OPERATOR'S
MANUAL

Range
ROSCAMAT-500

Serial no.		Machine no.	
Model			
Year of manufacture			

TECNOSPIRO
MACHINE TOOL SL

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ISO 9001
BUREAU VERITAS
Certification

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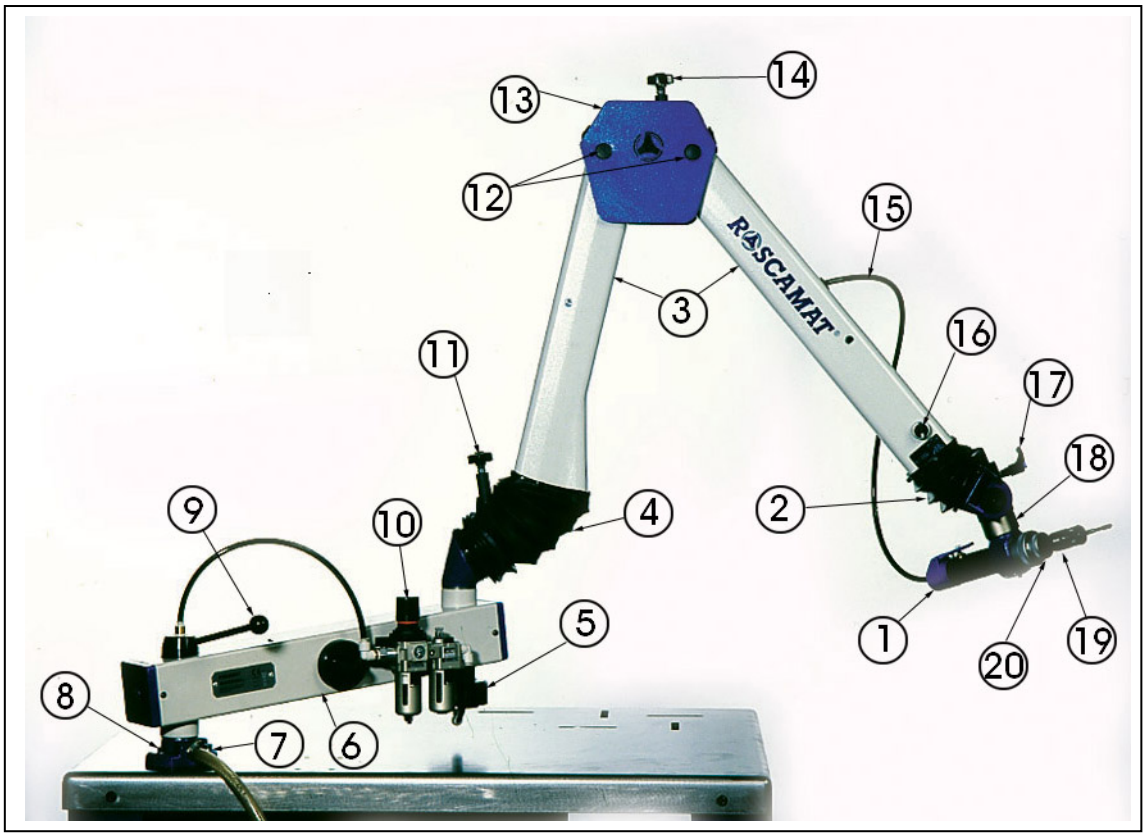
INTRODUCTION

Dear customer:

We wish to take this opportunity to thank you for choosing a “ROSCAMAT” tapping machine to produce quality threads ans associated operations.

This operation’s manual is given to you so that by careful reading of its contents, it will be enable you to maintain its reliability and performance for long-life.

DESCRIPTION MACHINE ROSCAMAT-500 RH



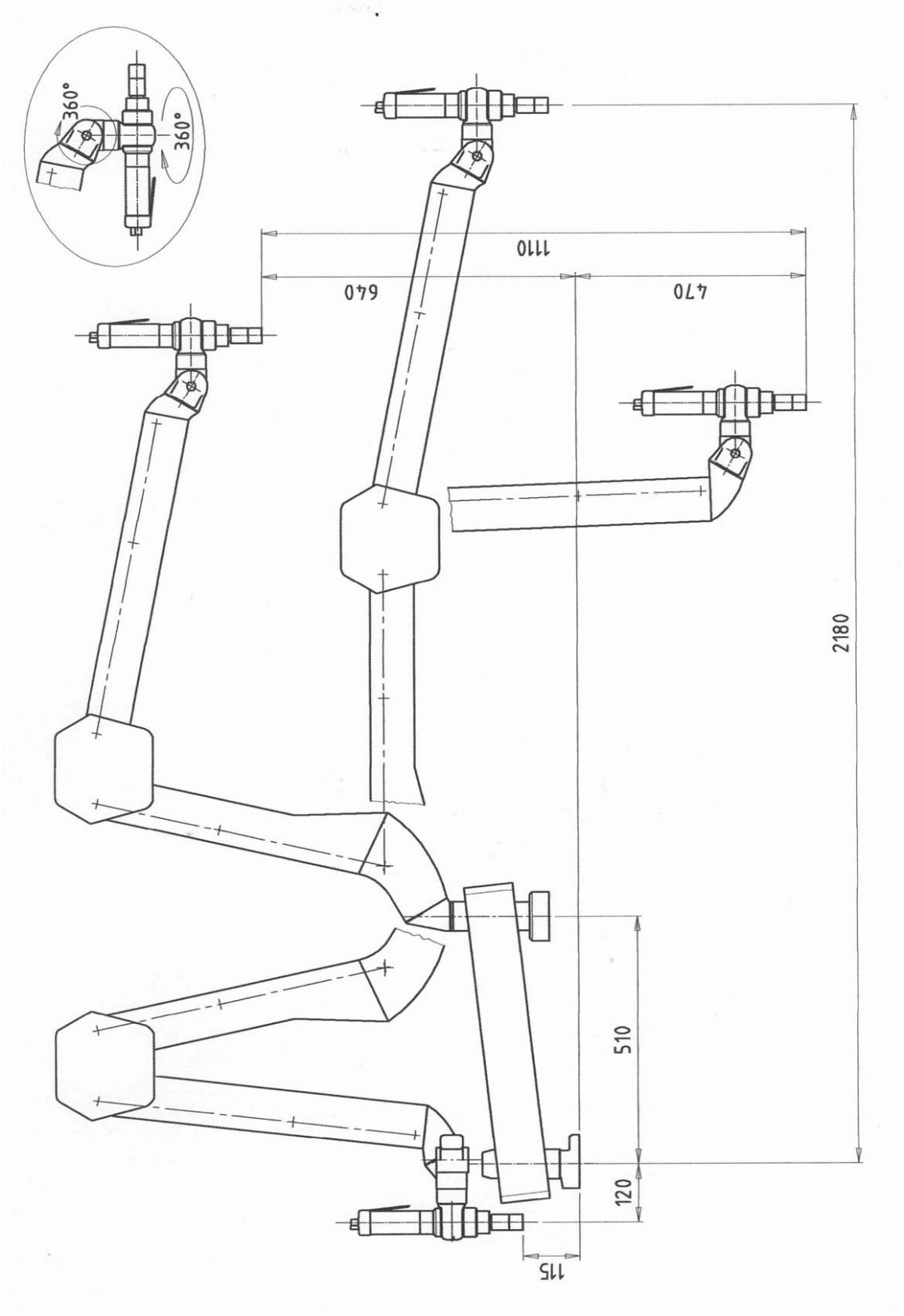
1. **MOTOR**
2. **FRONT BELLOW**
3. **TILTING ARMS**
4. **REAR BELLOW**
5. **ARM LOCKING KNOB**
6. **RADIAL ARM**
7. **AIR INLET SPIGOT**
8. **MACHINE BASE PLATE**
9. **BRAKE HANDLE**
10. **AIR & LUB PREPARATION UNIT**
11. **REAR DAMPER REGULATING HANDWHEEL**
12. **CAPS**
13. **UPPER HAT**
14. **FRONT DAMPER REGULATING HANDWHEEL**
15. **AIR PIPE**
16. **ARM LOCKING CONTROL**
17. **HEAD LOCKING HANDLE**
18. **MULTIPOSITION HEAD**
19. **TAPHOLDER**
20. **MODULE**

The basic machine consists of a radial parallelogram, plus two pendular parallelograms which are balanced by pneumatic springs and a two-rotation axis head. This group fixes the motor and keeps it perpendicular to the working area.

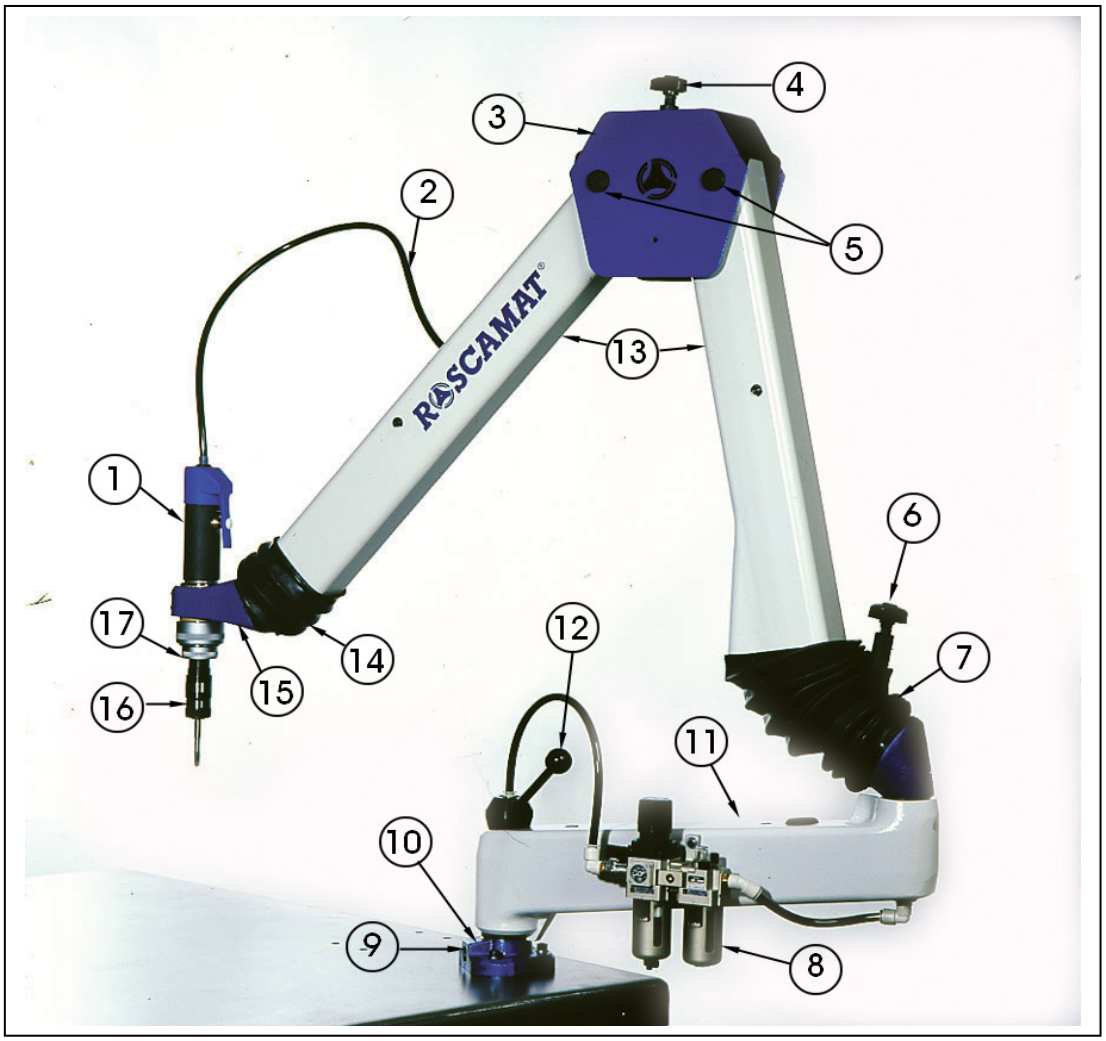
El motor is equipped with a module quick-change system, and rotates by compressed air, that has previously been filtered and lubricated by a unit for that purpose.

Taps and shank tooling fit directly to quick-change tapholders.

WORKING AREAS ROSCAMAT-500 RH



DESCRIPTION MACHINE ROSCAMAT-500



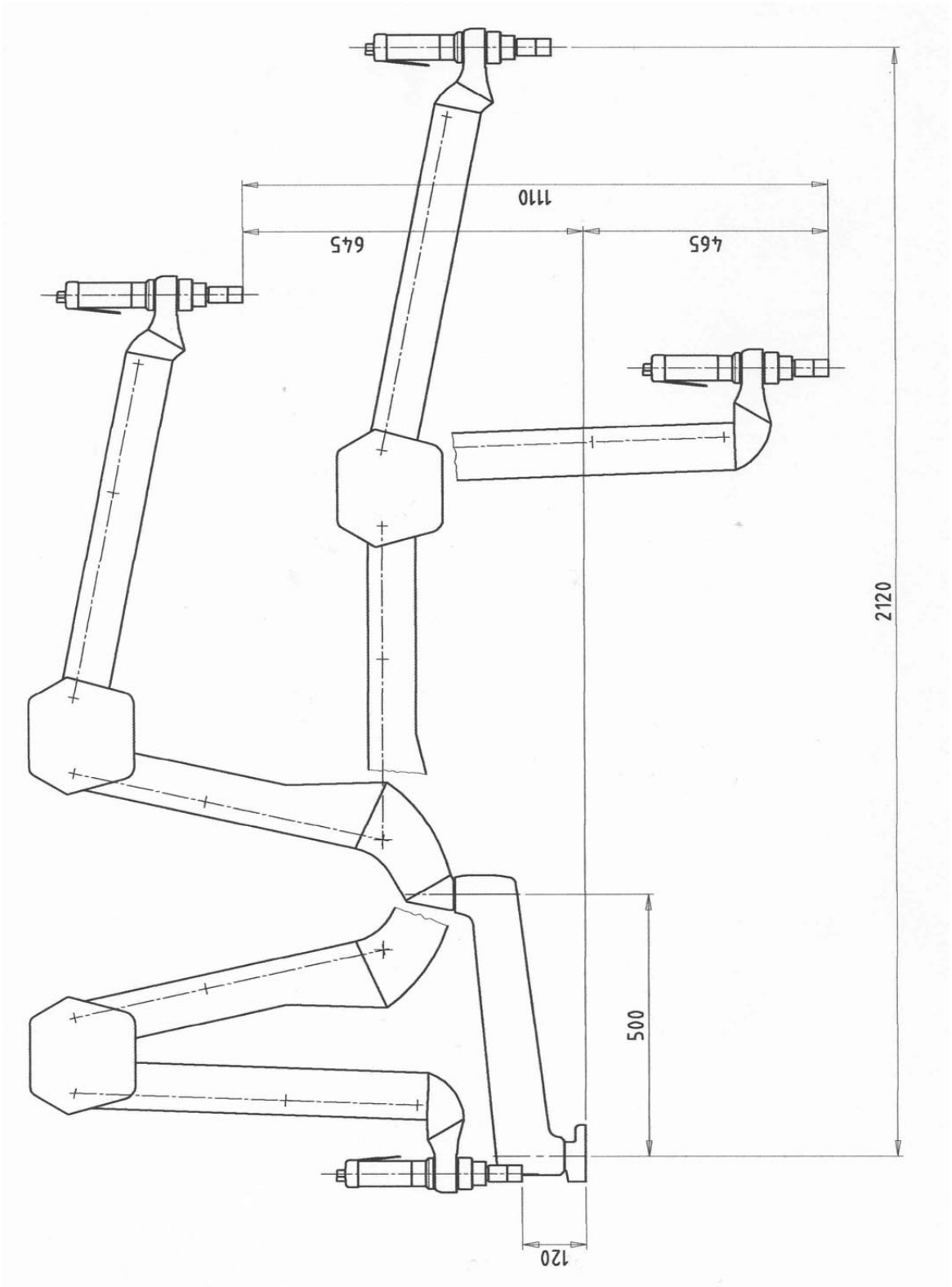
1. **MOTOR**
2. **AIR PIPE**
3. **UPPER HAT**
4. **FRONT DAMPER REGULATION HANDWHEEL**
5. **CAPS**
6. **REAR DAMPER REGULATION HANDWHEEL**
7. **REAR BELLOW**
8. **AIR GROUP**
9. **AIR INLET SPIGOT**
10. **MACHINE BASE PLATE**
11. **RADIAL ARM**
12. **BRAKE HANDLE**
13. **TILTING ARMS**
14. **FRONT BELLOW**
15. **VERTICAL HEAD**
16. **TAPHOLDER**
17. **MODULE**

The basic machine consists of a radial arm, plus two pendular parallelograms which are balanced by pneumatic springs. This group fixes the motor head and keeps it perpendicular to the working area.

The motor is equipped with a module quick-change system and rotates by compressed air that has previously been filtered and lubricated by a unit for that purpose.

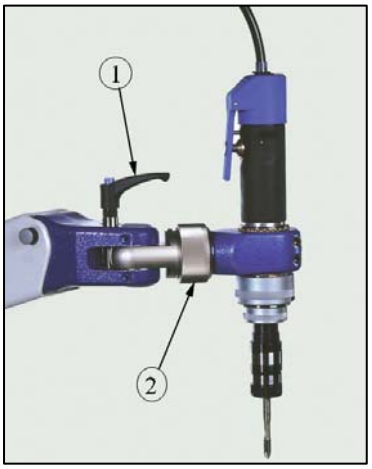
Tools and shank tooling fit directly to the quick-change tapholders.

WORKING AREAS ROSCAMAT-500



DESCRIPCTION MACHINE ROSCAMAT-500 (C-26 N)

The ROSCAMAT-500 can be supplied with an articulated head (C-26 N). This bracket of easy handling can be set in four different positions 90º apart.



♦ Orientable head:

1.- Handle

2.- Milled nut



Vertical operations:

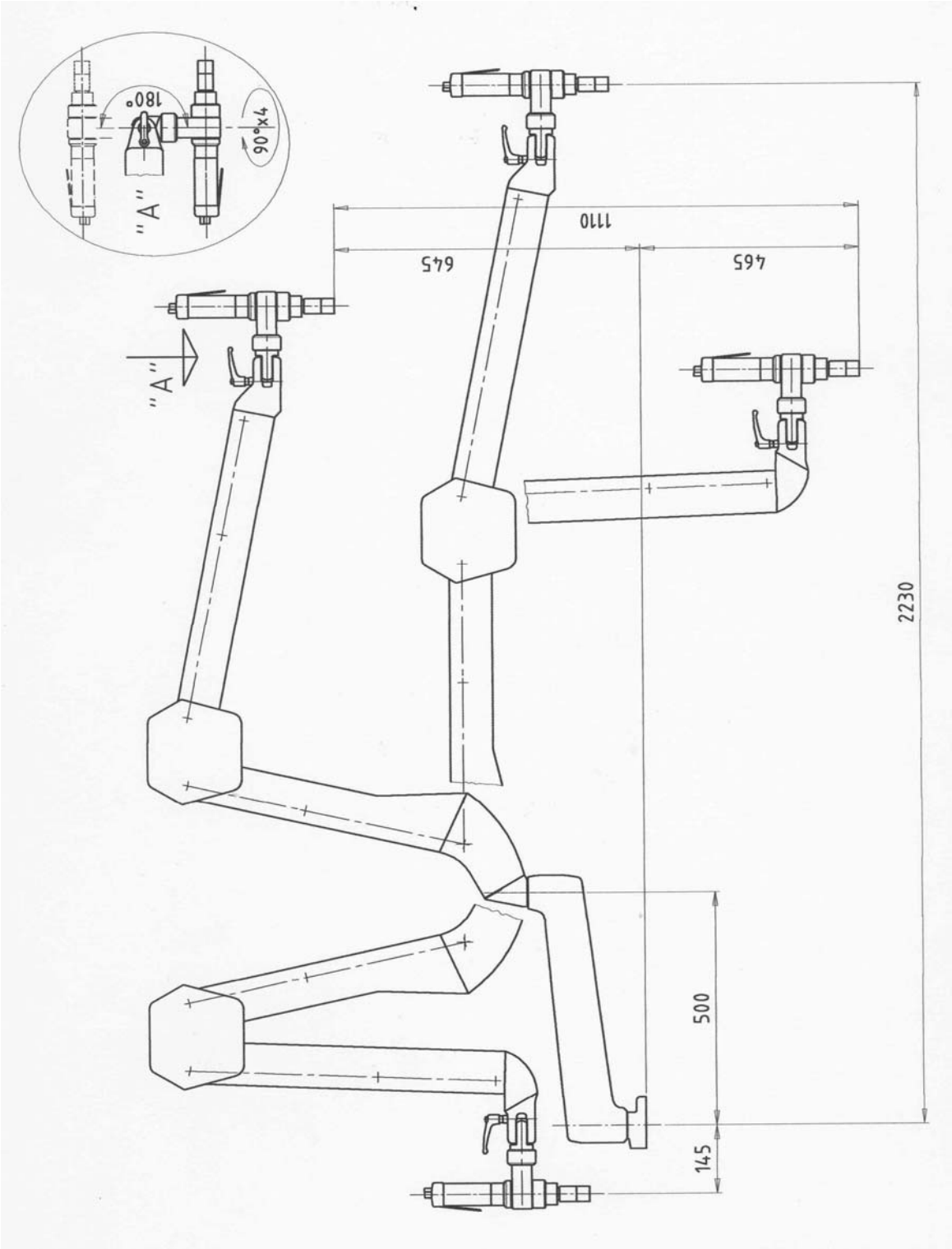
♦ Place the motor in vertical position and lock the handle (1) and the milled nut (2). The ROSCAMAT now is ready to work.

Horizontal operations:

♦ Loose the milled nut (2) to unlock the joint of the motor.
♦ Turn the head 90º till you reach the interlock, and then tighten the millet nut (2) again.
♦ 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.

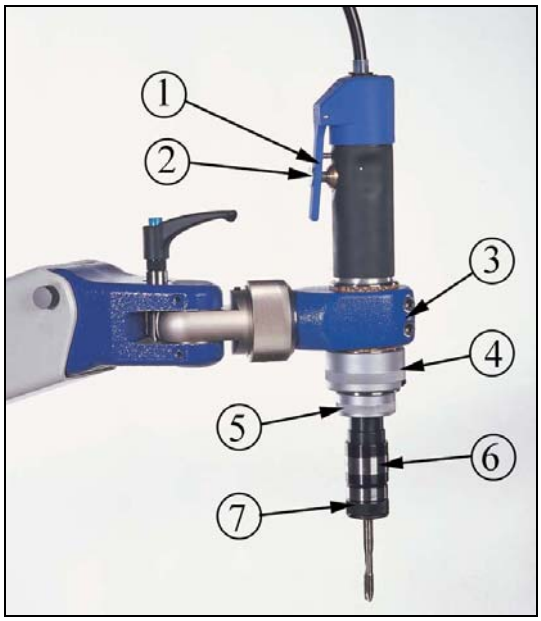
Do not lock the handle (1) if you are working in horizontal operations.

WORKING AREAS ROSCAMAT-500 (C-26 N)



DESCRIPTION

PNEUMATIC MOTOR TS-VIII



1.- Starting lever

2.- Reversing button

3.- Motor Head

4.- Module change slide collar

5.- Module

6.- Quick change (module)

7.- Tapholder with clutch

REGULATING FILTER UNIT AIR LUBRICATION

1b.- Pressure regulator

2b.- Flow rate regulating valve

3b.- Pressure gauge

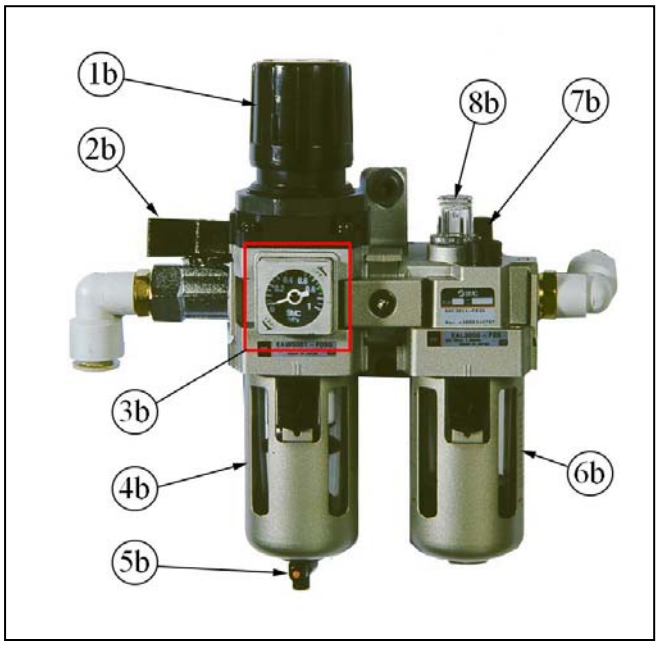
4b.- Reservoir (condensed water)

5b.- Drain pipe (WATER)

6b.- Oil reservoir (SAE-10)

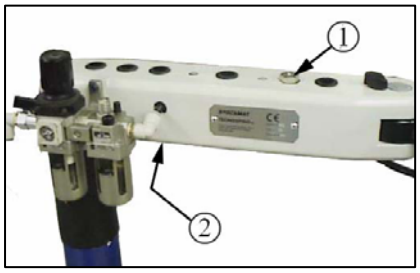
7b.- Lubrication regulation knob

8b.- Lubrication inspection sight glass

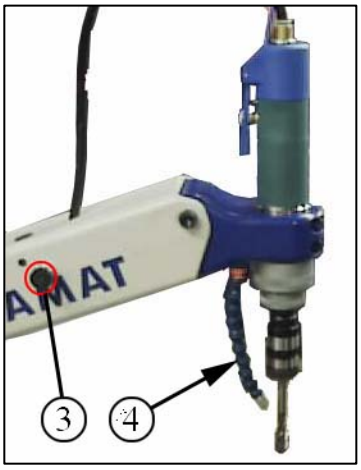


DESCRIPTION

AUTOMATIC TAP LUBRICATOR EQUIPMENT (E)



1.- Filling cap
2.- Drain screw
3.- Regulation valve
4.- Articulated pipe



The machines of the model ROSCAMAT 500 E / 500 (C26 N) E /500 RH E, incorporate an automatic tap lubrication system.
The oil reservoir is arranged inside the radial arm and is connected to an innerly arranged hydraulic cylinder. The desired cutting oil flow rate is adjusted by means of ten control valve (3). When pressing the motor lever the system pumps the flow rate in the pump being arranged the tilting arm.

After having filled the oil reservoir, immediately bleed the system by applying pressurised air through the hole being provided in the filling cap (1) of the reservoir.

*__Caution__: *USE CUTTING OIL*

Certain lubricant types containing trichlorines and alcohols can damage some of the valve components.

INSTALLATION

A : Mount the machine base plate on to the working table by means of three M8 screws or the clamp.

B : Fill up the reservoir (6b, page 10) with lubricating oil SAE-10.

C : The air connection is carried out by means of a notched connections (17, page 4 y 14, page 6) located on the machine base.

IMPORTANT:

Table showing the ratio length to inside diameter of the feeding pipe:

Length (mts.)	Minimum inside diameter. (mm.)
< 8	12
> 8	14

INSTALLATION VERIFICATION

Once the machine has been connected to the main, have to be checked:

1. Supply pressure:
   6-8 bar for full power

2. The pressure gauge reading can drop 0,5 maximum 1,5 bar when the motor is started (if a drop greater than 2 bar is noticed, this means that the supply flow rate is not sufficient).

3. Make sure, by checking the sight glass (8b, page 10) that when the machine is in operation two to three drops per minute are fed. The regulation is carried out by means of the control knob. (7b, page 10).

4. Arm balance:
   By turning the regulation handwheel (11 and 14, page.4) and (4 and 6, page.6) to the right (-) or to the left (+) different weight at the arm end are balanced.

OPERATION

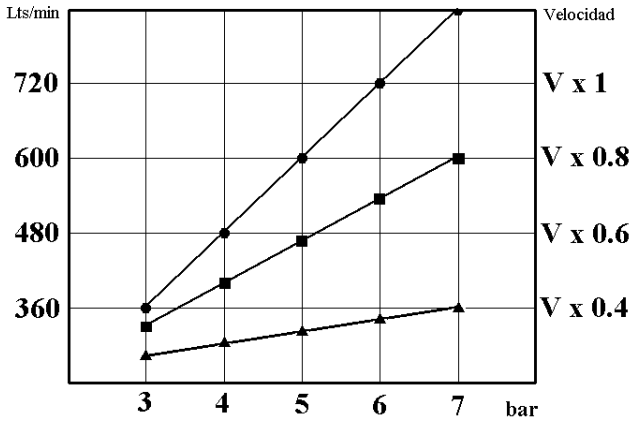
1. Turn the *slide collar* (4, page 10) to the left, insert the module and turn the *slide collar* to the right.
2. Regulate the arm balance for the *90* and *170 modules*.
3. Insert the tapholder in the quick change of the module.
4. Clockwise rotation: push *lever* (1, page 10)
5. Counterclockwise rotation: push simultaneously *lev*er (1, page 10) and *button* (2, page 10).
6. Pulling up the *tool quick change* (6, page 10) the tapholder will come out automatically.

SPEED CONTROL - CONSUMPTION CONTROL

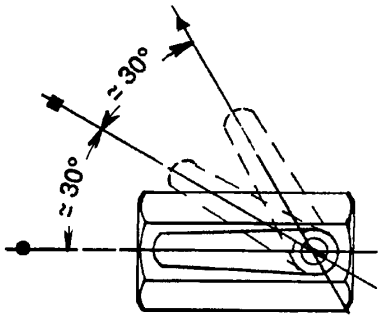
By means of the flowrate regulating valves (2b, page 10) and the pressure regulator (1b, page 10).

RATIO

(Consumption-Pressure-Rotation speed)



VALVE POSITION



Module	Maximum Speed (rpm)	Maximum Torque (Nm)	∅ Coupling diameter (mm.)	Max. Thread. Aluminium Cast Iron	Max. Thread Steel < 80 Kg..	Max. Thread Steel >80Kg.
90	**90**	**150**	**∅31**	**M27**	**M24**	**M22**
170	**170**	**79**	**∅31**	**M22**	**M18**	**M16**
300	**300**	**44**	**∅19**	**M16**	**M16**	**M14**
550	**550**	**24**	**∅19**	**M14**	**M12**	**M10**
750	**750**	**17**	**∅19**	**M12**	**M10**	**M8**
1.050	**1.050**	**12,5**	**∅19**	**M8**	**M8**	**M6**
2.100	**2.100**	**6**	**Cone B-16**	**To drill up to ∅ 8 Aluminium, Brass, Cast Iron,..**		

OPERATION ANOMALIES

Slipping clutch type tapholders. The clutch slips and the tap cannot be turned.

1. Clutch slackness. *Clutch adjustment (page 15)*
2. No tools lubrication. *Use cutting oil.*
3. Inappropriate tap for the material to machine. Use the correct tap. *(page 16).*
4. Tap spoiled “worn”.
5. Misaligned hole.
6. Drilled hole diameter too small.

When neither the tap or the motor turns, this could be attributed to one of the previous items 2 to 6, or to insufficient motor power.

1. Check items 1 to 3 (page 13).
2. MINIMUM pressure 6 bar (for high power and rotation speed).
3. Clogged exhaust filter (page 19).
4. Worn motor plates (pages 20 y 21).

If the pivoted arm drops:

1. Arm not balanced. *Check item 4 (page 13).*
2. Faulty damper. *Substitution (page 22, 23).*

If the lubrication system don’t work:

1. The oil tank is empty. *Fill the reservoir (page 11)*
2. The oil-hole is clogged. *Introduce a un a 0,3-0,4 mm wire through the oil-hole.*

Upon having filled the oil reservoir immediately bleed the system (page 11)

CLUTCH ADJUSTMENT

Remove small spring clip around perimeter and turn the notched nut clockwise or counter clockwise to increase or decrease the clutch tension and put the small ring back on the new notch.

TECHNICAL DATA

TURNING TORQUE (Nm) FOR THREADING

Metric thread	Steel > 100 Kg.	Steel 80-100 Kg.	Steel < 80Kg.	Aluminium Cast Iron
2				
3				
4	2	1.3	1.2	0.8
5	3	2	2	1.3
6	5	4	4	2.4
8	11	8	8	5
10	20	15	14	9
12	33	24	23	14
14	50	36	35	22
16	57	42	40	26
18	101	73	70	45
20	112	81	78	50
22	123	90	86	55
24	194	140	135	86
27	218	158	152	97

MACHINE TAPS

Blind hole	Helical-flute tap.	Lubrication
Through hole	Straight-flute tap with helical feed-in	
Steel > 80 Kg.	Rake angle 8-10.	Cutting oil with additive.
Steel < 80 Kg.	Rake angle 12-14.	Cutting oil.
Steel < 50 Kg. Stainless	Rake angle 14-16. Surface treatment.	
Cast Iron	Straight-flute tap. Surface treatment. Nitrated. Rake angle 5.	Petroleum, Coolant, dry machining.
Duraluminium	Rake angle 12-15.	Coolant, dry machining
Aluminium	Rake angle 17-25.	Cutting oil with additive.
Plastics		Coolant, dry machining.

TECHNICAL DATA

	R-500 RH	R-500
Pneumatic motor:		
Power	730 W.	730 W.
Consumption	300-900 l/m	300-900 l/m
Machine weight	39 Kg.	27 Kg.
Intake filter	5 U.m.	5 U.m.
Noise level	78 db.	78 db.
Machine colours	Blue to RAL 5002 Fog grey to RAL 7035	



(Pneumatic motor TS-VIII)

MAINTENANCE

Practically the only machine's part that we can wear is the motor. Therefore its maintenance should be carried out very carefully, which means that the air supply must be in dry & clean condition. For this purpose, the following three points must be taken into account:

1. Drain periodically the water collected in the left air treatment unit cup by pressing the relief knob (5b, page 10).

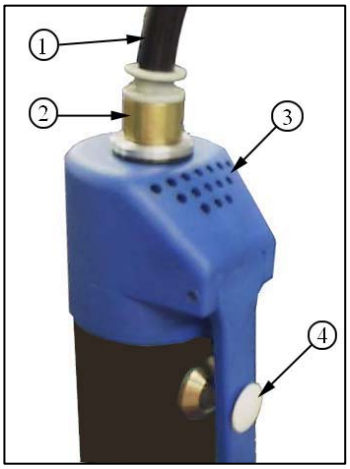
2. Fill up the right air treatment unit cup with SAE-10 (light duty oil).

3. Check through the sight glass (8b, page 10) that when the machine is in operation, two or three drops per minute are supplied. The regulation is made by means of the control knob (7b, page 10).

WARRANTY

The warranty period for the motor and for the rest of the machine is one year. The warranty does not cover any damage caused by overloads or improper handling of the machine.

EXHAUST FILTER (REPLACEMENT) *Ref. 40202304*



1. Close the flow rate regulating valve situated on the left-hand side of the filtering unit (2b, page 10) and actuate the motor starting lever.
2. Take out the intake tube and the reversing button (1, 4).
3. Unscrew the raccord (2) situated on the upper side of the motor. Remove the external casing (3) and take out the exhaust filter.
4. Replace the exhaust filter.

Reverse the process for the reassembling.

INTAKE FILTER (REPLACEMENT) *Ref. NH120856*

Remove the left air treatment unit cup (4b, page 10), unscrew the filter and replace it with a new one. The installation is carried out in the reverse order.

MOTOR REPLACEMENT *Ref. 40201105*

1. Close the air inlet valve (2b,page 10) being arranged to the left of the FRL air servicing unit and actuate the motor air lever to expel the air compressed.
2. Disconnect the air intake pipe being connected upper the motor
3. Remove the motor slide change collar (4, page 10). First, you must remove the "*seeger ring*" situated under the lower part of the slide collar.

WATCH THE Ø9 mm. BALLS OF THE INSIDE OF THE SLIDE CHANGE COLLAR

4. Loosen the two ALLEN screws of the head
5. To extract the motor (upwards), you must align the bolt ø2,5 mm of the motor gearbox with the front milled gap of the machine motorhead

Carry out the whole process in reverse order for the assembly.

PRESSURE GAUGE (REPLACEMENT) *Ref. NH40516*

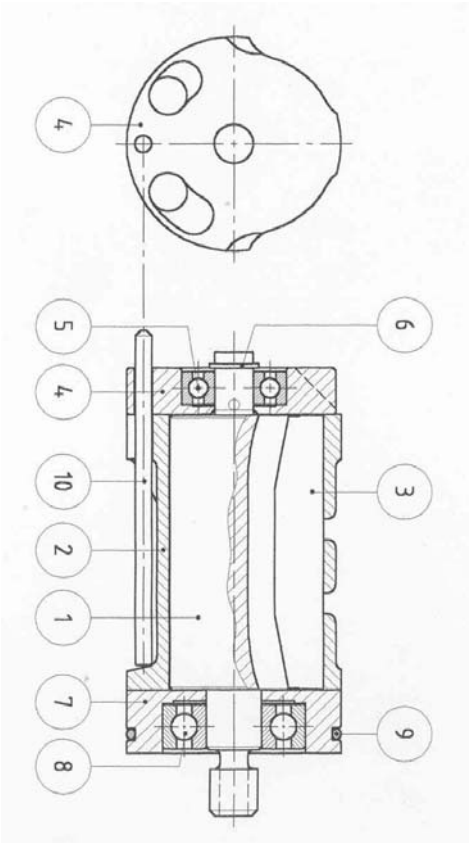
1. Close the flow control valve (2b, page 10), and actuate the motor lever in order to expel the compressed air from the inside of the motor
2. Turn the manometer "sight" to the right, and unscrew the two screws securing the manometer to the FRL air servicing unit.

Replace the manometer with a new one, and carry out the whole process in reverse order

MOTOR PLATES (REPLACEMENT) *Ref. NH120846*

1. Close the air inlet valve (2b, page 10) located on the left side of the filtering unit and operate the motor to expel the air.
2. Remove the intake pipe entering the top of the motor.
3. With a “belt key”, unscrew (LEFT HAND THREAD) the motor casing.
4. Remove the whole rotor assembly from inside the casing.
5. Pull out the “seeger ring” (nr.6) of the upper part of the motor and remove the upper head (nr. 4), the stator (nr.2) and the MOTOR PLATES (nr.3).

ATTENTION:
Notice the direction and positions of the motor stator and top head.



1. Rotor
2. Stator
3. Motor plates
4. Top head
5. Ball bearing 607-Z THB
6. “Seeger” O-ring
7. Bottom head
8. Ball bearing 6000-Z THB
9. Joint
10. Rod

CLEAN *and* ***BLOW OFF*** *all parts before doing the assembly.*

6. Lubricate the motor plates and both ball bearings with SAE 10 oil.

7. Place the motor plates in their seatings, the motor stator in its right position, install the upper head together with its ball bearing and mount the "seeger" ring.

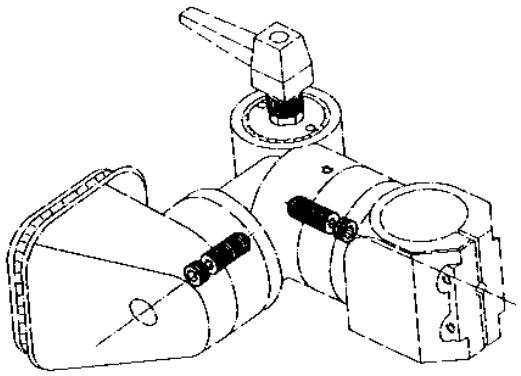
8. Take the whole rotor assembly and insert it vertically and without turning it so that the rod is introduced into the hole provided in the bottom of the motor casing (see drawing page 20). Once having placed the rod in its seat, screw the whole assembly (LEFT-HAND THREAD) and tighten it with the belt key.

9. Install the intake tube to the motor.

MULTIPOSICION HEAD (ADJUSTMENT)

In the event that the articulated head doesn't perfectly lock its movement or if on the contrary, it moves with difficulty on its idle position, it should be adjusted.

If the coupling on the motor side is to be adjusted, then the motor should be removed from the articulated head or if the coupling to be adjust is the other one, remove the plastic cap.



To perform the adjustment, set the handle (17, page. 4) in its lock position, drive in a 5 mm ALLEN spanner, loosen the lock nut by turning it counter clockwise, drive in the 4 mm ALLEN spanner, precision-adjust the screw by turning the screw clockwise = greater coupling slippage, counter clockwise = greater coupling locking effect. Once adjustment has been performed, drive in the 5 mm ALLEN spanner and tighten the lock nut by turning it clockwise.

FRONT DAMPER (SUBSTITUTION)

- Remove the front bellow ((2, page 4) and (14, page 6))
- Pull out the two 8 mm ALLEN screws.
- Pull out the fork stop ALLEN screw.
- With the arm in its horizontal position, turn the knob counterclockwise in order to release the damper up to it becomes completely loose ((14, page 4) and (4, page 6))
- Remove one Seeger ring along with the damper strut in the fork.
- Remove one Seeger ring along with the damper strut in the arm
- replace the damaged damper with a new one and reassemble it in the reverse order.

Damper ref. 262 037 04 (R-500)
Damper ref. 512 010 04 (R-500 RH)

REAR DAMPER (SUBSTITUTION)

- Remove the bellows ((4, page 6) and (7, page 6))
- Remove the screw that butts against the regulating fork.
- Pull out the nylon part that butts against the arm top.
- With the arm in its vertical position, turn the knob counterclockwise in order to release the damper up to it becomes completely loose. ((11, page 4) and (7, page 6))
- Remove one Seeger ring along with the damper strut in the fork.
- Remove one Seeger ring along with the damper strut in the arm.
- Replaced the damaged damper with a new one and reassemble it in the reverse order.

Damper ref. 262 041 04 (R-500)
Damper ref. 512 012 04 (R-500 RH)

NOTE: Make sure that the damper end fits in the strut groove.

The machine can work in two different ways: vertical or non-vertical (any position).

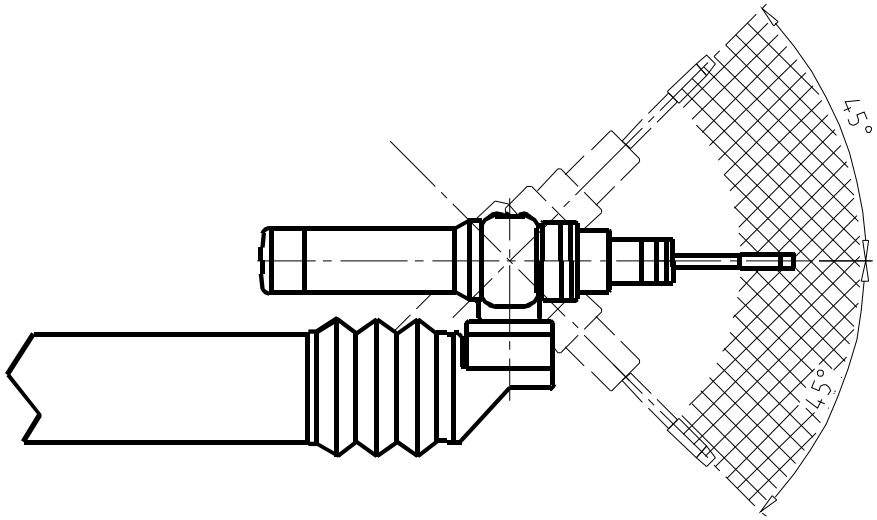
VERTICAL THREADING

1- Unlock the arm, button (16, page 4).
2- Insert the sensing plate.
3- Unlock the head through lever (17, page 4).
4- Apply the plate to work surface.
5- Lock the head through lever (17, page 4)
6- Drive out the sensing plate
7- Drive in the tool.

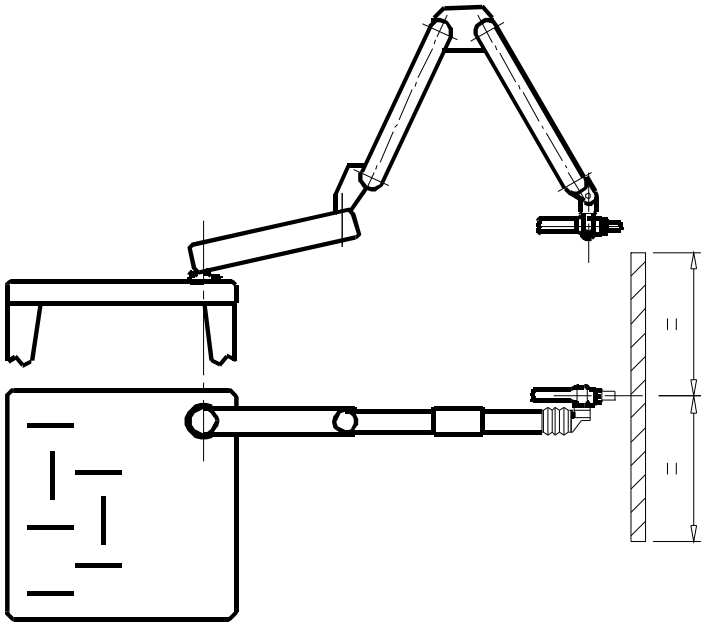
NON-VERTICAL THREADING

1- Place the arms in an appropriate position to make access to the workpiece (see drawing page 25, fig b)
2- Lock the arm through button (16, page 4)
3- Insert the sensing plate.
4- Unlock the head with the lever (17, page 4).
5- Apply the plate onto the working surface.
6- Lock the head with the lever (17, page 4).
7- Pull out the sensing plate.
8- Drive in the tool.

NOTE: for non-vertical threading, the brake lever (9, pág.4) should be completely loose.



(fig.a)



(fig.b)

For vertical threading with the modules *90* and *170*, you should tighten the brake lever (15, page 4)

For working with the modules *90* and *170* in non-vertical position, you should consider certain head position limitations (see fig.a, page 25)

When using the modules *90* and *170* in non-vertical position, the motor direction should be maintained within the range shown in the drawing a, page 25.

It is helpful to place the machine in an approximately centered position with respect to the work containing the workpiece. (fig.b, page 25)

REPLACEMENT ARM PARTS (R-500 RH y R-500 models)	
AC0 200 56	Damper regulating handwheel
AC0 903 36	Bellow
262 048 04	Double Bellow
262 019 B5	Front damper regulating fork
262 019 C5	Rear damper regulating fork
262 010 A3	Front damper abutment
512 006 03	Rear damper abutment
512 003 04	Rear arm
512 002 03	Front arm
512 009 04	Arm abutments
262 011 04	Upper support
262 022 A4	Upper hat
262 035 A4	Front stay
262 032 A4	Rear stay
301 040 04	Spindle arm with screws
262 005 03	Spindle of the arm damper
262 008 03	Spindle of the fork damper
REPLACEMENT ARM PARTS R-500 RH	
261 001 A2	Radial arm assembly
513 001 02	Multiposition head
AC0 600 36	Handle (multiposition head)
512 010 04	Front damper
512 012 04	Rear damper
511 004 66	Splitter joint pack
REPLACEMENT ARM PARTS R-500	
251 015 04	Base
901 007 05	Radial arm
251 017 04	Main axis
252 003 A4	Vertical motor head C-24
CC0 002 04	Flat motor head C-25
CCO 002 A0	Revolving motor head C-26 N
AC0 603 56	Handle (C-26 N)
262 037 04	Front damper
262 041 04	Rear damper

MOTOR REPLACEMENT PARTS	
402 001 02	Pneumatic motor TS-VIII
402 017 03	Rotor
402 017 05	Rotor assembly
402 019 03	Rotor cassing
402 011 05	Gearbox assembly
402 012 03	Module change slide collar
402 014 04	Planetary gear train
402 022 04	Raccord
402 001 04	Motor framework
CO0 112 76	Top head ball bearing
CO0 107 36	Bottom head ball bearing
NH1 208 46	Motor plates
402 003 04	Punch kit-air lever
AC0 404 76	Reversing button
402 002 03	Exhaust cover
402 023 24	Exhaust filter
NH0 205 14	Splitter joint pack
PNEUMATIC REPLACEMENT PARTS	
NH0 907 96	Notched spigot 3/8 –12
NH0 906 06	Elbow fitting 90º 3/8-10
NH0 902 86	Elbow fitting 90º 1/4 –10
NH0 906 96	Straight raccord 3/8-10
NH0 603 16	Flowrate regulating valve
NH1 208 56	Intake filter
NH0 405 16	Pressure gauge
NH1 109 15	Air FRL unit
NH1 108 26	Sight glass filter (water)
NH1 108 36	Sight glass lubricator (oil)
252 006 04	Raccords and air pipes kit
512 008 04	Raccords and air pipes kit*
NH1 200 96	Valve driving*
NH0 602 96	Blocking valve*

**Spare parts only for ROSCAMAT 500 RH*

AUTOMATIC LUBRICATION REPLACEMENT PARTS	
404 001 04	Lubrication pump
904 002 04	Oil tank assembly
520 012 04	Oil tank assembly*
ACO 404 06	Filler plug
CL0 505 66	Drain plug
311 025 04	Articulated pipe and lubrication nipple
520 015 04	Raccord and lubrication pipe kit
AC0 203 56	Control knob
ACCESORIES REPLACEMENT PARTS	
AC0 803 76	Trolley&table wheel 1.500x850 & 850x850 (without brake)
AC0 803 86	Trolley&table wheel 1.500x850 & 850x850 (with brake)
263 002 03	Setting piece (19/1)
513 003 03	Setting piece (31/2)
AC0 900 46	Quick-change (Modules 90, 170)
AC0 900 36	Quick-change (Modules 300, 550, 750, 1050)
AC0 903 56	Drill chuck Ø10 for module 2100
NH0 600 76	Elevator valve
NH1 200 86	Elevator piston

**Spare parts only for ROSCAMAT 500 RH*

REPLACEMENT ARM PARTS (R-500 y R-500 RH models)



Damper reg. handwheel
Ref. AC0 200 56



Bellow
Ref. AC0 903 36



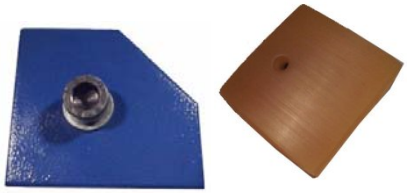
Double bellow
Ref. 262 048 04



Dampers regulating fork
Front *Ref. 262 019 B5*
Rear *Ref. 262 019 C5*



Damper abutments
Front *Ref. 262 010 A3*
Rear *Ref. 512 006 03*



Arm abutments
Ref. 512 009 04



Rear Arm
Ref. 512 003 04



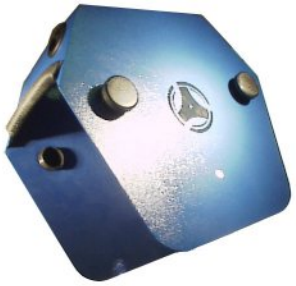
Front Arm
Ref. 512 002 03



Stay
Front: *Ref. 262 035 A4*
Rear: *Ref. 262 032 A4*



Upper support
Ref. 262 011 04



Upper hat
Ref. 262 022 A4

REPLACEMENT ARM PARTS (R-500 & R-500 RH models)

		
Spindle arm with screws *Ref. 301 040 04*	Spindle of the arm damper *Ref. 262 005 03*	Spindle of the fork damper *Ref. 262 008 03*

REPLACEMENT ARM PARTS (Only R-500 RH model)

		
Radial arm assembly *Ref. 261 001 A2*	Multiposition head *Ref. 513 001 A2*	Handle (Multipos. head) *Ref. AC0 600 36*

	
Dampers Front *Ref. 512 010 04* Rear *Ref. 512 012 04*	Splitter joint pack *Ref. 511 004 66*

REPLACEMENT ARM PARTS (Only R-500 model)



Machine base
Ref. 251 015 04



Radial Arm
Ref. 901 007 05



Main axis
Ref. 251 017 04



Vertical head C-24
Ref. 252 003 A4



Flat motor head C-25
Ref. CC0 002 04



Orientable head C-26 N
Ref. CC0 002 A0



Handle (C-26 N)
Ref. AC0 603 56



Dampers
Front *Ref. 262 037 04*
Rear *Ref. 262 041 04*

MOTOR REPLACEMENT PARTS

 Pneumatic motor TS-VIII *Ref. 402 001 02*	 Rotor *Ref. 402 017 03*	 Rotor assembly *Ref. 402 017 05*
 Rotor cassing *Ref. 402 019 03*	 Gearbox assembly *Ref. 402 011 05*	 Module change slide collar *Ref. 402 012 03*
 Planetary gear train *Ref. 402 014 04*	 Raccord *Ref. 402 022 04*	 Motor framework *Ref. 402 001 04*
 Top head ball bearing. *Ref. CO0 112 76* Bottom head ball bearing. *Ref. CO0 107 36*	 Motor plates *Ref. NH1 208 46*	 Punch kit air lever *Ref. 402 003 04*

MOTOR REPLACEMENT PARTS

 Inversion button *Ref. AC0 404 76*	 Exhaust cover *Ref. 402 002 03*	 Exhaust filter *Ref. 402 023 04*
 Splitter joint pack *Ref. NH0 205 14*		

PNEUMATIC REPLACEMENT PARTS

 Notched spigot 3/8 –12 *Ref. NH0 907 96*	 Elbow fitting 90º 3/8-10 *Ref. NH0 906 06* Elbow fitting 90º 1/4-10 *Ref. NH0 902 86*	 Straight raccord 3/8-10 *Ref. NH0 906 96*
 Flowrate regulating valve *Ref. NH0 603 16*	 Intake filter *Ref. NH1 208 56*	 Pressure gauge *Ref. NH0 405 16*
 Air FRL unit *Ref. NH1 109 15*	 Sight glass filter (water) *Ref. NH1 108 26*	 Sight glass lubricator *Ref. NH1 108 36*
 Raccords & air pipes kit *Ref.252 006 04 (R-500)* *Ref.512 008 04* (R-500 RH)*	 Valve driving* *Ref. NH1 200 96*	 Blocking valve* *Ref. NH0 602 96*

**Spare parts only for ROSCAMAT 500 RH*

AUTOMATIC LUBRICATION REPLACEMENT PARTS



Lubrication pump
Ref. 404 001 04



Oil tank assembly
Ref. 904 002 04 (R-500)
Ref. 520 012 04(R-500 RH)*



Filler plug
Ref. ACO 404 06



Drain plug
Ref. CL0 505 66



Articulated pipe &
lubr. nipple
Ref. 311 025 04



Racc.& lubrication
pipes kit
Ref. 520 015 04



Control Knob
Ref. AC0 203 56

**Spare parts only for ROSCAMAT 500 RH*

ACCESSORIES REPLACEMENT PARTS

 Trolley & Table wheel 1.500x850 & 850x850 *Ref. AC0 803 76 (without brake)* *Ref. AC0 803 86 (with brake)*	 Setting piece *Ref. (19/1): 263 002 03* *Ref. (31/2): 513 003 03*	 Quick-change (Modules 90, 170) *Ref. AC0 900 46*
 Quick-change (Modules 300, 550, 750, 1050) *Ref. AC0 900 36*	 Drill chuck Ø10 for module 2100 *Ref. AC0 903 56*	 Elevator Valve *Ref. NH0 600 76* Piston *Ref. NH1 200 86*

STANDARD PRODUCTS RANGE

☞ SUPPORTS

· Clamping device:

For mounting the machine on to any table or workbench.

Ref. BR1 001 00



☞ **DETACHABLE TABLES**

Measures: 850 x 850 x 850
Weight: 74 Kg.
Maximum weight on table: 200 Kg.
Provided with:
· 4 wheels (2 with brake).
· Notches for fixing the workpieces or tools.
· Supports for tapholders.

Ref. TF0 001 00



Measures: 1100 x 850 x 850
Weight: 120 Kg.
Maximum weight on table: 500 Kg.
Provided with:
· 4 wheels (2 with brake).
· Notches for fixing the workpieces or tools.
. Lateral side with notches
. Lockable drawer

Ref. 907 B00 00



STANDARD PRODUCTS RANGE

☞ TROLLEY WITH COLUMN



For moving the working unit. The column is
used to fix the machine by means of 4 metallic
dowels.
Provided with 4 pivoted wheels (2 with brake)
Measures: 700 x 700 x 940
Weight: 124 Kg.
Ref. KA0 001 00

☞ COLUMN



For fixing the machine on the floor by means
of 4 metallic dowels.
Base: 350 x 350 x 750 height.
Weight: 20 Kg.
Ref. CL0 001 00

☞ LIFTER



Pneumatic: It consists of a collapsible column
and a torsion –protected pneumatic cylinder- with
a 550 mm. Stroke in vertical direction.

Attention: the elevator can be mounted on to a column, on to a skid, on to a table and can support
any ROSCAMAT model.
Ref. EA0 001 A0

STANDARD PRODUCTS RANGE

☞ QUICK-CHANGE TOOLHOLDER

A wide range of tapholders, all of them with clutch and without it, apart from other quick holding mixtures for different tools, duch as drills, sinking tools, threading dies, socket wrenches, etc, are avaialable.

· **Tapholders with clutch:**
(so that it slips when it reaches the hole bottom)

Type-1 ∅ 19 capacity M2-M16
(for modules 300, 550, 750, 1050 and 2100)



Type-2 ∅ 31 capacity M14-M30
(for modules 90 and 170)

· **Tapholders without clutch:**
(for holding different tools with a cylindrical shank and driving cube)

Type-1 ∅ 19 capacity M2-M16
(for modules 300, 550, 750, 1050 and 2100)



Type-2 ∅ 31 capacity M14-M30
(for modules 90 and 170)

STANDARD PRODUCTS RANGE

☞ **THREADING DIE HOLDER**

For die threading.
Capacity range M5-M20.



☞ **LONG THREADING DIE HOLDER**

For guided die threading
Capacity range M6 a M12.



☞ **QUICK CHANGE EXTENSION**

To separate 80 mm, tool from the head member and gain access to difficult areas.



☞ **REDUCING CUP**

To convert the module 90 and 170 output diameter from 31 to 19 mm. and be able to match tapholder type-1 to module 90 and 170.



☞ MODULAR SYSTEM

Driven from a single motor, seven different speed modules are available with their relevant power torques.

The seven quick-change speed modules provide the speed and torque for each threading type, from M3 to M24 threads, getting this way important time and energy saving.



Module	Max. speed. (rpm)	Max. Torque. (Nm)	Coupling ∅ (mm)	Max. Thread Aluminium	Max. Thread Steel <80Kg.	Max. Thread Steel >80Kg.
90	90	150	∅31	M27	M24	M22
170	170	79	∅31	M22	M18	M16
300	300	44	∅19	M16	M16	M14
550	550	24	∅19	M14	M12	M10
750	725	17	∅19	M12	M10	M8
1050	1050	12,5	∅19	M8	M6	M6
2100	2100	6	Cone B-16	To drill up ∅ 8 (Aluminium, foundry)		

Date of review: January 2010

CERTIFICATE "CE" OF CONFORMANCE

We, Company : TECNOSPIRO Machine Tool SL
Addres: POL.IND. PLA DELS VINYATS, B
City: SANT JOAN DE VILATORRADA
Country: ESPAÑA

hereby certify, on our own responsibility that **the machine**

Brand : ROSCAMAT
Type : Range 500 RH

Series nr.	***Machine nr.***	***Year of built***

As per description in the enclosed documents, is in conformance with the **Machine Directions** 2006/42/CEE.

It conforms with the standards: UNE-EN ISO 12100-1: 2004
UNE-EN ISO 12100-2: 2004

Name: RAMON
Surname: JOU PARROT
Post: MANAGER

Place and date: SANT JOAN DE VILATORRADA, 01-02-2017

Signature:

TECNOSPIRO
MACHINE TOOL SL