<b>5.5 Hp</b>
<b>Feeding pipe</b>	<b>Ø inner 12 mm (minimum)</b>

## 1.2.2. MODULAR SYSTEM (Ranges 400 & 500)

The system consists in a series of 7 modules (speed reducers) for quick replacement to be coupled to the motor to thus make available 7 different tool rotational speeds.

The compressed-air motor, TS-VIII with modular system, as well as tapping range is common to all ROSCAMAT models series R-400 & R-500.

The table below shows the characteristic values of each module and their respective maximum tapping range.

Module 2100, has no reduction and rotates at the same rpm as the motor, thus being especially useful for drilling soft materials (brass, aluminium, cast iron, etc.) up to Ø8. It also incorporates a key-type drill chuck (Ø1,5 to Ø10 mm.)

Module	Max.Speed (r.p.m.)	Max.Torque (Nm)	Coupling Diam.(mm)	Max.Thread Aluminium C.Iron	Max.Thread Steel < 80 Kg	Max.Thread Steel > 80 Kg
90	90	150	Ø 31	M27	M24	M22
170	170	79	Ø 31	M22	M18	M16
300	300	44	Ø 19	M16	M16	M14
550	550	24	Ø 19	M14	M12	M10
750	750	17	Ø 19	M12	M10	M8
1050	1050	12,5	Ø 19	M8	M8	M6
2100	2100	6	Cone B-16	(To drill up to Ø 8 Aluminium, cast iron)		



**Module**



**Module + tapholder + tap**



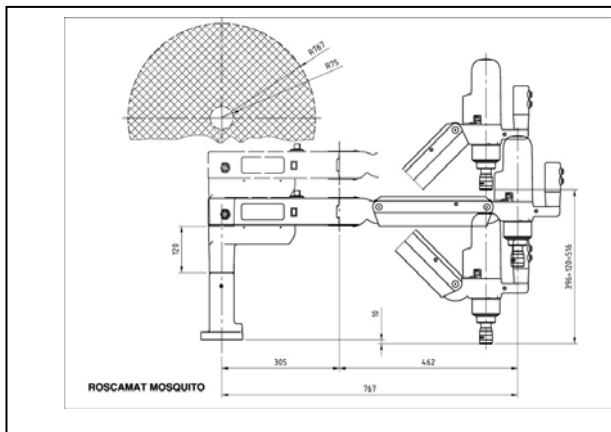
The machine itself consists of a radial arm joint to a tilting arm balanced by means of a pneumatic spring. The head member and the electric motor find themselves at the end of the tilting arm and adapt to always move at right angle with respect to its working area.

The High Frequency is regulated by means a variator board located in the "electronic box casing". The turning motor speed and the optional automatic lubrication control are adjustable by means of the buttons being located over the "radial arm". The speed can be thus adapted to every thread type.

The tapholders are fixed to the motor by means of a quick change, and taps fixes directly to the tapholders. With this simple method, we reduce the time of change of tooling with the consequent save of time, and increase of the productivity in all threading operations.

The **MOSQUITO** can be supplied with:  
*two motors, each one with a different speed but the same power of 500 W or one motor with both speeds.*

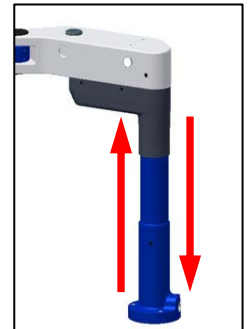
Motor	Speed (rpm)	Max. Torque (Nm)	Ø Coupl..	Max. Thread Aluminium	Max. Thread Steel < 100 Kg
AF220301	300	36	Ø19	M16	M14
AF220201	600	17	Ø19	M12	M10
AF220101	300 / 600	36	Ø19	M16	M14



**WORKING AREA:**  
 Radius: 767 mm  
 High: 396 + 120 mm

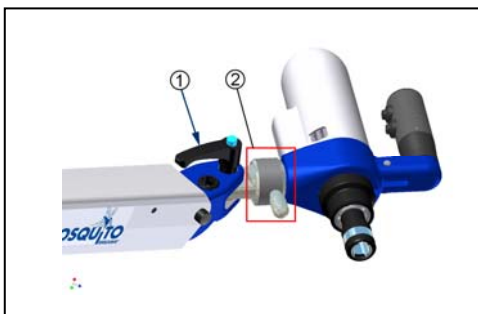
**TAPPING OF HIGH PIECES:**

For working in high positions, lift the machine till reaching the top.



**ROSCAMAT-MOSQUITO VH**

The **MOSQUITO** can be supplied with an articulated headmember of easy handling that can be set in four different positions 90° apart.



- 1-Handle
- 2-Milled nut

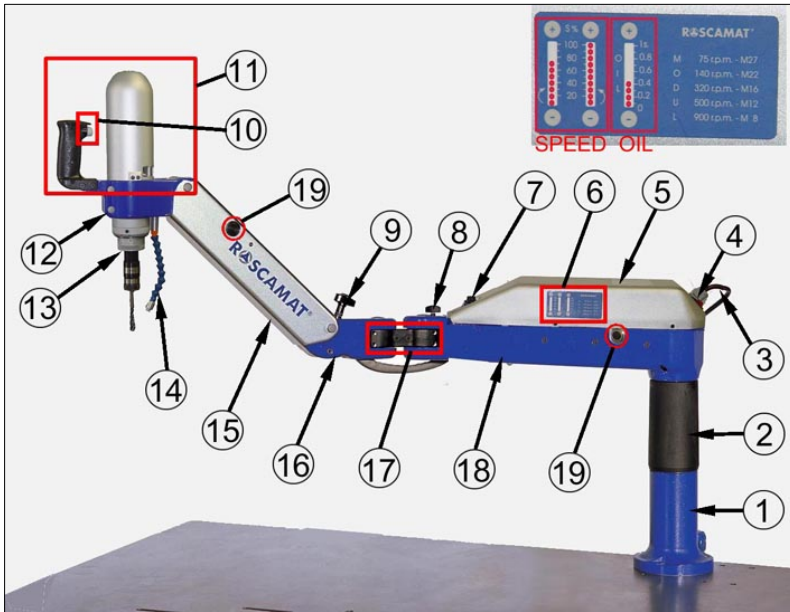
**WORKING AREA:**  
 Radius: 885 mm  
 High: 396 + 120 mm



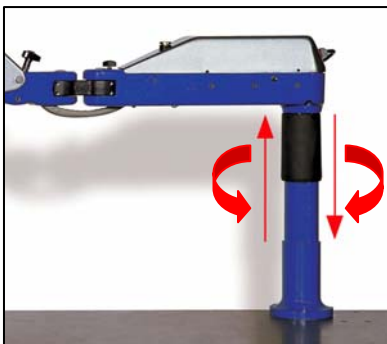
(Optional):

**AUTOMATIC LUBRICATION**

## ROSCAMAT 6000 (M2 to M27)



- 1.- Machine Base Plate
- 2.- Lifter casing
- 3.- Electric cable
- 4.- Electric current main switch
- 5.- Electronic box casing
- 6.- Display control speed / lubrication
- 7.- Oil reservoir filling cup
- 8.- Brake handle
- 9.- Damper regulation handwheel
- 10.- "Trigger"- motorstarting button
- 11.- Motor
- 12.- Motor head
- 13.- Module
- 14.-Articulated pipe (tool lubrication system)
- 15.- Tilting arm
- 16.- Cross unit
- 17.- Union
- 18.- Radial arm
- 19.-Magnetic arm enclave



### **LIFTER:**

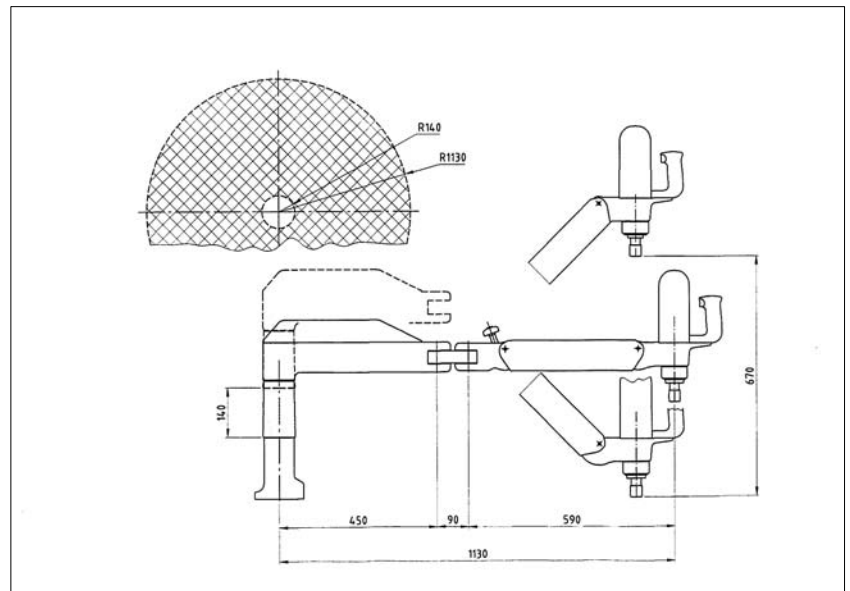
We can increase the working area in 100 mm. in order to work on different height levels.

The machine is formed by a tilting arm being by means of a pneumatic spring, said arm being fitted through an intermediary union to a radial arm being revolvable around 360°. The assembly is secured to the workbench by means of a base plate being provided with a post clearing the whole table area. The motor head finds itself at the end of the tilting arm and is apt to always move at right angles with respect to its working area.

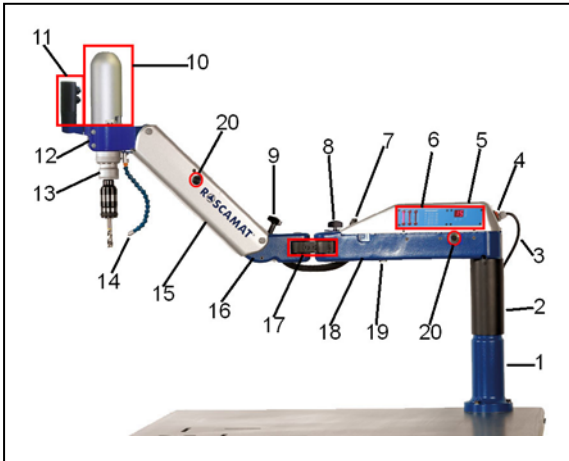
The motor speed and the tool automatic lubrication can be configured by means of a

push-button control placed on the top of the motor case. The modular system is apt to be fitted to the electronic motor and consists of 5 quick-change planetary speed reducers living 5 different speeds and torques. The speed can be thus adapted to every thread type.

The toolholders (or tap holders) with or without safety clutch are also apt to be fitted to the modules by means of a quick-change system.



## ROSCAMAT 9001 (M3 to M36)



Along the same lines as with the pneumatic models, the machine is made up of a pendular parallelogram being balanced by an air spring plus a radial arm. The assembly being made up of both members fixes the motor head and keeps it in a position being perpendicular to the working area.

The electric motor of High Frequency is connected to one frequency variator's board and control board easily to actuate by a keypad being placed at the radial arm to control features like tapping speed, desired quantity of lubrication for each tap or thread depth to be

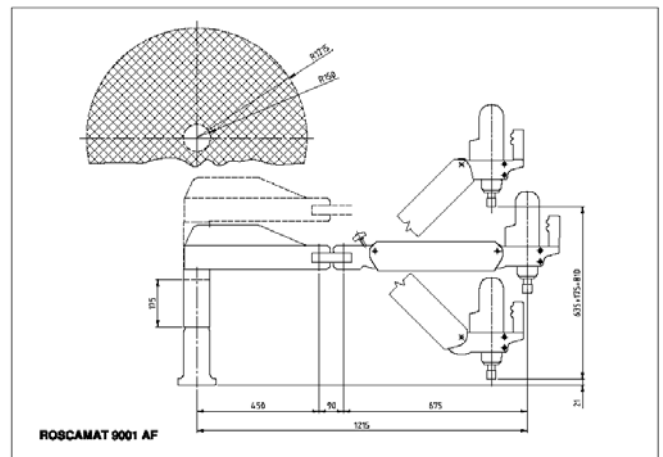
controlled. By means a quick-change system, a set of 6 reducer modules (different from those of the pneumatic) are apt to be fitted to the motor output by means of a quick-change system and allow to adjust the tapping speed as a function of the metric pitch to be cut (page 15).

- 1.- Machine base
- 2.- Lifter case
- 3.- Electric cable power inlet
- 4.- Electric current main switch
- 5.- Electronic box casing
- 6.- keyboard: speed, lubrication & depth control
- 7.- Oil reservoir filling cap
- 8.- Handle turning brake
- 9.- Damper regulation handwheel
- 10.- Motor
- 11.- Motor Grip; Motor Push buttons
- 12.- Headmember
- 13.- Module
- 14.- Articulated pipe
- 15.- Tilting arm
- 16.- Croos unit
- 17.- Union
- 18.- Radial Arm
- 19.- Oil deposit drain cap
- 20.- Magnetic pivoted arm enclave



### **LIFTER:**

We can increase the working area in 170 mm. in order to work on different height levels.



## AUTOMATIC TAP LUBRICATION (R-6000 & R9001)

Inside the arm the cutting oil reservoir is located. This is used for lubricating the tool during the tapping operation.

The lubrication time is predetermined in the NC programme according to the size of tap. However by means of the screen keys, we can vary the lubrication time percentage depending on the material, the tap condition, etc.



### ***ELECTRIC MODELS***



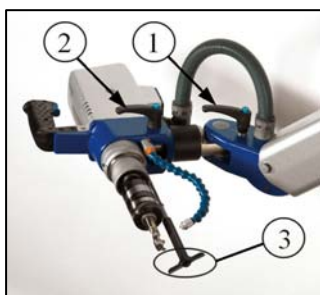
**ORIENTABLE HEADMEMBER:  
ROSCAMAT 9001 VH / ROSCAMAT 6000 VH**

Both models of machines equipped with electronic motor can be supplied with an articulated headmember of easy handling, which allows to set the machine in vertical or horizontal position.



**Vertical operations:**

- ◆ Place the motor in vertical position and lock the handles nrs. 1 y 2.



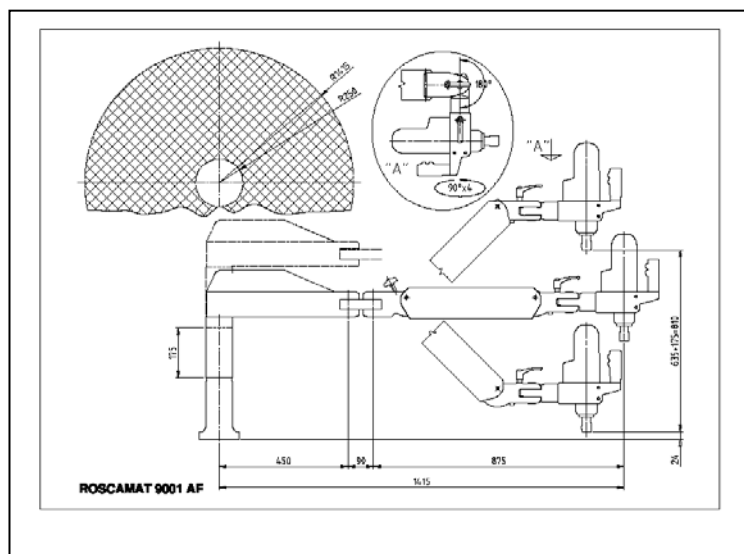
- 1-Horizontal turn clamp handle
- 2- Head orientation clamp handle
- 3-Feeler

*Headmember VH*

- ◆ Loosen handle 2 to unlock the joint of the motor
- ◆ Turn the head 90 ° till you reach its interlock, and tighten the handle again (2).
- ◆ Unlock handle nr.1 located in the upper side of the headmember.
- ◆ Align the feeler with the piece to be threaded and proceed with the thread always keeping the feeler correctly aligned to the piece.

**Do not lock the handle 1 in horizontal operations.**

**Horizontal operations (Max. Thread M27)**



*Headmember VH in vertical position.*

***ELECTRIC MODELS***

## 2.2.- MODULAR SYSTEM

Consists of a range of modules (speed reducers) that can be coupled to the quick-change of the motor thus make available different tool rotational speeds.

### **ROSCAMAT 9001 : M3 to M36 (6 modules) / ROSCAMAT 6000: M2 to M27 (5 modules)**

Module	Reduct	Max.Speed (rpm)	Max.Torque (Nm)	Coupl. Ø.	TAPPING CAPACITY				
					Alum. 100 HB	Found. GG22	Steel <90Kg	Steel 90-115 Kg.	Steel >115Kg.
40	35	40	340	Ø48	M42	M39	M36	M33	M27
75	18,85	75	185	Ø31	(M33)	M30	M27	M27	M22
140	9,7	140	95	Ø31	M27	M24	M22	M22	M16
320	4,5	310	44	Ø19	(M20)	M16	M16	M16	M12
500	2,91	480	28	Ø19	M16	M12	M12	M12	M8
900	1,54	900	15	Ø19	M10	M8	M8	M6	M6

**MODULE 40: only available for the model ROSCAMAT 9001**

(-) For the sizes in brackets, we should dress the tap shank dimension. (Ø) and the driving cube (□) (to fit the tapholder's size) or order a special module with the upper type coupling diameter.



**Motor Characteristics:** Make the connexion to a monophase socket (220 V.) with differential and a ground wire.

MODEL	TYPE	POWER	VOLTAGE
R-6000	High Frecuency	1 Kw	220-240 V.
R-9001	High Frecuency	1 Kw	220-240 V.

## Chapter 3.- ACCESSORIES

---

The thread cutting **toolholders** (tap or diestock holders) are quick-change accessories apt to be attached to the different modules. These are two types of tap holder:

- ◆ Type 1: with  $\varnothing$  19 mm. coupling covering the range from M2 to M16.
- ◆ Type 2: with  $\varnothing$  31 mm. coupling covering the range from M6 to M30.
- ◆ Type 3: with  $\varnothing$  48 mm. coupling covering the range from M14 to M42



All types (19/1, 31/2, 48/3) can be supplied with or without safety clutch (blind or through holes).



The **diestock holders** comprise a screw cutting range for outside threads from M5 to M20 and are also quick-change accessories.



**Long die holders**, from M6 to M12.



**Quick-change extension**, for pieces of difficult access (L=80 mm.)



When for any reason, (type of material, coating, heating treatment, etc.) we must tap small threads at lower speed, there are also available for supply different **Reducer Bushings** which can be coupled to the modules (90, 170 –pneumatic models- or 40, 75, 140 – electronic model) and with output for Type 1  $\varnothing$  19 mm. or type 2  $\varnothing$  31 mm. tapholders, according to the job intended.

Types:      Reducer 48/31  
                 Reducer 48/19  
                 Reducer 31/19

## DISMOUNTABLE TABLES



**TABLE 500X500**  
Measures: 500x500x900 mm.  
Weight: 80 Kg.



**TABLE 700X700**  
Measures: 700x700x850  
Peso: 47 Kg.  
Maximum weight: 150 Kg.

Light and robust, very useful for medium or small pieces. Provided with 4 wheels and notches for attaching the workpieces or tools.

Provided with:  
- 4 wheels (2 with brake)  
- Notches for fixing the workpiece or tools  
- Supports for tapholders



**TABLE 850X850**  
Measures: 850x850x850  
Weight: 74 Kg.  
Maximum weight: 200 Kg.



**TABLE 1100X850**  
Measures: 1100x850x850 mm.  
Weight: 120 Kg.  
Maximum weight on table: 500 Kg.

Provided with:  
- 4 wheels (2 with brake)  
- Notches for fixing the workpiece or tools  
- Supports for tapholders

Provided with:  
- 4 wheels (2 with brake))  
- Notches for fixing the workpiece or tools  
- Box with key

## SUPPORTS

### **SMALL CLAMP & CLAMP 500**

For mounting the machine on to any table or workbench.



### **MAGNETIC SUPPORT**

For mounting the machine on to any metallic flat surface.

Roscamat 200: 150x150 mm  
Roscamat 400: Ø200 mm  
Roscamat 6000/9001NC: Ø250mm



## SUPPORTS ACCESSORIES

		
<p><u>TROLLEY WITH COLUMN</u></p> <p>For moving the working unit. The column is used to fix the machine by means of a 4 metallic dowells.</p> <p>Provided with 4 pivoted wheels (2 with brake).</p> <p>Weight: 125 Kg.</p>	<p><u>LIFTER: 2 models</u></p> <ul style="list-style-type: none"> <li>- Pneumatic: It consists of a collapsible column and a torsion – protected pneumatic cylinder – with a 550 mm. stroke in vertical direction.</li> <li>-Mechanic: It consists of a collapsible column operated by a compensating spring according to the machine’s weight. Stroke: 500 mm.</li> </ul>	<p><u>COLUMN</u></p> <p>For fixing the machine on the floor by means of a 4 metallic dowells.</p> <p>Measures: Base: 350x350x750 altura Weight: 20 Kg.</p>

\*Attention: the elevator can be mounted on to a column, on to a skid, on to a table and can support any ROSCAMAT model.

## Chapter 4.- PACKAGING FEATURES

Next follows a brief account of the main features of the machines and accessories with their corresponding net and gross weight.

### Machines

<i>Model</i>	<i>Characteristics</i>	<i>Net weight (Kg.)</i>	<i>Gross Weight (Kg.)</i>	<i>Package dimensions (cm.)</i>	<i>Package volume (m<sup>3</sup>)</i>
<b>Models with pneumatic motor</b>					
R-200	Articulated arm-tapping machine. Capacidad M2-M12, 350 rpm (M8, 650 rpm)	9	12	71x48x23	0.078
R-200 VH	Articulated arm-tapping machine with orientable headmember (90°). Capacity: from M2 to M12,(350 rpm) or M8 (650 rpm).	10	13	71x48x23	0.078
R-400	Articulated arm-tapping machine. Capacity: M2- M24.	20	24	75x37x26	0.07
R-400 VH	Articulated arm tapping machine with orientable headmember (90°). Tapping capacity from M2-M24	21	25	75x37x26	0.07
R-500	Articulated arm-tapping machine. Tapping capacity from M2 to M24.	27	40	138x83x43	0.50
R-500 VH	Articulated arm tapping machine with orientable headmember (90°). Tapping capacity from M2 to M24	29	42	138x83x43	0.50
R-500 RH	Articulated arm tapping machine with multiposition headmember. Tapping capacity from M2 to M24.	39	53	138x83x43	0.50
<b>Models with electronic motor</b>					
R-9001	Articulated tapping arm machine. Capacity: M3- M36.	41	43	92x45x40	0,26
R-9001 VH	Articulated tapping arm machine with orientable headmember vertical/horizontal. Capacity M3 to M36 (M27 horizontal)	43	45	107x48x33	0,26
R-6000	Articulated tapping arm machine. Capacity: M2 – M27	28	32	96x46x36	0,16
R-6000 VH	Articulated tapping arm machine with orientable headmember vertical / horizontal. Capacity: M2 - M27	30	34	106x49x29	0,15
R-Mosquito	Articulated tapping arm machine. Capacity: M- M14.	16	20	57x83x30	0,14

### Modular System

#### ROSCAMAT machines – Pneumatic models. Range R-400 - R-500 y R-500 RH

<i>Module</i>	<i>Characteristics</i>	<i>Net weight (gr.)</i>	<i>G. weight(gr.)</i>
90 / 170	Quick-change reducers with tapping range up to M24 / M18	1630	1672
300 / 550 / 750	Quick-change reducers with tapping range up to M16 / M 12 / M10	670	692
1050	Quick-change reducers with tapping range up to M8	800	832
2100	Quick-change module for drilling soft materials up to Ø 8	800	832

#### ROSCAMAT machines – Electronic models ( R-9000 NC – R6000)

<i>Module</i>	<i>Characteristics</i>	<i>Net weight(Kg.)</i>	<i>G. weight (Kg.)</i>
40	Quick-change reducers with tapping range up to M36	3,3	3,4
75 /140	Quick-change reducers with tapping range up to M27 / M22	2	2,1
320/ 500	Quick-change reducers with tapping range up to M16/M12	1,6	1,3
900	Quick-change reducers with tapping range up to M8	1,2	1,3



### Accessories

<i>Model</i>	<i>Characteristics</i>	<i>Net Weight (Kg.)</i>	<i>Gross Weight (Kg.)</i>	<i>Package Dimensions (cm)</i>	<i>Package volume (m<sup>3</sup>)</i>
Table 1100x850x850	Dismountable table of measures 1100x850 mm. and 850 mm. height, provided with four wheels with brakes, jig fastening slots, lockable drawer for modules and tools. Made of 8 mm sheet	120	140	120x95x52	0,60
Table 850x850x850	850 mm high dismountable table with the same characteristics as the above one.	97	109	95x95x29	0.44
Table 700x700x850	Dismountable table. Made of 4 mm sheet. Only useful for model ROSCAMAT-200 due to its light weight and smaller dimensions.	47	52	83x83x29	0.2
Table 500 x 500	Fixed column table of 500x500x900 high. Light and rugged; very handy for small and middle-sized parts. Provided with wheels and part fastening slots.	80	102	91x71x42	0.27
Clamp 500	Quick fastening clamp to fasten the machines of series 500 & 9000 NC to any table or workbench.	6	6		
Clamp 300	The same as the one above but for machines of series 300.	2.3	2.3		
Column	Accessory for a fixed working station as a base measuring 850x350x350, very appropriate for an auxiliary machine in a mechanisation centre.	20	39	45x45x60	0.13
Trolley	For moving the column. Measuring 840x700x700.	104	151	76x76x121	0.70
Lifter	Consisting of a telescopic column and a compressed air cylinder. Can be fitted to the column, the trolley or the two big tables. Stroke 600 mm. Increases the height of the working range.	35	42	95x26x24	0.05
Magnetic foot	An accessory designed to be fastened to the foot of the ROSCAMAT machines series 300 for a fixation onto flat metal surfaces.	11	12.5	26x22x11	0.006

**PACKAGING FEATURES**

### Toolholders

Denomination	Characteristics	Net Weight (gr.)	Gross weight (gr.)
Tapholder with clutch M3-M16	For the tapping range M3-M16 type 1 Ø19 (Blind holes)	130	140
Tapholders without clutch M3 - M16	For the tapping range M3-M16 Type 1 Ø19 (Through holes)	70	80
Tapholder with clutch M6-M30	For the tapping range M6-M30 Type 2 Ø 31 (Blind holes)	490	508
Tapholder without clutch M6-M30	For the tapping range M6-M30 Type 2 Ø 31 (Through holes)	200	218
Tapholder with clutch M14-M42	For the tapping range M14-M42 Type 3 Ø48 (Blind holes)	1280	1340
Tapholder without clutch M14 – M42	For the tapping range M14-M42 Tipo-3 Ø48 (Through holes)	590	640
Reducer Bushing	To transform the output coupling diameter of modules to other small diameters so that we can adapt the tapholders Type-1 or Type-2 to the other modules. <u>3 types:</u> Reducer 48/31; 48/19; 31/19	166	194

***PACKAGING FEATURES***

## Chapter 5.- MISCELLANIES

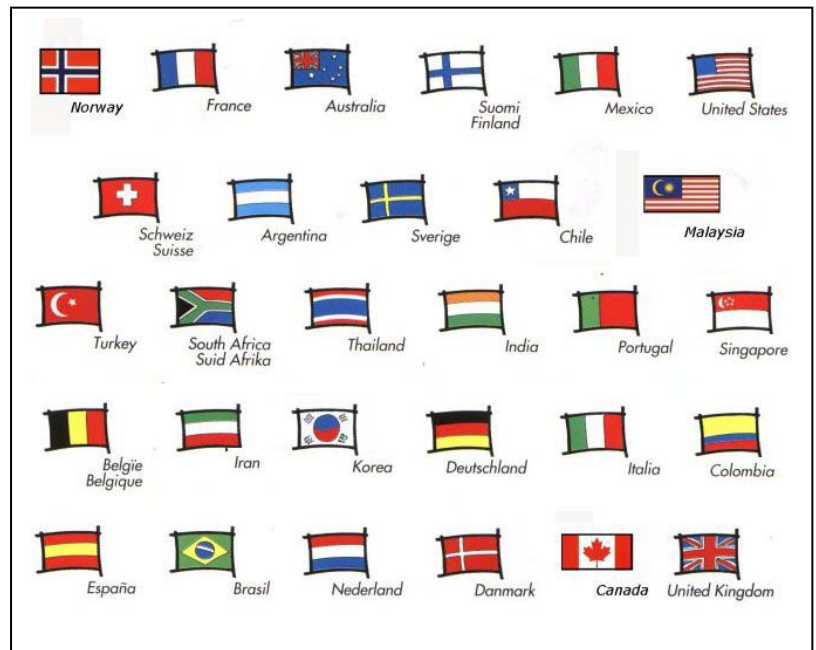
The range of ROSCAMAT units represents the simplest and the most economic method for carrying out the tapping operations in the mechanical manufacture.

These machines are especially useful for mould and die makers, manufacturers of machine parts and tools, small- and medium-quantity batches, etc., and can also be used as auxiliary units in mechanisation centres thus allowing to simultaneously carry out the tapping and other operations and to thus optimise the manufacturing process.

The ROSCAMAT arms can also be used for chamfering, riveting and helicoil inserting operations and even for carrying out load handling tasks

At the beginning of the 90's we started our export activities which level has been going up unstoppable year after year until locating on the horizon of 90% level. Nowadays, more than 14.500 endusers over the world into the five continents are working with our machines and everyday show their satisfaction of their high productivity and rendibility.

The main destination countries till 2010 are:



### HISTORICAL SALES CHART

Machine	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>BRM-1690</b>	15	16	16	18										
<b>R-160</b>			48	158	150	126	6							
<b>R-260</b>				4	13	18	2	1						
<b>R-300</b>						17	71	195	347	472	554	680	655	706
<b>R-500</b>							5	15	28	59	68	75	66	62
<b>Movimat</b>												73	55	132

Machine	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>R-200</b>			225	231	169	182	282	312	395	394	480	150	209	
<b>R-300</b>	680	655	706	576	442	411	65							
<b>R-500</b>	75	66	62	56	57	47	34	37	34	41	56	8	20	
<b>Movimat</b>	73	55	132	136	112	85	84	89	74	80	81	48	36	
<b>R-9001</b>					35	22	33	39	34	40	39	7	21	
<b>R-400</b>						13	484	481	482	577	550	126	259	
<b>R-6000</b>							33	60	102	122	134	19	39	
<b>Mosquito</b>												25	131	

If you need more information do not hesitate to contact with Tecnospiro Machine Tool SL

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