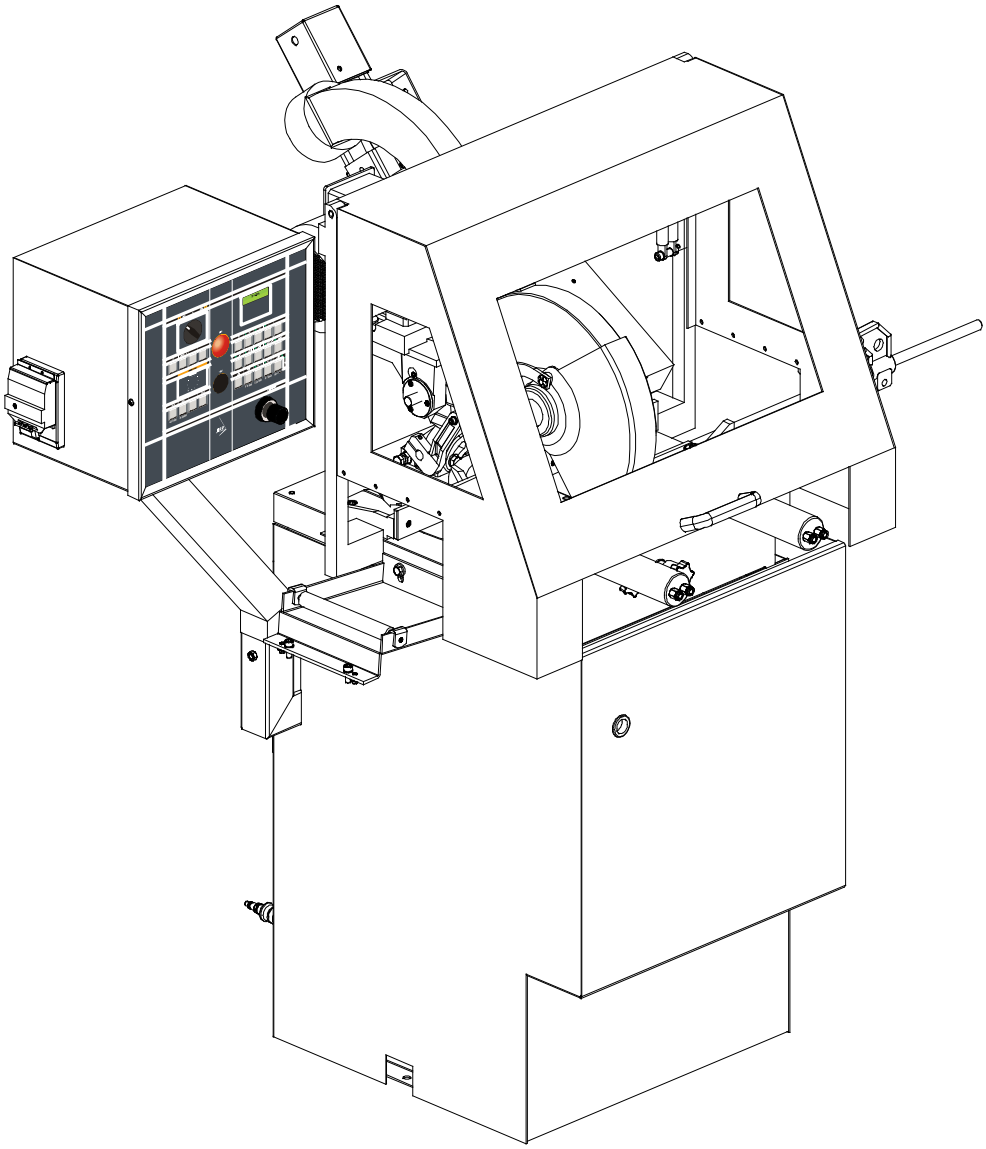


USE AND MAINTENANCE MANUAL

EN PNF 350-2 S

YEAR OF MANUFACTURE: _____

CE

EN

"CE" CONFORMITY DECLARATION
(according to EEC MACHINES DIRECTIVE 2006/42/CE annex II A)

The manufacturer:

MEP S.p.A.
Via Enzo Magnani, 1
61045 Pergola (PU) ITALIA
Tel. 072173721 - Fax 0721734533

Hereby declares that the circular sawing machine:

Machine Type:	**SAWING MACHINE**
Machine model:	**PNF 350-2S**
Serial number:	
Year of manufacture:	

is in specification with the following directives:

- **EEC MACHINES DIRECTIVE 2006/42/CE (D.Lgs. 17/2010)**
  - **EN 13898:2003 + A1:2009**
- **DIRECTIVE 2014/30/UE "EMC" (D.Lgs. 80/2016)**
  - **EN 50370-1:2005 Emission**
  - **EN 50370-2:2003 Immunity**
- **DIRECTIVE 2014/35/UE "LVD" (D.Lgs. 86/2016)**

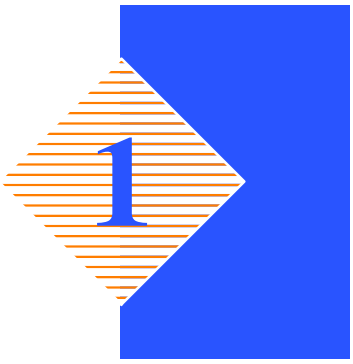
Responsible of a Technical File
(Walter Di Giovanni)

c/o MEP SPA
Via Enzo Magnani, 1
61045 - Pergola - PU - ITALY

Managing Director
(William Giacometti)

Pergola, lì _____

Introduction and technical specifications



Foreword

We have decades of experience in the construction of the best metal- cutting machines. Our experience, our knowledge of our customers and constant technological development of design and production equipment allow us to offer a specific solution for every type of cutting need.

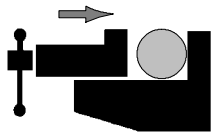
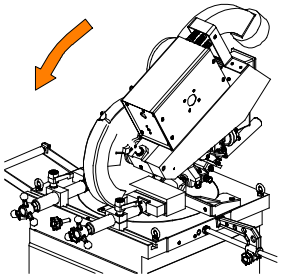
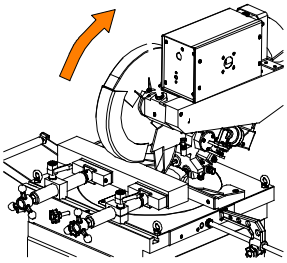
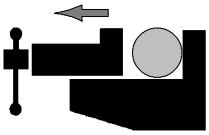
This work tool has been designed as a simple and reliable answer to the wide range of cutting needs of the modern workshop.

PNF 350- 2 S is a disk sawing machine and can perform mitre cuts of 45° on the left and 45° on the right.
These features, together with its good cutting capabilities, make the Tiger 350 a very versatile machine.
Please keep this instruction manual for future reference in a known location and easily accessible to all users of the device. HYD·MECH offers a great variety of options, components, and features for its various models.
Therefore, some of the equipment described in this manual (various illustrations and drawings) may not be applicable to your particular machine.
The information and specifications provided in this manual were accurate at the time of printing. HYD·MECH reserves the right to discontinue or change specifications or design at any time without notice and without incurring any obligation.
Congratulations for having chosen this product which, by following the instructions contained in this user and maintenance handbook, will guarantee you years of dependable service.

Warning This machine has been designed and manufactured specifically for cutting non- ferrous metals.

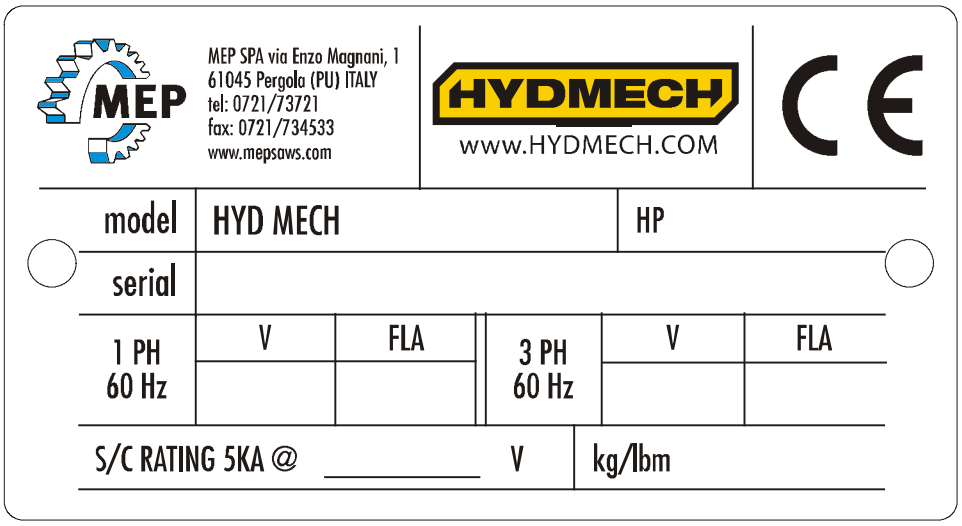
Machine presentation

The operation is semi- automatic: after having set the cutting stroke of the operating head on the control board and the head lowering speed, the operator positions the vices at 2÷3 mm from the material being machined and presses the START push button on the console, or the optional pedal control; the vices close, the head lowers till the end of the cut, it returns to the starting position and the vices open.

1. The cutter vice closes	2. The head lowers until the cut is made (FCTA)	3. The head returns to start position (FCTI)	4. The cutter vice opens
			

Machine specification

The anodised aluminium name plate is riveted on the side of the machine; the same data are reproduced on the declaration of conformity included with this use and maintenance manual.



N.B. When communicating with the Technical Service department, the model, serial number and year of manufacture of the machine must be quoted.

CUTTING SPEEDS		
Three- phase machine 2 speeds	rpm	1700/3400

BLADE		
External disc diameter	mm	350
Internal hole diameter	mm	32
Blade thickness	mm	3,4

RATED ELECTRICAL POWER		
Three- phase head spindle motor 2 speeds	KW	2,6/3,5
Max installed power	KW	3,5

WORKING PRESSURE		
Max. working pressure for opening/closing vice	Bar	6
Air consumption for a complete cycle	Nl/min	7,35

N.B. The ”air consumption for vice” value refers to standard conditions (temperature 0° and pressure 1.013 bar, i.e. density 1.3 x 10- 3 Kg/l) where 1 Kg/min. = 772 Nl/min.

LUBRICANT/COOLANT FLUID AND OIL		
Lubricant/coolant fluid (oil concentration 10 %)	capacità Lt.	1
Lubricant/coolant fluid MA (oil concentration 10 %)	capacità Lt.	10

VICE		
Vice max. opening	mm	180

THREE- PHASE MOTOR FEATURES 2 speed				
No.of poles	**Current (Volts)**	**Absorption (Amps)**	**Power (Kw)**	**rpm**
2	400 λ	5,26	2,2	2.840
4	400 Δ	3,68	1,5	1.410
Stator wound with enamelled copper wire, class H 200° C.				
Class F insulation (limit temperature TL 155° C).				
IP 54 protection rating (total against contact with live parts, water sprayed from all directions, with shaft oil seal).				
Conforming to CEI norms, publication: IEC 34 of 01/07/1985.				

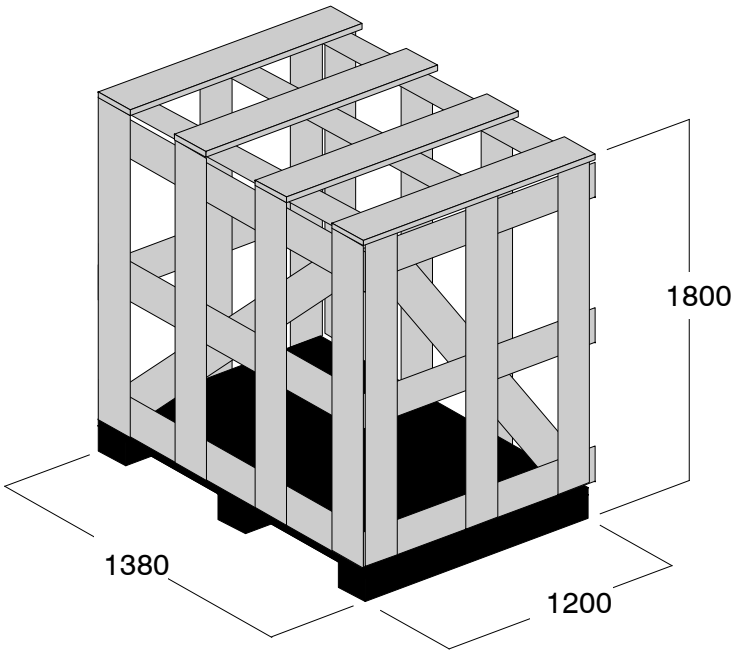
N.B. Example of class F insulation: in air- cooled machines at an ambient temperature of 40° C (according to CEI 2- 3 and IEC 85), the allowable overtemperature is 100° C (where 100° C represents the allowable ΔT).

EXTRACTOR MOTOR (Optional)			
Voltage (Volts)	**Absorption (Amps)**	**Power (Kw)**	**rpm**
230	1,8	75	2.820
400	3,1	75	2.820
Protection rating IP 55.			
Conforming to CEI norms, publication: IEC 34 of 01/07/1985.			

CUTTING CAPACITY				
Section				
0°	120	105	180 x 70	80
45° ◗	120	100	135 x 60	55
45° ◖	110	95	135 x 60	55

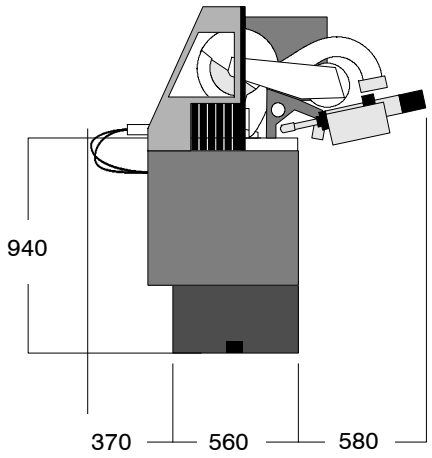
CUTTING CAPACITY With head placed on the left			
Section			
45° ◗	50	50	160 x 35

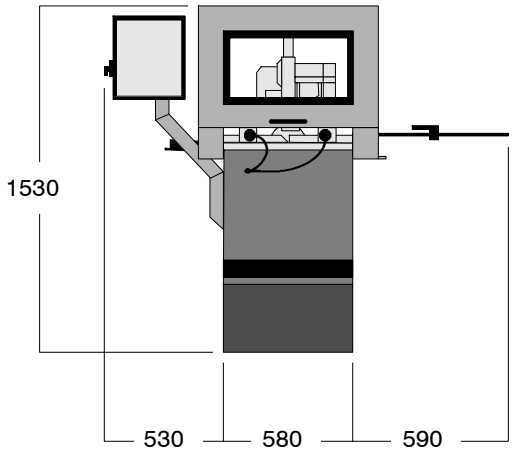
PACKED WEIGHT		
Wooden cage and pallet	Kg	70
Wooden pallet	Kg	20

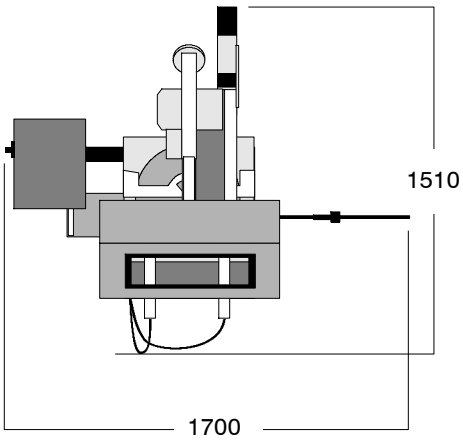


Dimensions

MACHINE INSTALLED		
Work table height	mm	940
Weight	Kg	290





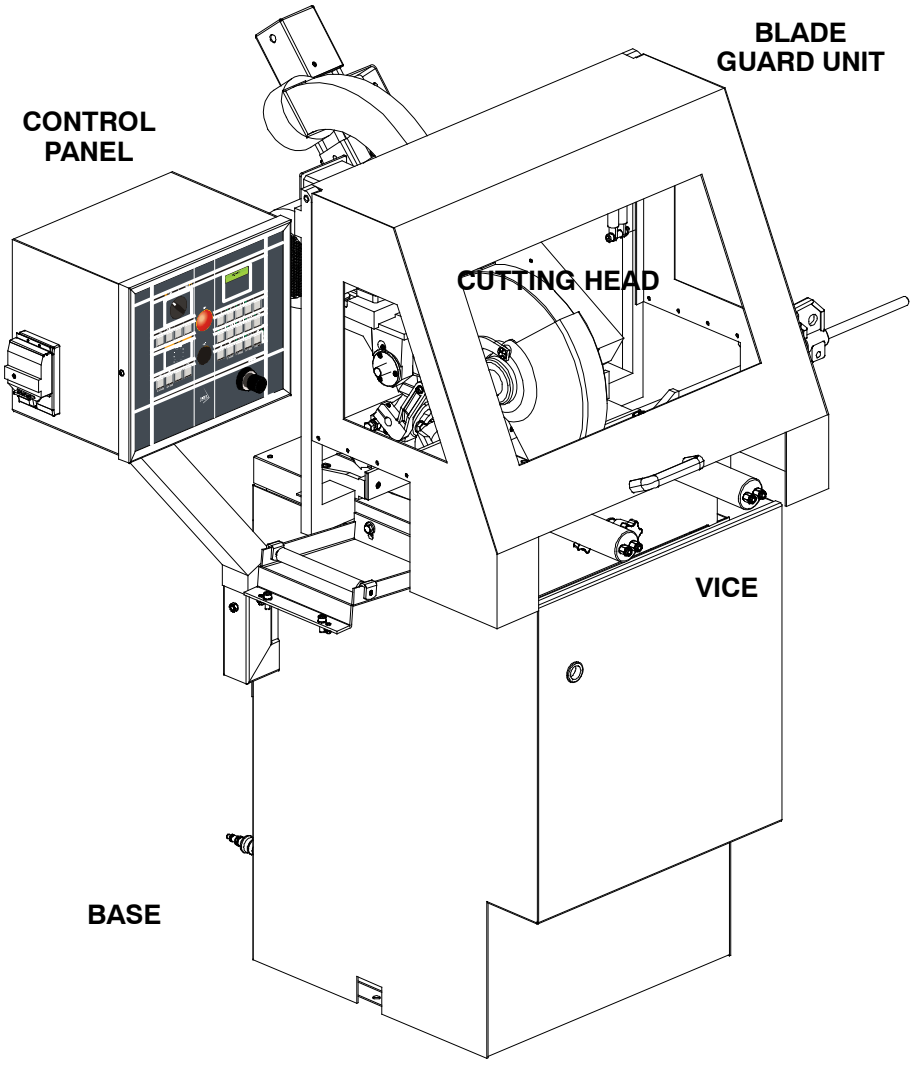


Functional parts

2

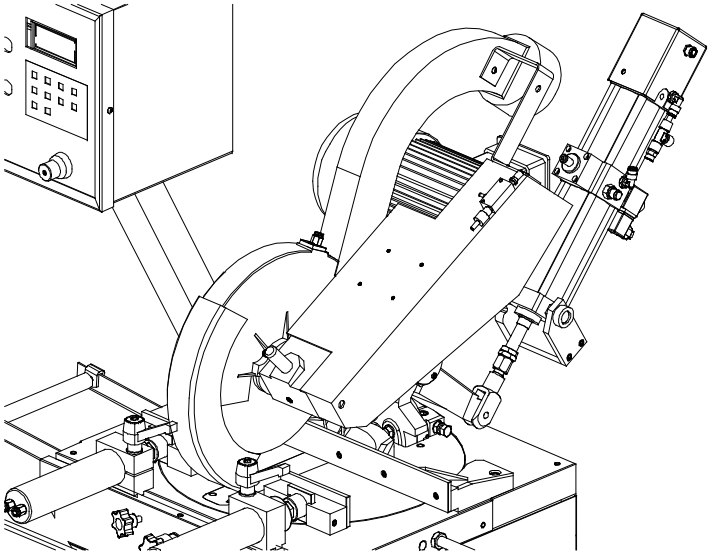
PNF 350-2 S model

In order for the user to move towards a full understanding of how the machine works, which is described in detail in the chapter 5, this chapter deals with the main units and their locations.



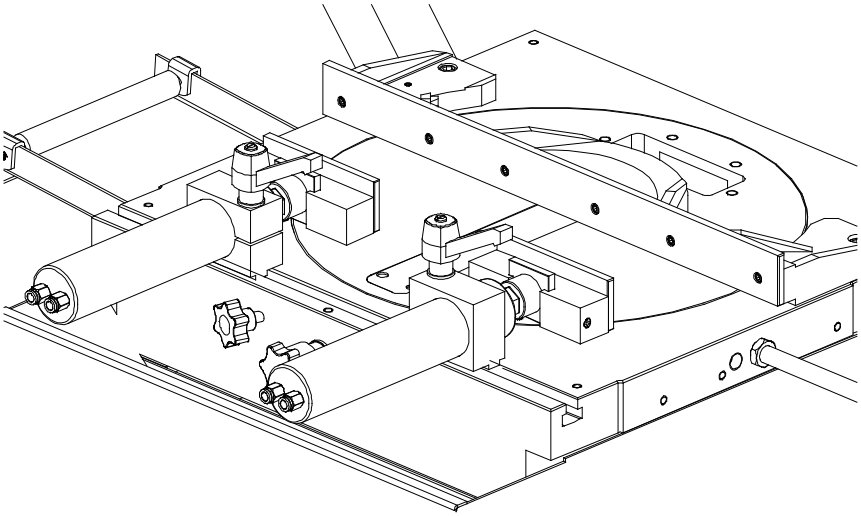
Cutting head

The cutting head is the unit that cuts the material. It consists of a cast iron head on which the following are mounted: the band saw, the blade guide components, the blade tensioner components, the transmission box and the spindle motor.



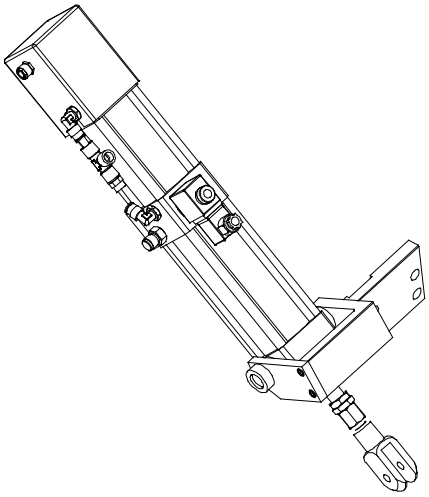
Shearing vices

Shearing vices are the components locking the material during the cut; they are made of fixed jaws, integral with the rotating platform and the sliding blocks with the movable jaws that can move on the dovetail guide. The vices are controlled by the vice opening and closing button on the control panel. The vice approaching movement is manual and the closing is operated by a pneumatic cylinder.



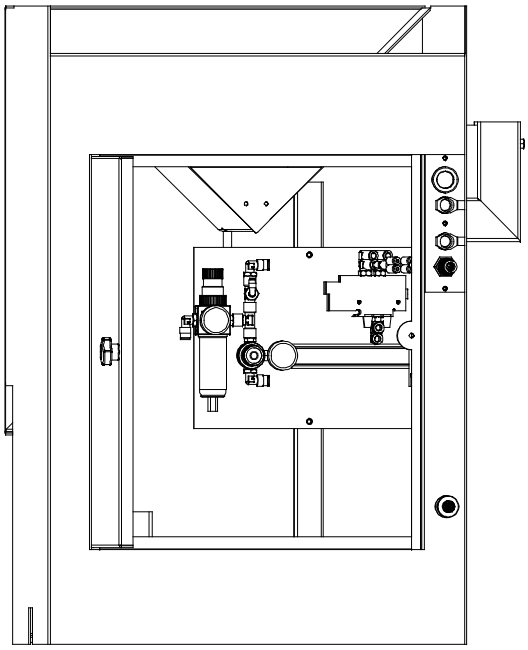
Oil pneumatic unit

This unit drives and regulates the upward and downward movement of the cutting head and consists of a hydro- pneumatic cylinder and recovery electro- valves. The head descent regulator on the control panel can be used to regulate the quantity of oil that flows into the cylinder and naturally the downward movement speed of the cutting head.



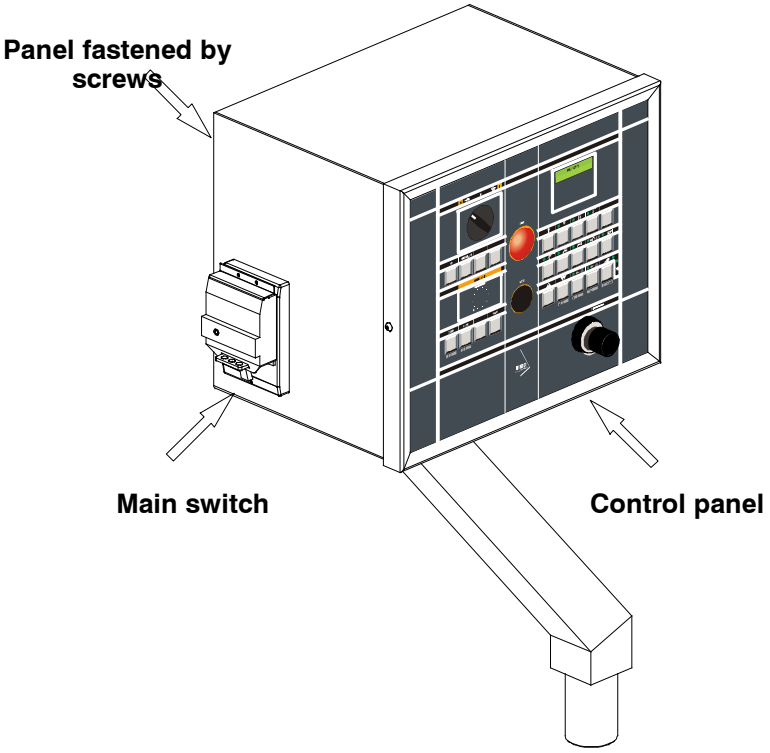
Electro- pneumatic unit

The panel shown in the diagram below is the electro- pneumatic unit. It consists of an air treatment unit (1) and an electro- valve (2); the unit serves to filter the air entering the circuit. The box above the air treatment unit is for the coolant and its electric pump (3).



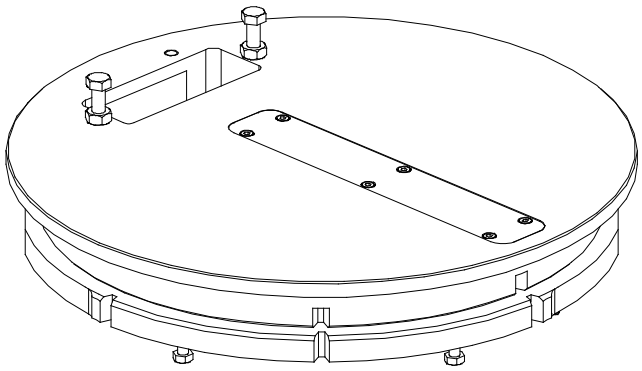
Control Panel

The control panel has a protection rating of IP 54 and contains the electrical equipment. Access is gained by removing a few screws, while the operator's safety is guaranteed by a key- operated safety switch, designed to prevent any intentional interference with the unit. In fact, removing the control panel from its mounting simultaneously extracts the key from the switch, thus cutting- off the electricity supply to the machine.



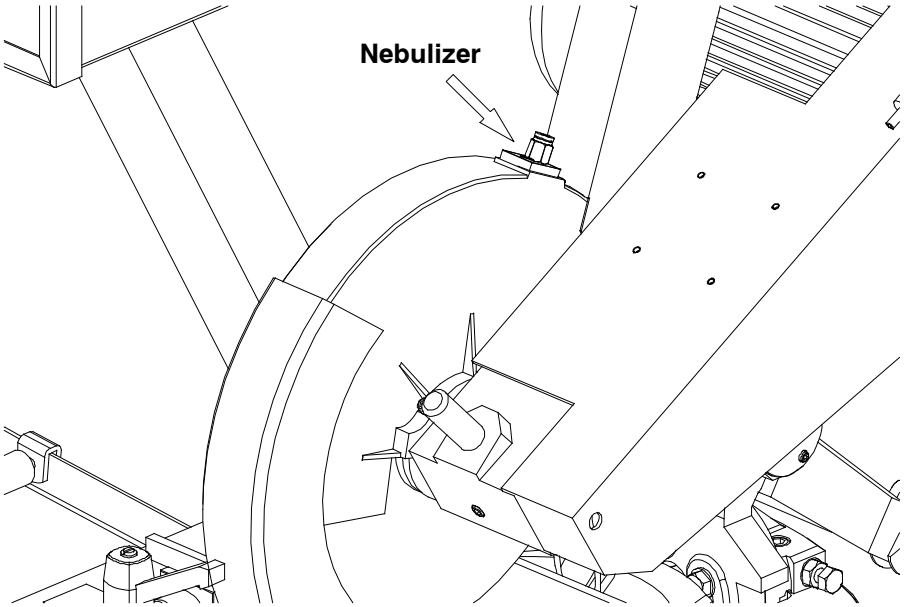
Turntable

Made in cast iron, it is the supporting plane for the material being processed and can rotate on the central pin together with the cutting head indicating the cutting angle by the etched grading. The cutting slot is made of two replaceable aluminum plates.

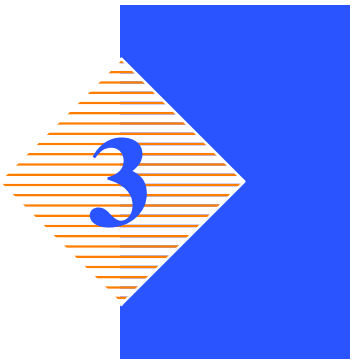


Lubrication system

The lubrication system is entirely automatic. When the band starts rotating, a pneumatic vacuum system is started to aid the liquid flow inside the band cover from the containing tank in the machine base. The liquid flow is adjusted by the nebulizer cock on the band cover back.



Safety and accident prevention



The **PNF 350- 2 S** has been designed and produced in accordance with European standards. For the correct use of the machine we recommend that the instructions contained in this chapter are carefully followed.

Use of the machine

The disk vertical sawing machine **PNF 350- 2 S** can be used only and exclusively for cutting profiles and solid parts in aluminum and light alloys.
Other types of material and machining are not compatible with the specific characteristics of the saw.
The employer is responsible for instructing the personnel who, in turn, are obliged to inform the operator of any accident risks, safety devices, noise emission and accident prevention regulations provided for by international standards and national laws regarding the use of the machine. The operator must be perfectly aware of the position and function of all the machine's controls.The instructions, warnings and accident prevention standards in this manual must be respected without question by all those concerned.The following definitions are those provided for by **EEC MACHINES DIRECTIVE 98/37/CE** :

- "Danger zone": any zone in and/or around a machine in which the presence of a person constitutes a risk for the safety and health of that person.
- "Person exposed": any person finding himself either completely or partly in a danger zone.
- "Operator": the person or persons given the responsibility of installing, operating, adjusting, maintaining, cleaning, repairing or transporting the machine.

Attention

The manufacturer declines any responsibility whatsoever, either civil or criminal, should there be unauthorised interference or replacement of one or more parts or assemblies on the machine, or if accessories, tools and consumable materials are used that are different from those recommended by the manufacturer itself or if the machine is employed in a plant system and its proper function is thereby altered.

General recommendations

LIGHTING

Insufficient lighting for the types of operation envisaged could constitute a safety hazard for the persons concerned. For this reason, the machine user must provide lighting in the working area sufficient to eliminate all shadowy areas while also avoiding any blinding light concentrations. (Reference standard ISO 8995- 89 ”Lighting in work environments”).

CONNECTIONS

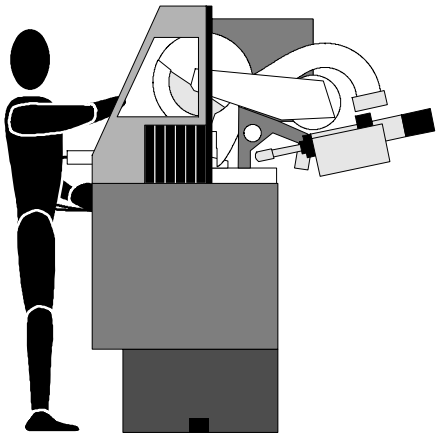
Check that the power supply cables and pneumatic feed systems comply with the maximum machine absorption values listed in the ”Machine Specification” tables; replace if necessary.

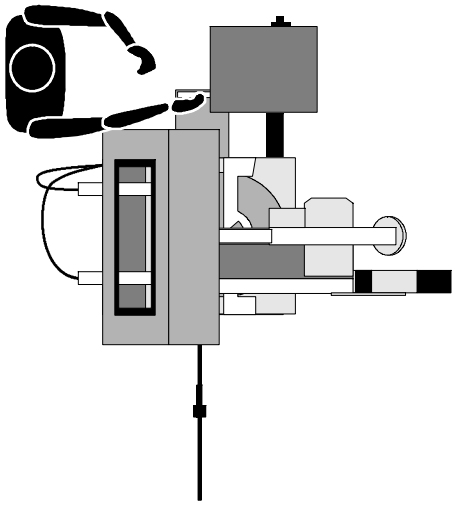
EARTHING

The installation of the earthing system must comply with the requirements set out in EN STANDARD 60204- 1:2010.

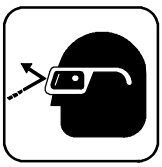
OPERATOR POSITION

The position of the operator controlling machine operations must be as shown in the diagram below.





Recommendations to the operator



Always wear proper goggles or protective glasses.

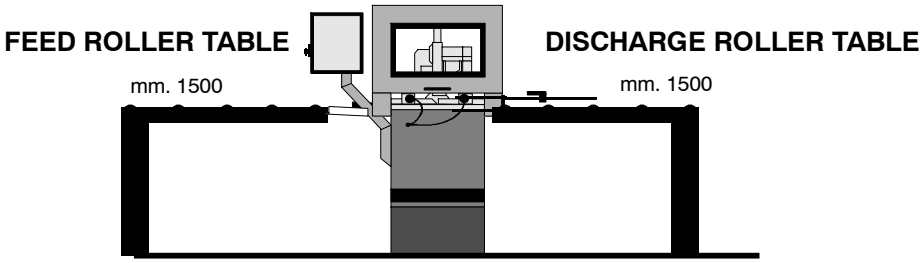
Do not use the machine without the guards in position. Replace the poly-carbonate windows , if subject to corrosion.

Do not allow hands or arms to encroach on the cutting zone while the machine is in operation.

Do not wear oversize clothing with long sleeves, oversize gloves, bracelets, necklaces or any other object that may become entangled in the machine during working; long hair must be tied back and bunched.

Always disconnect the power supply to the machine before carrying out any maintenance work whatsoever, including in the case of abnormal operation of the machine.

Before starting cutting operations, support the material at both ends of the machine using the support arm - standard, or OPTIONAL accessories such as the feed and discharge roller tables shown in the diagram below. Before removing the devices supporting and moving the material, fasten the latter in place using the machine's clamping devices or other suitable equipment.



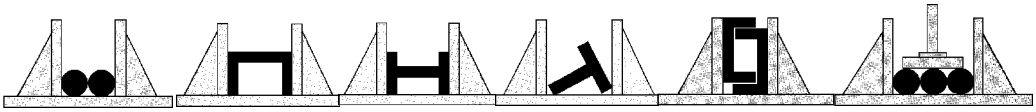
Any maintenance work on the hydraulic or pneumatic systems must be carried out only after the pressure in the system has been released.

The operator MUST NOT perform any risky operations or those not required for the machining in course (e.g. remove swarf or metal shavings form the machine while cutting).

Remove equipment, tools or any other objects from the cutting zone; always keep the working area as clean as possible.

Do not use the machine for cutting pieces which exceed the cutting capacity described in the technical specifications or are less than 5 mm

Before starting any cutting operations, ensure that the workpiece is securely held in the vice and the machine has been set correctly. A number of examples of how to clamp the different profiles correctly in our machines are shown below.



Never move the machine while it is cutting.

Do not use blades of different sizes to those recommended in the machine's specifications.

When cutting very short pieces, make sure that they are not dragged behind the support shoulder, where they could jam in the blade.

When using the pneumatic vice (version MA) check that the jaws actually move right up to and effectively block the piece, as the maximum travel in only 8 mm, and check that the clamping pressure is correct.

When working on the bandsaw, only wear gloves when handling materials and tool change or adjustment operations. Only carry out one operation at a time and do not hold more than one item or operate more than one device simultaneously. Keep hands as clean as possible.

Warning: if the blade jams in the cut, press the emergency stop pushbutton immediately. If this does not free the blade, slowly release the vice, remove the piece and check that the blade or its teeth for damage, if need be replace the blade.

Before carrying out any repair works on the machine, consult the MEP Technical Service; this can also be done through an agency in the country in which the machine is being used.

Machine safety devices

This use and maintenance manual is not intended as purely a guide for the use of the machine in a strictly productive environment, it is instead an instrument providing information on how to use the machine correctly and safely. The following standards are those specified by the EEC Committee in the directives regarding safety of machinery, health and safety at work, personal protection and safeguarding of the environment. These standards have been applied to the **PNF 350- 2 S** band saw.

Reference standards

MACHINE SAFETY

- EEC MACHINES DIRECTIVE 98/37/CE ;
- EEC directive no. 2014/30/EU “EMC - Electromagnetic Compatibility”;
- EEC Directive No. 2014/35/EU known as “Low voltage directive”.
- EN 13898:2003+A1:2009 Machine tools - Safety - Sawing machines for cold metal
- EN ISO 12100:2010 ”Safety of machinery - General principles for design - Risk assessment and risk reduction”.

HEALTH AND SAFETY AT WORK

- EEC Directive No. 80/1107; 83/477;86/188;88/188; 88/642 for the protection of workers against risks caused by exposure to physical, chemical and biological agents during working;
- EEC Directive No. 89/391 and Special EEC Directives No. 89/654 and No. 89/655 for improvements in health and safety at work;
- EEC Directive No. 90/394 for the protection of workers against risks deriving from exposure at work to carcinogenic substances;
- EEC Directive No. 77/576 and No. 79/640 on safety signs at work.

PERSONAL PROTECTION

- EEC Directive No. 89/656 and No. 89/686 on the use of personal protection devices.

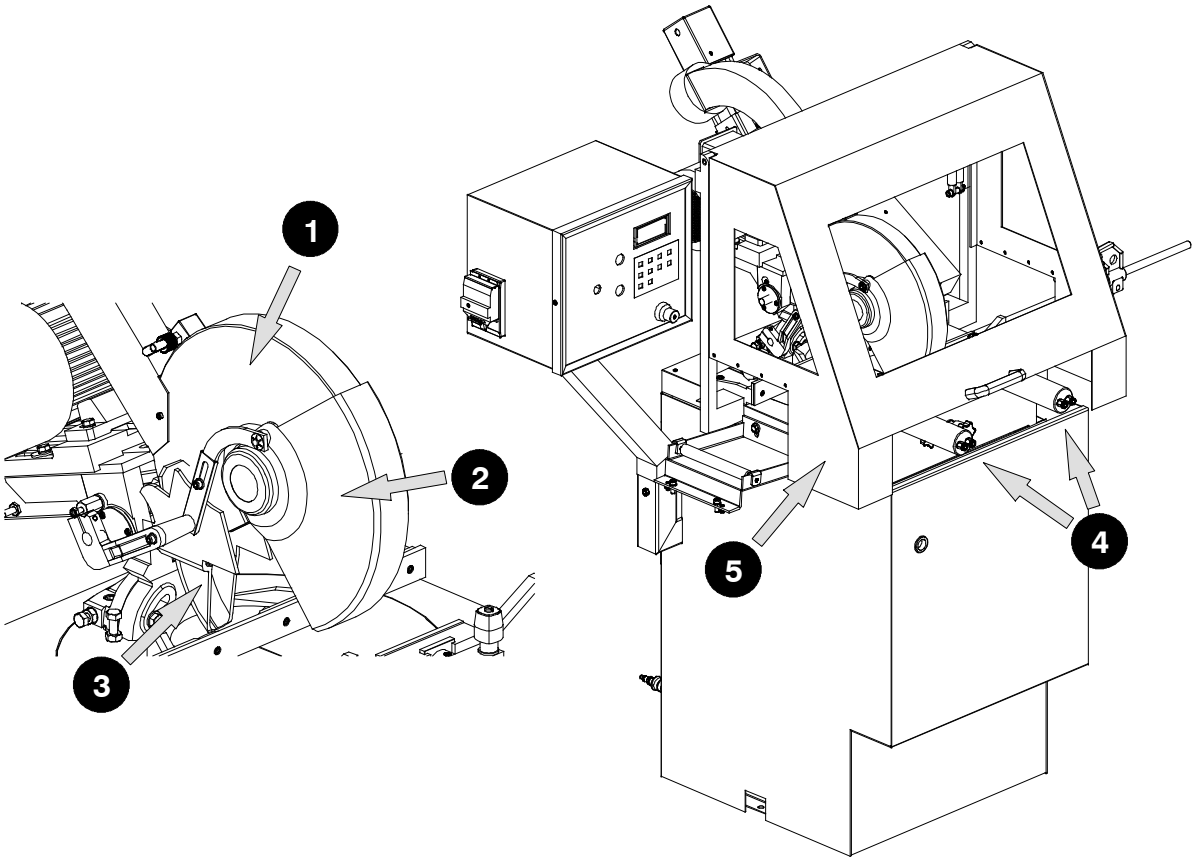
ENVIRONMENTAL PROTECTION

- EEC Directive No. 75/442 on waste disposal;
- EEC Directive No. 75/439 on the disposal of used oil.
- Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

Protection against accidental contact with the blade

1. Metal blade guard fixed firmly to the cutting head;
2. mobile protective blade cover fixed axially to the blade guard (operator side), forming an integral part of the working table so as to ensure that the only part of the blade exposed is that used for the actual cutting in accordance with DPR 547/55 art.108;
3. fixed lower blade protecting cover;

4. the cutting vices are pneumatically operated and controlled by a limit switch tightening them as soon as the head lowers, with a max. stroke of 8 mm; the jaws locking the piece must be approached to the part being machined at a distance of 2÷3 mm.
5. the cutting area is enclosed by a sheet metal cover that can be opened with a plexiglass inspection window to check the cutting operations. An electric limit switch ensures that the sawing machine functions are stopped and inhibited when the cover is opened.



Electrical equipment

In accordance with Italian standard CEI EN 60204- 1:2010, derived from European Standard EN 60204- 1:2010:

- access to electrical board limited by screws and automatic electro- thermal main switch with Minimum Voltage Coil;
- 24 Vac Control voltage for actuators, in accordance with chapter 6 of European Standard ”Control and indication circuits” paragraph 2 ”Control Circuits” sub- section 1 ”Preferential voltage values for control circuits”.
- Plant protected against short circuits by quick blowing fuses and earthing of all work and accidental contact parts.
- Protection from accidental start- up by a minimum voltage relay in the case of power failure.

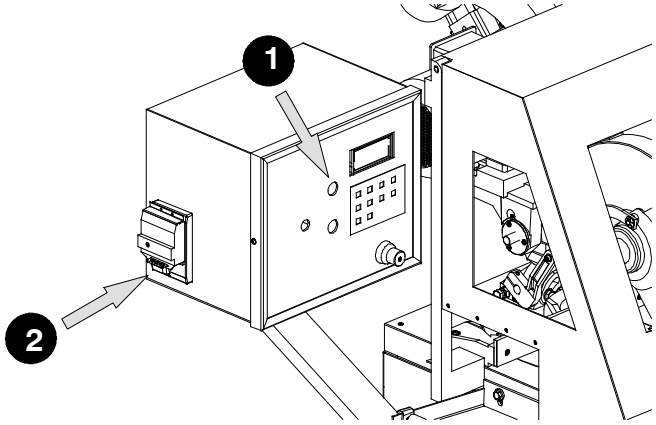
Emergency devices

In accordance with Standard EN 60204- 1:2010:

- **Chapter 5 Section 6 Sub- section 1 ”Emergency stop device”**: «the emergency stop device immediately stops all the dangerous and other functions of the machine».

...Emergency devices applicable to the PNF 350- 2 S:

1. **Emergency stop**: a non- return mushroom- head pushbutton, colour red on yellow background, is located on the control panel of the machine. To release the pushbutton, the actuator must be rotated 45° . After the emergency situation has been resolved, the machine must be reset.
2. **Key operated safety switch:** the door on the base has a key operated safety switch that operates directly on the minimum voltage coil (BMT), shutting off the electricity supply to the machine every time the base door is opened.



Noise level of the machine

Noise can cause hearing damage and represents one the problems faced by many countries who adopt their own standards. In accordance with the **EEC MACHINES DIRECTIVE 98/37/CE** , we are listing the standards that specify noise levels for machine tools.
The following paragraph explains the modes and the detected sound power and pressure values released by the sawing machine.
These values comply with norm EN 13898:2003 + A1:2009, EN ISO 12100:2010 and EN ISO 4871:2009,concerning the rules for drawing and presenting a procedure for noise tests and the declaration and check of sound emission values by machines and equipment.

Noise level measurement

Noise levels are measured using an instrument known as an Integrator noise-meter which registers the equivalent continuous acoustic pressure level at the work station.The damage caused by noise depends on three parameters: level, frequency and duration. The equivalent level concept Leq combines the three parameters and supplies just one indication. The Leq is based on the principle of equal energy, and represents the continuous stationary level containing the same amount of energy, expressed in dBA, as that actually fluctuating over the same period of time.This calculation is made automatically by the integrator noise-meter. The measurements are taken every 60 seconds, in order to obtain a stabilised value. The reading stays on the display for a sufficient time to enable a reading to be taken by the operator.Measurements are taken by holding the instrument at approximately 1 metre from the machine at a height of 1.60 metres above the platform at the operator's work station.
Two measurements are taken: the first while the machine operates without cutting anything, the second while cutting in manual mode.

Noise level values

Identification	
Machine type	Band saw for metal applications
Model	**PNF 350- 2 S**
Reference standard	ISO 3746

Results		
Test 1st	**Description**	60 x 40 mm pipe in aluminium Disc blade HSS HM 350x32 Z 84
	Results	**Mean sound level (Leq) 96,36 dB (A)** Environmental correction (K) 5,73 dB(A) Peak sound power (Lw) 99,23 dB(A)
Test 2nd	**Descriprion**	Ø 80 mm pipe in aluminium Disc blade HSS HM 350x32 Z 84
	Results	**Mean sound level (Leq) 98,54 dB(A)** Environmental correction (K) 5,73 dB(A) Peak sound power (Lw) 101,24 dB(A)
Test 3rd	**Description**	50 x 40 mm solid tube in aluminium Disc blade HSS HM 350x32 Z 84
	Results	**Mean sound level (Leq) 88,37 dB(A)** Environmental correction (K) 5,73 dB(A) Peak sound power (Lw) 98,33 dB(A)

Electromagnetic compatibility

As from 1 January 1996 all electrical and electronic appliances bearing the CE marking that are sold on the European market must conform to Directive 2014/30/UE e 2014/35/UE and **EEC MACHINES DIRECTIVE 98/37/CE** . The prescriptions regard two specific aspects in particular:

1. "EMISSIONS: during its operation, the appliance or system must not emit spurious electromagnetic signals of such magnitude as to contaminate the surrounding electromagnetic environment beyond clearly prescribed limits";
2. "IMMUNITY: the appliance or system must be able to operate correctly even when it is placed in an electromagnetic environment that is contaminated by disturbances of defined magnitude".

The following text contains a list of the applied standards and the results of the electromagnetic compatibility testing of machine model **PNF 350- 2 S**; Test report no. 170201.

Emissions

- CEI EN 61000-6-4 (2002) Electromagnetic Compatibility (EMC) - Generic standard regarding emissions. Part 6-4: Industrial Environment.
- EN 55011 (1999) Industrial, scientific, and medical radio frequency appliances (ISM). Characteristics of radio frequency disturbance - Limits and methods of measurement.
- EN 50370-1:2005 Electromagnetic compatibility (EMC) - Product family standard for machine tools - Part 1: Emission

CONDUCTED EMISSIONS				
Gate A	**Freq. (MHz)**	**Q- peak limit (dBuV)**	**Mean value limit (dBuV)**	**Result**
A.C. power supply input	0.15 - 0.5 0.5 - 5 5 - 30	79 - 73 (linear reduction with log of frequency) 73 73	66 - 60 (linear reduction with log of frequency) 60 60	Complies

CONDUCTED EMISSIONS - ANALYSIS OF INTERMITTENT DISTURBANCES	
Gate	**Result**
A.C. power supply input	Not applicable

IRRADIATED EMISSIONS			
Gate	**Freq. (MHz)**	**Q- peak limit (10 m) (dBuV/m)**	**Result**
Enclosure	30 - 230 230 - 1000	40 47	Complies

Immunity

- CEI EN 61000-6-2 (2000) Electromagnetic Compatibility (EMC) - Generic standard on immunity. Part 6-2: Industrial Environment.
- EN 61000-4-2 + A1 (1996-1999) Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 2: Electrostatic discharge immunity tests - Basic publication.
- EN 61000-4-3 Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 3: Radiated radio-frequency electromagnetic field immunity tests.EN 61000-4-3 Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 3: Radiated radio-frequency electromagnetic field immunity tests.
- EN 61000-4-4 (1996) Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 4: Fast transients/bursts immunity tests - Basic publication.
- EN 61000-4-5 (1997) Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 5: Pulse magnetic field immunity tests.
- EN 61000-4-6 (1995) Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 6: Immunity to conducted interference, induced by radio frequency fields.
- EN 61000-4-11 (1977) Electromagnetic Compatibility (EMC) - Part 4: Test and measurement techniques - Section 11: Voltage dips, short interruptions and voltage variations immunity tests.
- EN 50370-2:2003 Electromagnetic compatibility (EMC) - Product family standard for machine tools - Part 2: Immunity

IMMUNITY TO ELECTROSTATIC DISCHARGES			
Gate	**Test levels**	**Evaluation criterion**	**Result**
Enclosure	contact 4 kV steel plate 4 kV in air 8 kV	B	Complies

IMMUNITY TO VOLTAGE (BURSTS)			
Gate	**Test levels**	**Evaluation criterion**	**Result**
A.C. power supply input	2 kV	B	Complies

IMMUNITY TO CONDUCTED ELECTROMAGNETIC FIELDS			
Gate	**Test levels**	**Evaluation criterion**	**Result**
A.C. power supply input	10V	A	Complies

IMMUNITY TO IRRADIATED ELECTROMAGNETIC FIELDS			
Gate	**Test levels**	**Evaluation criterion**	**Result**
Enclosure	10 V/m	A	Complies

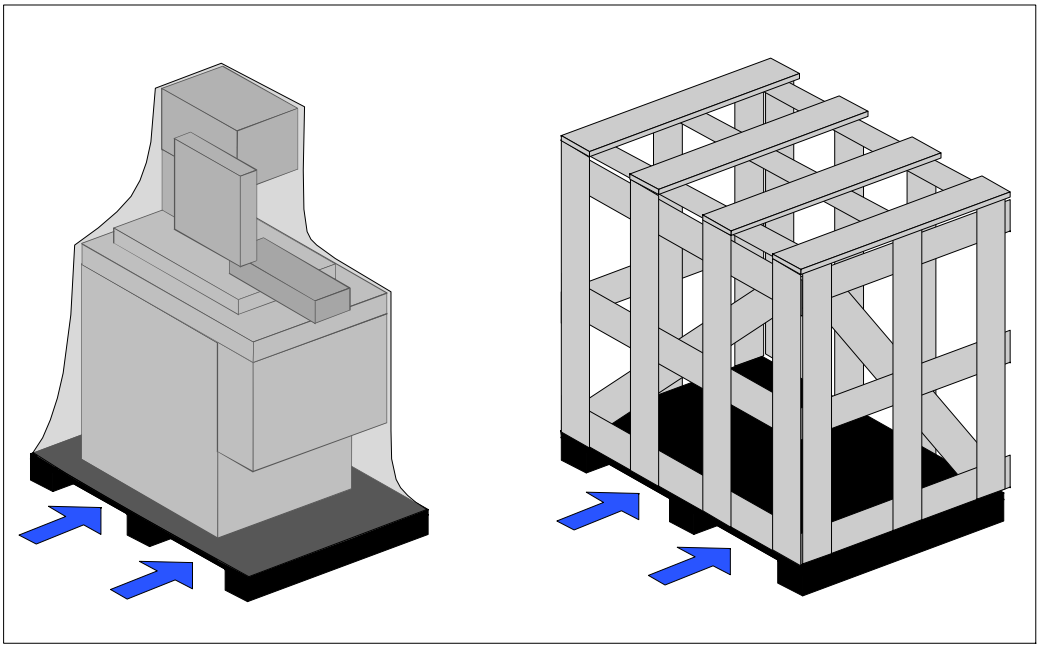
Machine installation

4

Packaging and storage

The company use packing materials that guarantee the integrity and protection of the machine during its transport to the customer.

The type of packing differs according to the size, weight and destination.
Therefore the customer will receive the machine in one of two following ways:



1. on a pallet with straps and heat- shrink plastic;
2. on a pallet with straps, heat- shrink plastic and a wooden crate.

Warning

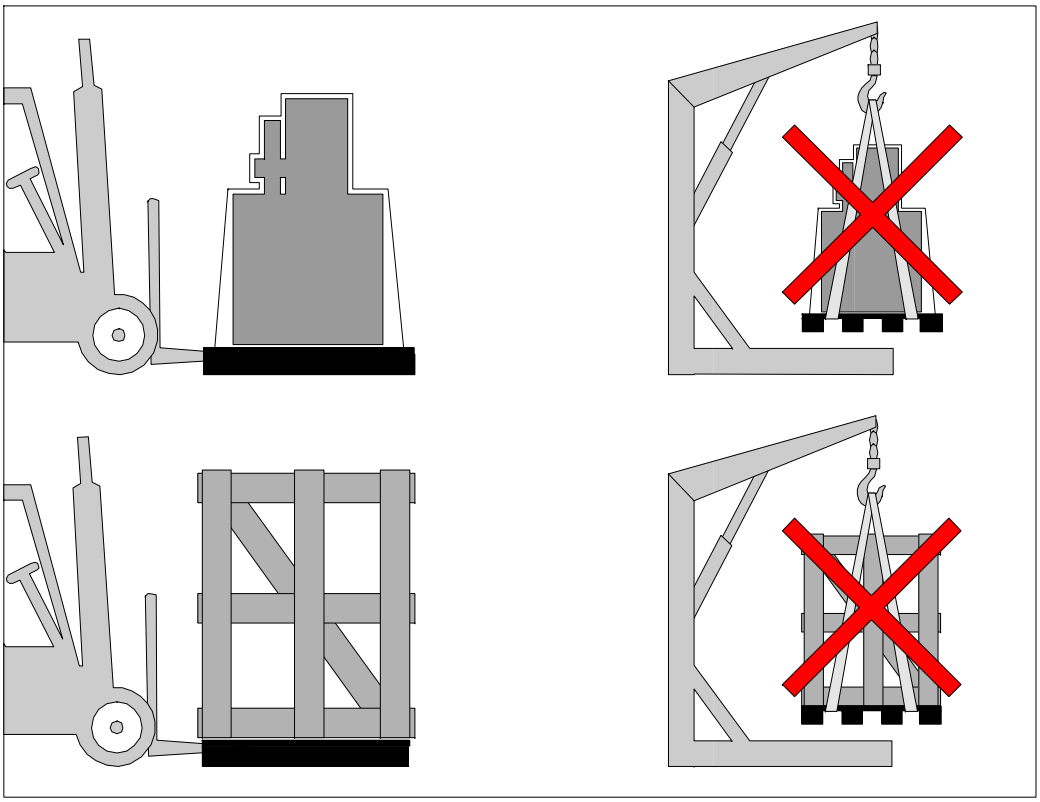
In both cases, for correct balancing the machine must be handled using a fork- lift truck, inserting the tines at the points indicated by the arrows, using the reference marks on the crate itself.

Attention

Before carrying out lifting operations, make sure that the weight of the machine, as indicated on the crating or other packaging, is within the forklift truck load limit.

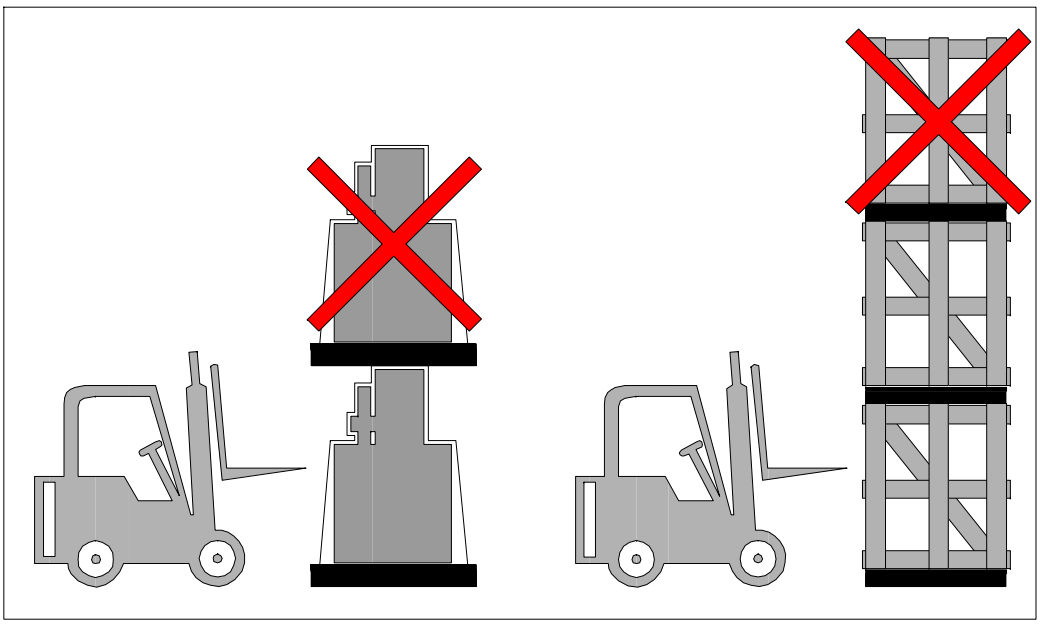
Attention

Do not handle the packed machine using slings.



Attention

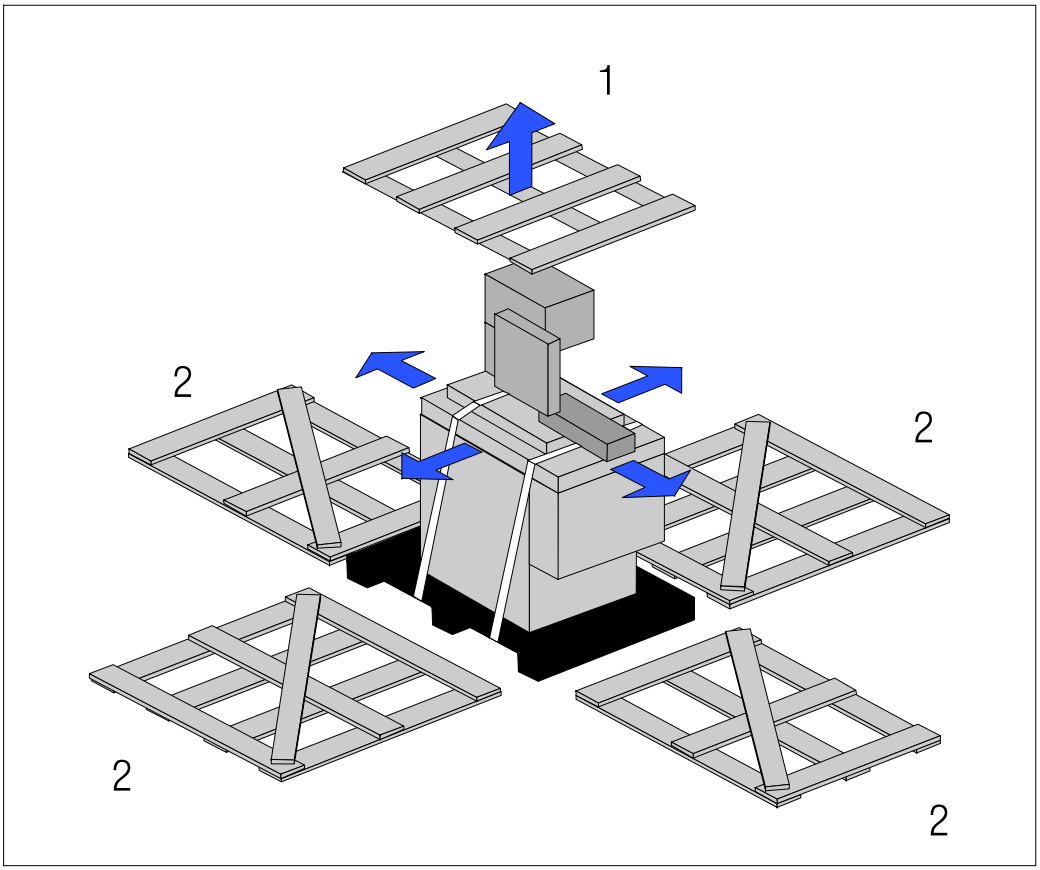
When storing, machines palletized and shrink- wrapped must not be stacked two high, and machines pallettized and crated must not be stacked three high.



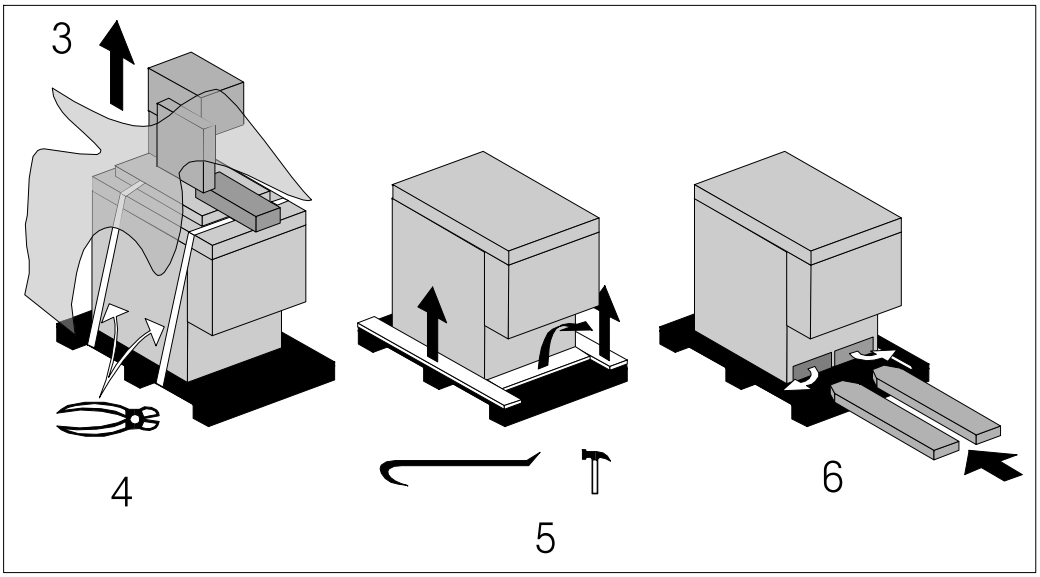
To install the machine, first remove the packing, paying particular attention not to cut any electric wires or hydraulic hoses; if necessary use pliers, a hammer and a cutter.
Open crate in the illustrated order:

1. remove nails and lift the top of the cage;

2. remove nails and lower walls;



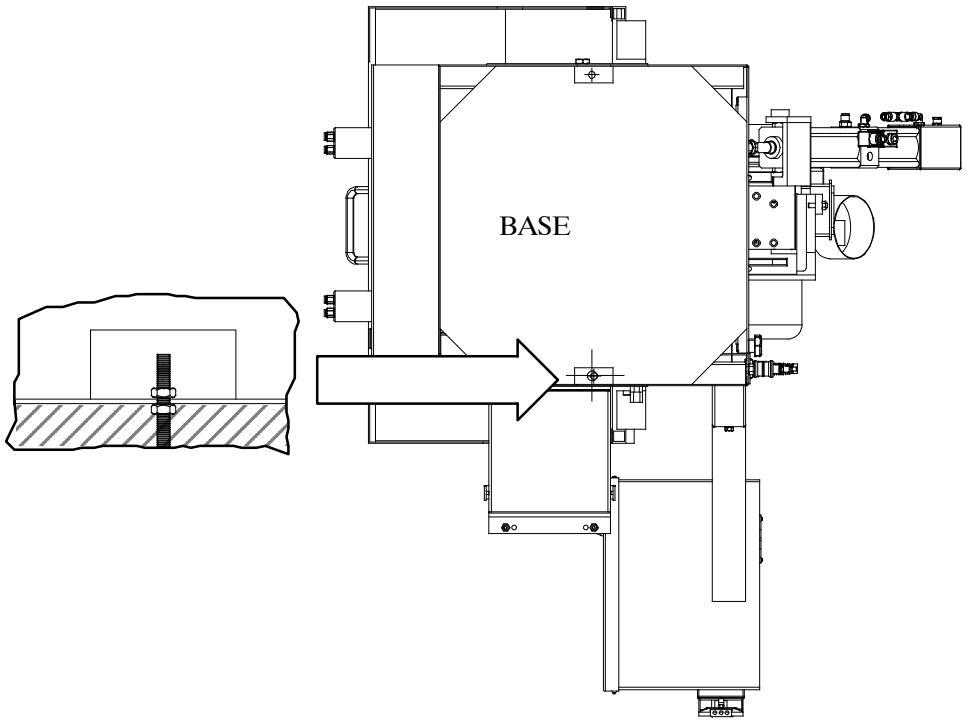
3. remove heat- shrink covering;
4. remove the straps;
5. remove nails from pallet securing planks and remove planks;
6. remove the front panel and insert fork tines.



To locate the machine in the workplace, **the machine dimensions** and necessary operator working space, including **the spaces laid** down in safety standards, **must be taken into account.**

Anchoring the machine

The base of the machine is anchored to the floor by two permanent studs located on the sides of the base. The studs are screwed into nuts previously sunk into the concrete, and tightened from above with lock nuts. The schematic specifications set out in Chapter 1 should be taken into account when positioning the machine.



Minimum requirements

For the machine to function correctly, the room in which it is to be installed must satisfy the following requirements:

- power supply voltage/frequency: refer to the values on the rating plate;
- Working pressure (MA version) not less than 6 Bar and not greater than 8 Bar;
- temperature of machine location: from - 10 to + 50 C;
- relative humidity: not more than 90%
- lighting: not less than 500 Lux.

Warning

The machine is already protected against voltage variations, but will only run trouble- free if the variations do not exceed ± 10%.

Check list

Before starting installation, check that all the accessories, whether standard or optional, supplied with the machine are present. The **PNF 350- 2 S** sawing machine in the single- phase, three- phase with 1 or 2 speeds, with or without automatic vice, is supplied complete with:

CHARACTERISTICS	STANDARD	OPTIONAL
Machine with microprocessor with one controlled axis, with latest generation controller exclusively designed by our company for its semi- automatic sawing machines	✓	
Display at 16 characters read on 2 lines to visualize technological parameters: number of cuts, cutting time, amperometer, diagnostics and/or caution messages (more than 100) visualized in the language of use	✓	
Displaying and recording of alarms and errors with possibility of displaying the event log	✓	
The head stroke is set directly from the control panel according to the dimensions of the bars to be cut	✓	
Automatic band lubricating device	✓	
Aluminum movable jaws with vertical positioning adjustment	✓	
Possibility of cutting from 0° to 45° on the right and 45° on the left, tilting on the vertical for mitre head cuts from 0° to 45° on the left	✓	
Electric control panel (totally identifiable cabling, stand- by, main switch with lockable panel- closing device, speed switch, emergency device, thermal- magnetic overload cutout, minimum voltage relay, voltage drop protection, 24 V low- voltage plant)	✓	
Adjustable stroke for cuts of the same size	✓	
HM toothed circular blade ø 350 x 32 x 3.4 mm, positive rake, balanced and silenced		✓
HM toothed circular blade ø 350 x 32 x 3.4 mm, negative rake		✓
Pneumatic vertical vice (only MA version)*		✓
Rotating platform installed on bearings for a precise and easy rotation	✓	
Machine preset for lifting	✓	
Adjustable mechanical strokes for the head fast positioning at 0° and 45° on the right and on the left	✓	
Screw locking system for positioning the head at any angle	✓	
Chip conveyor preset for suction system	✓	
Tightening system made of two front vices, that can be positioned along the piece longitudinal axis as wished	✓	
K35 roller table module for feed side, 1500 mm		✓
Feed side roller table support		✓
Discharge side roller table adapter		✓
K35 roller table for discharge side, 1500 mm		✓
K35 roller table for discharge side, 3000 mm		✓
K35 roller table for discharge side, 4500 mm		✓
K35 roller table for discharge side, 6000 mm		✓
5 l can of emulsible oil		✓
Bar- supporting arm complete with roller, preset for the loading plane application	✓	
Supplementary pedal control*		✓
Aspirator electric connection*		✓
Suction system		✓

CHARACTERISTICS	STANDARD	OPTIONAL
Device for customized cuts with steel millimeter rod		✓
Spray mist system		✓

***ACCESSORIES AVAILABLE ON REQUEST**

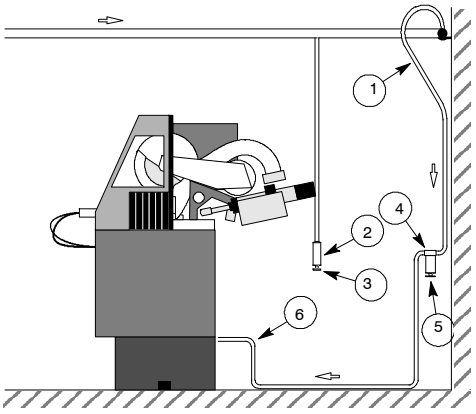
The bag of accessories is enclosed in the machine before being packed and contains:

- 4, 5, 6, 8 mm Allen keys;
- 17, 36 mm double open-ended and box wrenches;
- 20 mm Ø rod for cuts to measure with an 8 mm Ø ratchet fork and lever + VCE M8x35 Allen grub screw;
- arm with roller on which the bars to be cut rest and for fitting the feed side roller tables;
- jaws for piece supporting shoulder, height mm 60;
- this Use and Maintenance Manual.

Connection to the compressed air supply

To ensure perfect operation and a long service life, it is recommended that the machine is connected to a compressed air system having the characteristics reported in the diagram below.

KEY
1 - DOWN PIPE
2 - CONDENSATE COLLECTOR
3 - DRAIN COCK
4 - AIR FILTER
5 - DRAIN COCK
6 - CONNECTING HOSE



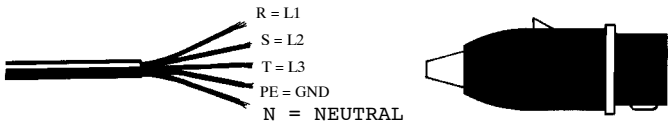
Connection to the power supply

Before connecting the machine to the power supply, check that the socket is not connected in series with other machines. This requirement is fundamental for the good operation of the machine.

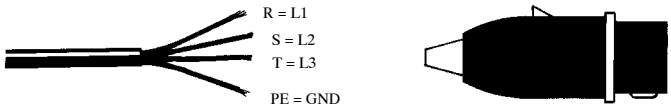
To connect the machine to the power supply, proceed as follows:

▶ connect the power supply cable of the machine to a plug which matches the socket to be used. (EN 60204- 1; par. 5.3.2)

CONNECTION FOR **"5-CORE"** WIRE SYSTEMS WITH NEUTRAL



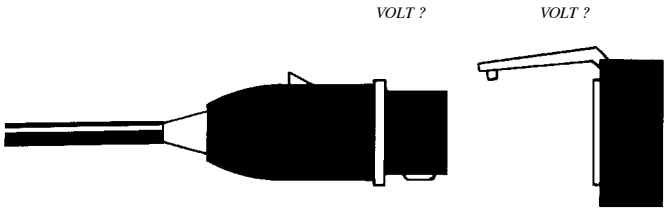
CONNECTION FOR **"4-CORE"** WIRE SYSTEMS WITH NEUTRAL



Attention

When using systems with a neutral wire, special care must be taken when connecting the **blue** neutral wire, in that if it is connected to a phase wire it will discharge the **phase voltage** to the equipment connected for **voltage: phase-neutral.**

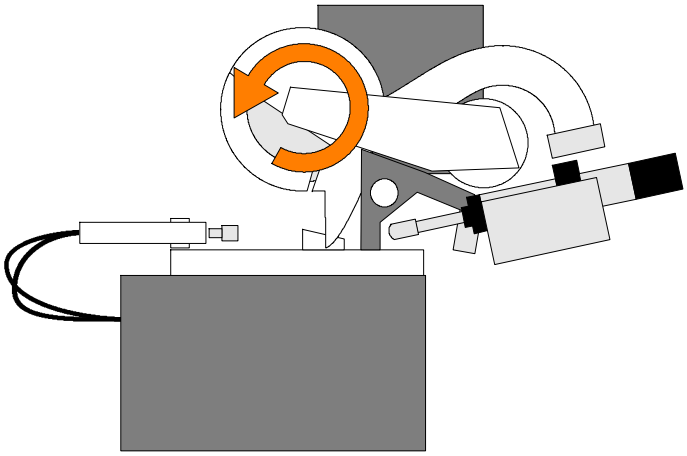
▶ Insert the plug in the socket, ensuring that the mains voltage is the same as that for which the machine has been setup.



▶ Press the minimum voltage coil reset button alongside the red mushroom head emergency pushbutton.

Attention

Ensure that the blade moves in the correct direction as shown in the above figure. If it does not, simply reverse two of the phase wires on the machine's power supply input.



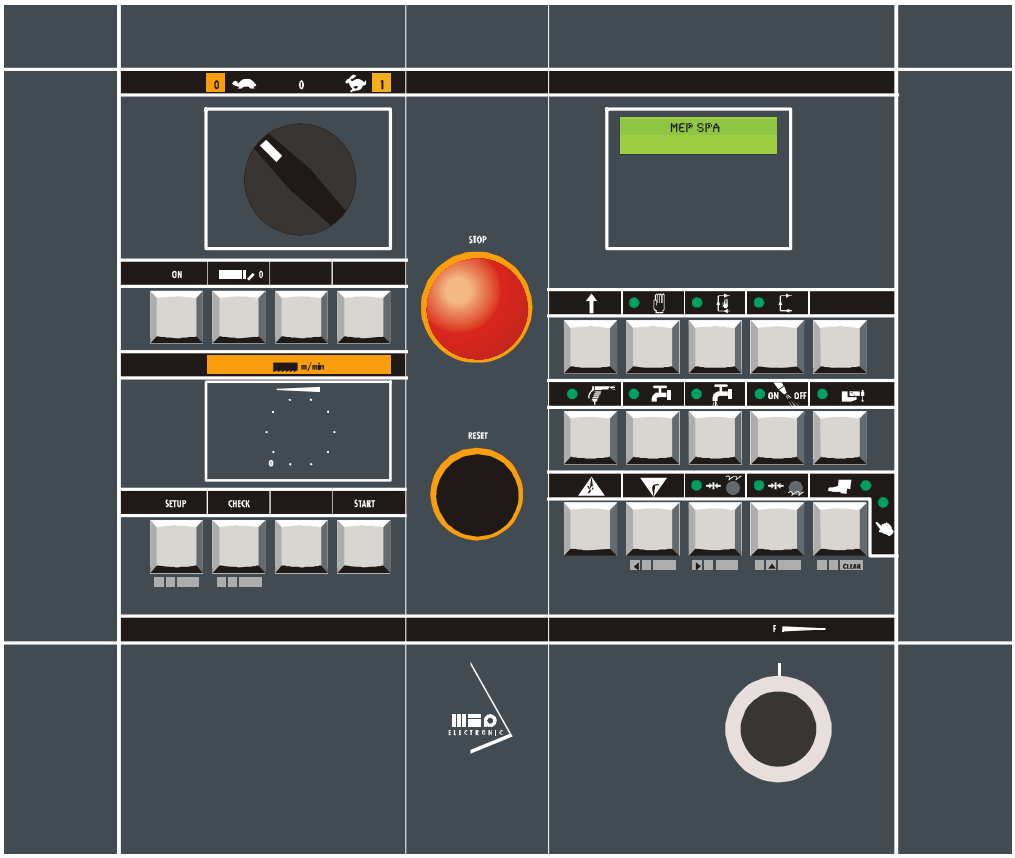
The sawing machine is now ready to start the work for which it was designed. Chapter 5 provides a detailed description of the various functions of the machine and its operating cycles.

Description of machine operation

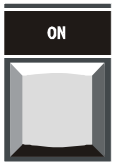
This chapter analyses all the machine functions. We begin with a description of the pushbuttons and other components on the control panel.

Description of the control panel

The control console is housed inside the control panel, a tamperproof IP 54 protection class housing sealed against dust and moisture. The control panel swivels on two articulated joints so that it can be positioned as required by the operator for greater ease- of- use and safety. The control board of the **PNF 350- 2 S** is shown in the picture below:

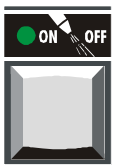


Key of control console keyboard



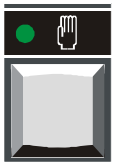
Initialisation key: enables machine operation

Cutting speed selection: hare (fast), turtle (slow) and zero (deselection)

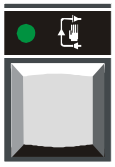


Selection for min. lubrication (optional)

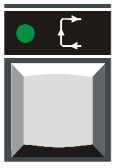
RESET key: resets the machine after an emergency condition or conflicting command



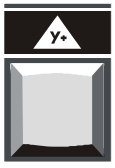
Nonoperating



Nonoperating

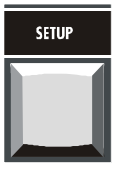


Semi- automatic cycle key

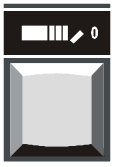


Head “up” key

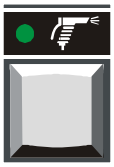
Head “down” key



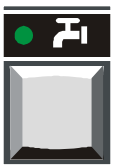
Machine parameters input/edit key



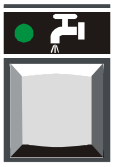
Zeroing key for cuts made



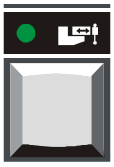
Nonoperating



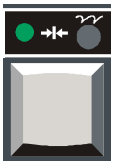
No lubricant/coolant key



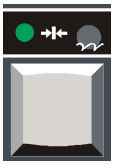
Lubricant/coolant spray cock key (only available during cycle)



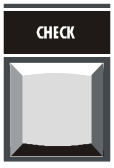
Vice opening/closing



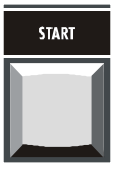
FCTI (Head Upstroke Limit) memory key for Head Positioning System



FCTA (Head Downstroke Limit) memory key for Head Positioning System



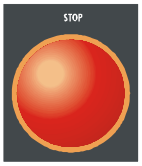
Diagnostics key



Programmed cycle start key

Foot pedal or console START selection key

Nonoperating

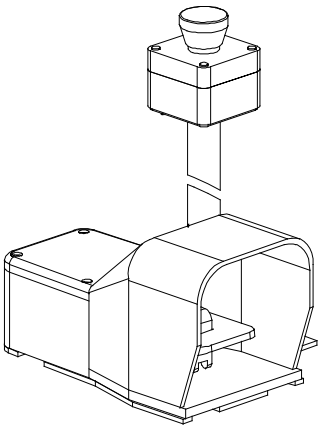


Mushroom head emergency stop button: when pressed, this button immediately shuts down the machine. To reset the emergency stop button, simply rotate through 45°

Hydraulic adjuster for choosing the head lowering speed

Key for displaying the machine parameters for performing a machining cycle: TL blade tension, PT head position, VL blade speed, T cutting time, PZ cut piece number, I motor absorption

MOBILE START - EMERGENCY DEVICE (optional)



The machine can be equipped with a remote control device, enabling the start of the semiautomatic cycle through pedals and the emergency stop through red mushroom push button (optional).

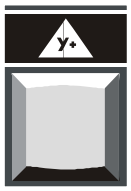
THERMAL - MAGNETIC CIRCUIT - BREAKER WITH UNDERVOLTAGE COIL AND DOOR LOCKING DEVICE

On the left side of the control board, the machine is equipped with a main switch that, when set ON (1), powers the machine. When set to ON (1), this switch powers up the machine. The main switch is fitted with three power failure protection systems. In fact, in the event of a power failure, this switch disconnects all the electrical devices, causing the machine to immediately shut down, and prevents it from automatically starting up again when power is restored. This device also resets the thermal relay fitted to protect against current overloads.

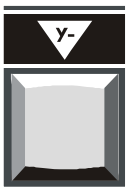
Basic instructions for carrying out a cutting operation cycle

Cutting head movement

The cutting head can be moved by the head lifting and lowering buttons, described in the key to the control console keyboard in this chapter, enabled in the working mode with SEMI- AUTOMATIC cycle.

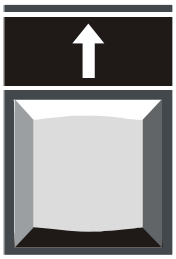


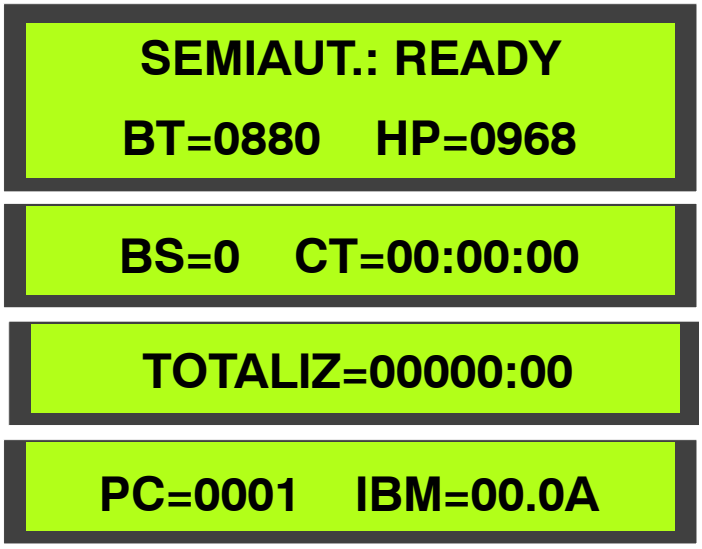
Head “down” key



Head “up” key

N.B. During any processing cycle it is possible to control the machine operating parameters BT (blade tensioning) and HP (head position), pressing the key below it is also possible to display the values BS (blade speed), CT (cutting time), PC (cut piece counting) and IBM (motor current absorption).

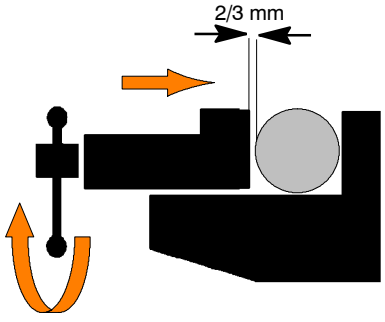




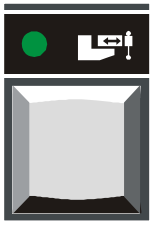
Clamping the work piece in the vice

Vice opening and closure is controlled by the corresponding buttons on the control console. However, to ensure that the workpiece is securely clamped in the vice, proceed as follows:

- Make sure the workpiece dimensions do not exceed the machine’s cutting capacity;
- make sure the piece is correctly supported on both sides of the machine;
- approach the vices at 2 3 mm from the piece being machined manually.



- press the vice closure button;



- make sure the workpiece is securely clamped in the vice by trying to move it manually.

N.B. If the vice was already closed by the pneumatic piston, it may not block the piece. In this case it is necessary to repeat the operation, i.e.: open the vice by pressing the specific button, bring the moving jaw near to the piece and block it again with the closing button, bearing in mind that the stroke of the pneumatic piston is approx. 8 mm.

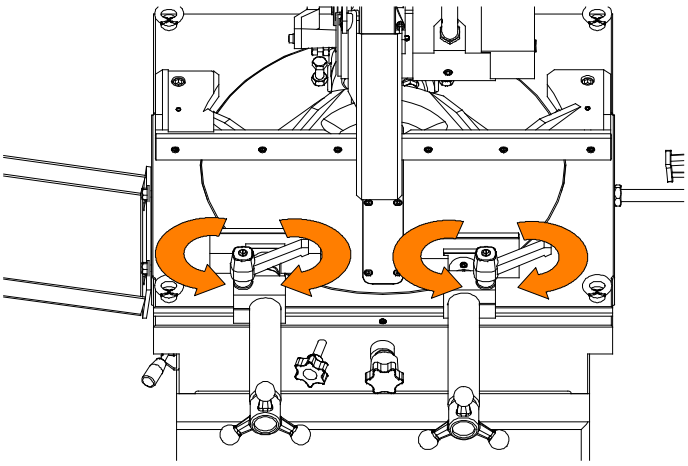
Width of cut

The machine is fitted with barriers which adjust to suit to the workpiece.

Vice cross positioning

Positioning the shearing vices as close as possible to the cutting area, vibrations are decreased and the cutting area is covered better. For the cross movement of the vice body:

- loosen the release triggers tightening the body of the vice cylinder;
- move the vice body along the groove cut into the fixed table until it is in the desired position;
- tighten the release triggers.



Preliminary check list for cutting operation

To guarantee complete safety during cutting cycles, the operator should work through a check list of the entire apparatus, checking:

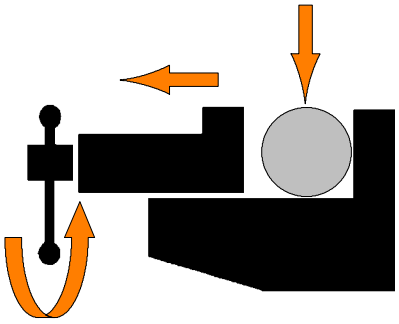
- that the disk guard can move freely;
- that the right cut angle has been set and the turntable is locked in position;
- that the work piece is properly clamped in place;
- that the blade teeth are suitable for the material to be cut;

- that the speed selected is right for the kind of piece to be cut;
- that the lubricating coolant level is sufficient and that the delivery by the nebulizer is suitable;
- that all protections are in place and correctly locked.

Semi- automatic operating cycle

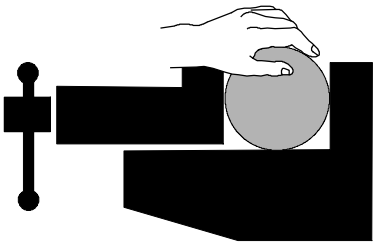
Sequence of operations for performing a cut:

- power up the machine by pressing the reset button;
- position the workpiece in the vice and calculate the length of cut (using the measuring rod for cuts to measure).

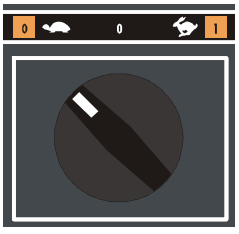


- secure the piece in the cutter vice; manually move vice towards the workpiece leaving a minimum distance of 2÷3 mm, lock the vice with the open/close button on the base or with the foot pedal if fitted;
- Make sure the workpiece is securely clamped in the vice by trying to move it manually.

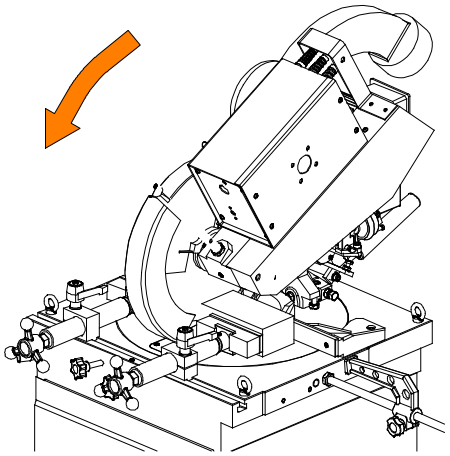
N.B. If the vice was already closed by the pneumatic piston, it may not block the piece. In this case it is necessary to repeat the operation, i.e.: open the vice by pressing the specific button, bring the moving jaw near to the piece and block it again with the closing button, bearing in mind that the stroke of the pneumatic piston is approx. 8 mm.



- select the cooling lubricant delivery mode;
- Select the cutting speed on the “Polarity change switch” in accordance with the type of material to cut (shape, thickness, hardness, etc.).



- set the Head Back Limit (FCTI) and the Head Forward Limit (FCTA), as described above;
- press the start button to start the cycle, after making sure you reset the head downstroke speed regulator, to avoid sudden downward movement of the head;
- The motor starts up and starts the blade moving, at the same time starting the lubricant/coolant pump.
- increase the head downstroke speed until reaching an optimum value;



- on completing the cut the head will return automatically to the Head Back Limit (FCTI), ready for a new cut cycle;
- Free the workpiece from the vice by pressing the open/close vice button on the control panel.

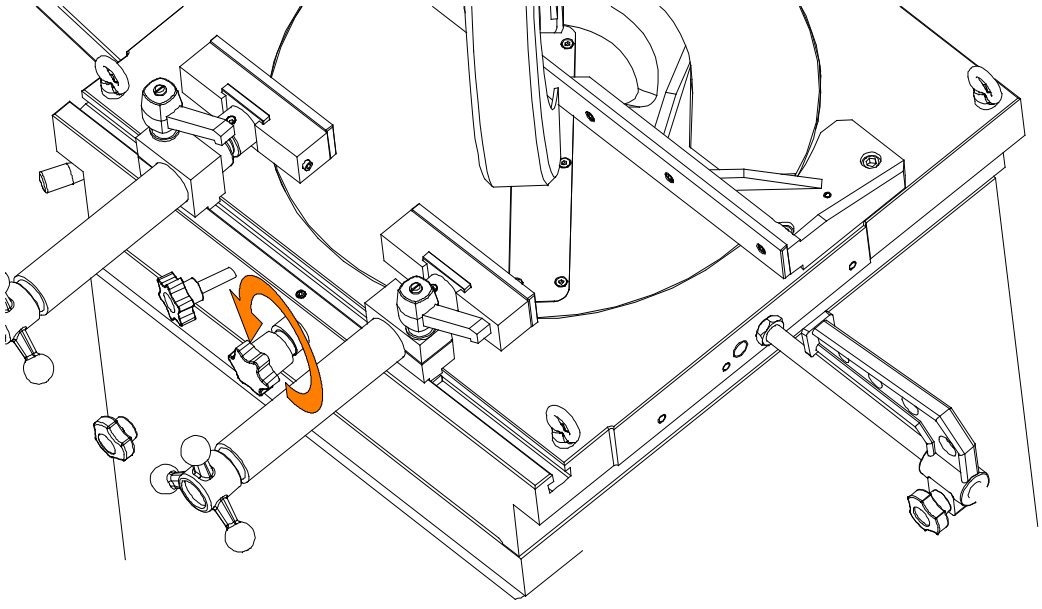
Angled cuts

The machine can make angled cuts from 45° left to 45° right. Reference stops are mounted on the sides of the turntable to facilitate rapid 0°, 45° cuts to the left and 45° cuts to the right.

Angled cuts 45° to the left

- Loosen the fastening knob on the fixed platform;
- pull the knob of the fixed point outwards and rotate it by 45 degrees, rotate the head till reaching the wished grading and lock again the tightening knob;

N.B. To use the preset strokes at 0 and 45 on the left and on the right, restore the initial position of the fixed point pin.



Angled cuts 45° to the right

▶ Pull the pin of the fixed point outwards and rotate it by 45 degrees, rotate the head till reaching the wished grading and lock again the tightening knob;

▶ adjust the vice position.

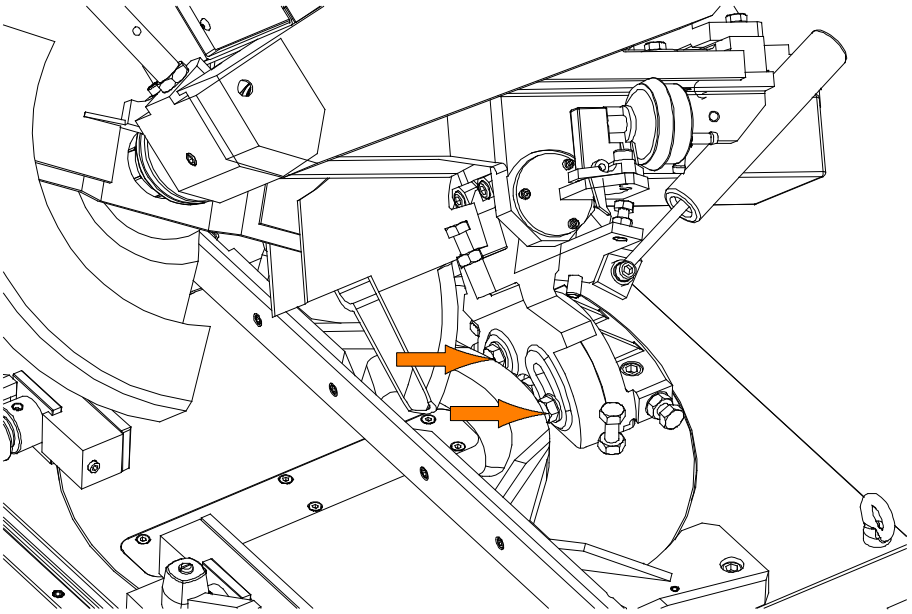
N.B. To use the preset strokes at 0 and 45 on the left and on the right, restore the initial position of the fixed point pin.

Mitre head cut

It is a special machining as it can make mitre cuts to the orthogonal line of the working plane.

Attention When making the first mitre head cut, also the left jaws of the piece- supporting shoulder must be inevitably cut.

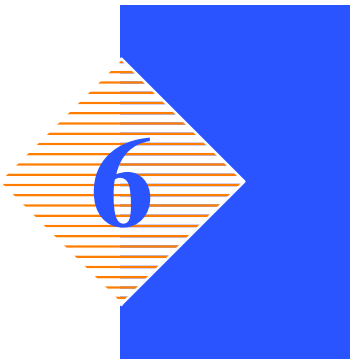
▶ Loosen the HH screws on the head rocker arm;



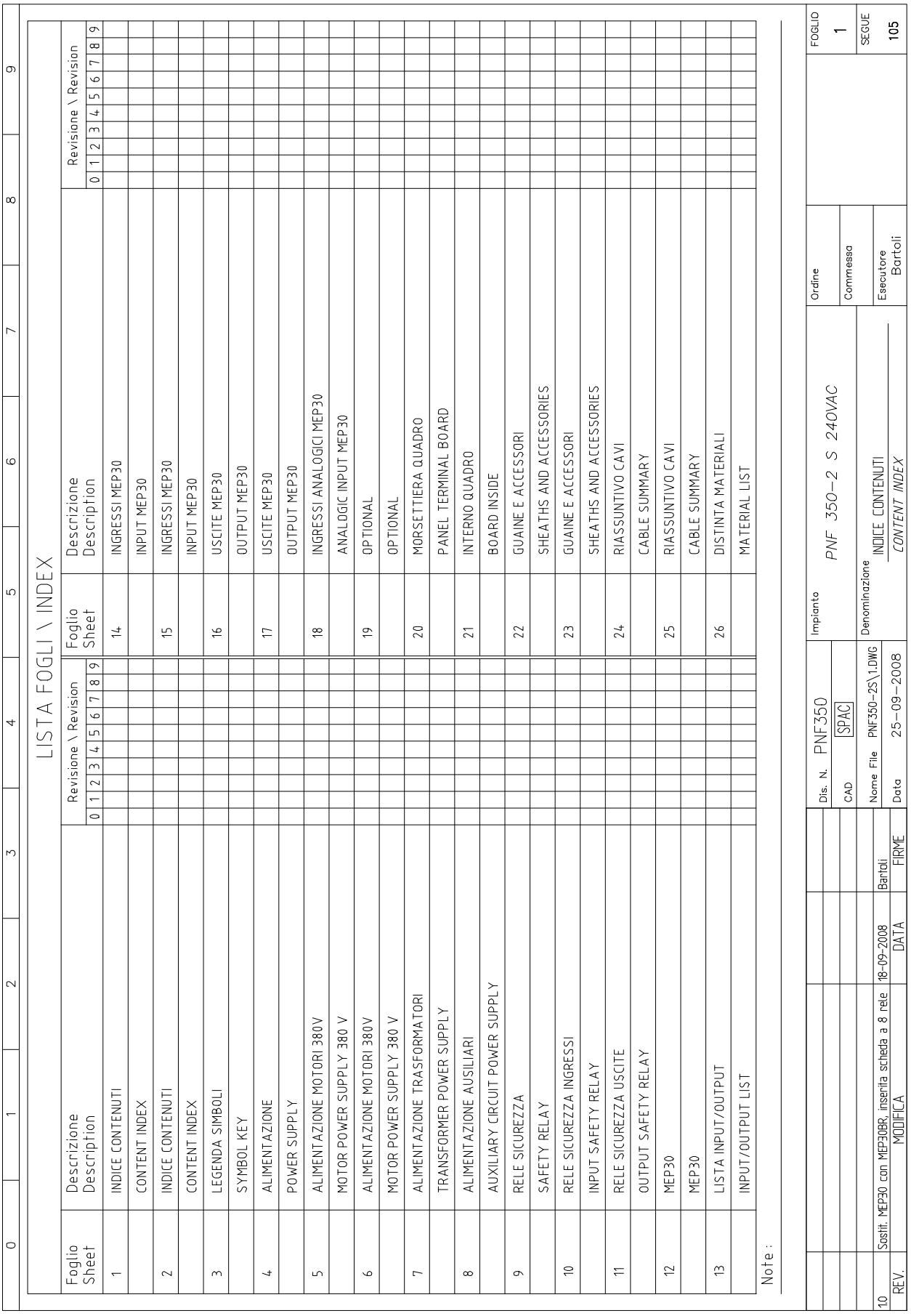
▶ bend the head leftwards will reaching the indicated sloping on the rocker arm support;

▶ tighten the HH screws and cut.

Diagrams, exploded views and replacement parts



This chapter contains functional diagrams and exploded views of the **PNF 350- 2 S**. This document is intended to help in identifying the location of the various components making up the machine, giving information useful in carrying out repair and maintenance operations; This chapter will also enable the user to order replacement parts with no risk of misunderstanding, as all parts are given codes.



LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisione \ Revision 0 1 2 3 4 5 6 7 8 9	Foglio Sheet	Descrizione Description	Revisione \ Revision 0 1 2 3 4 5 6 7 8 9
1	INDICE CONTENUTI		14	INGRESSI MEP30	
	CONTENT INDEX			INPUT MEP30	
2	INDICE CONTENUTI		15	INGRESSI MEP30	
	CONTENT INDEX			INPUT MEP30	
3	LEGENDA SIMBOLI		16	USCITE MEP30	
	SYMBOL KEY			OUTPUT MEP30	
4	ALIMENTAZIONE		17	USCITE MEP30	
	POWER SUPPLY			OUTPUT MEP30	
5	ALIMENTAZIONE MOTORI 380V		18	INGRESSI ANALOGICI MEP30	
	MOTOR POWER SUPPLY 380 V			ANALOGIC INPUT MEP30	
6	ALIMENTAZIONE MOTORI 380V		19	OPTIONAL	
	MOTOR POWER SUPPLY 380 V			OPTIONAL	
7	ALIMENTAZIONE TRASFORMATORI		20	MORSETTIERA QUADRO	
	TRANSFORMER POWER SUPPLY			PANEL TERMINAL BOARD	
8	ALIMENTAZIONE AUSILIARI		21	INTERNO QUADRO	
	AUXILIARY CIRCUIT POWER SUPPLY			BOARD INSIDE	
9	RELE SICUREZZA		22	GUAINE E ACCESSORI	
	SAFETY RELAY			SHEATHS AND ACCESSORIES	
10	RELE SICUREZZA INGRESSI		23	GUAINE E ACCESSORI	
	INPUT SAFETY RELAY			SHEATHS AND ACCESSORIES	
11	RELE SICUREZZA USCITE		24	RIASSUNTIVO CAVI	
	OUTPUT SAFETY RELAY			CABLE SUMMARY	
12	MEP30		25	RIASSUNTIVO CAVI	
	MEP30			CABLE SUMMARY	
13	LISTA INPUT/OUTPUT		26	DISTINTA MATERIALI	
	INPUT/OUTPUT LIST			MATERIAL LIST	

Note :

REV.	MODIFICA	DATA	FIRME
10	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008

Impianto PNF 350-2 S 240VAC
Denominazione INDICE CONTENUTI
CONTENT INDEX

Ordine
Commessa
Esecutore Bartoli

FOGLIO 1
SEGUE 105

0	1	2	3	4	5	6	7	8	9

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisione \ Revision 0	1	2	3	4	5	6	7	8	9
27	DISTINTA MATERIALI										
	MATERIAL LIST										
28	DISTINTA MATERIALI										
	MATERIAL LIST										
100	ALIMENTAZIONE PNEUMATICA										
	PNEUMATIC POWER SUPPLY										
101	COMPOSIZIONE ELETTROVALVOLE										
	SOLENID VALVE COMPOSITION										
102	ESPLOSO PANNELLO VALVOLE										
	EXPLODED PANEL VIEW										
103	GUAINE E ACCESSORI										
	SHEATHS AND ACCESSORIES										
104	DISTINTA MATERIALE PNEUMATICO										
	PNEUMATIC MATERIAL LIST										
105	DISTINTA MATERIALE PNEUMATICO										
	PNEUMATIC MATERIAL LIST										

Foglio Sheet	Descrizione Description	Revisione \ Revision 0	1	2	3	4	5	6	7	8	9

Note :

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008

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INDICE CONTENUTI
CONTENT INDEX

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Bartoli

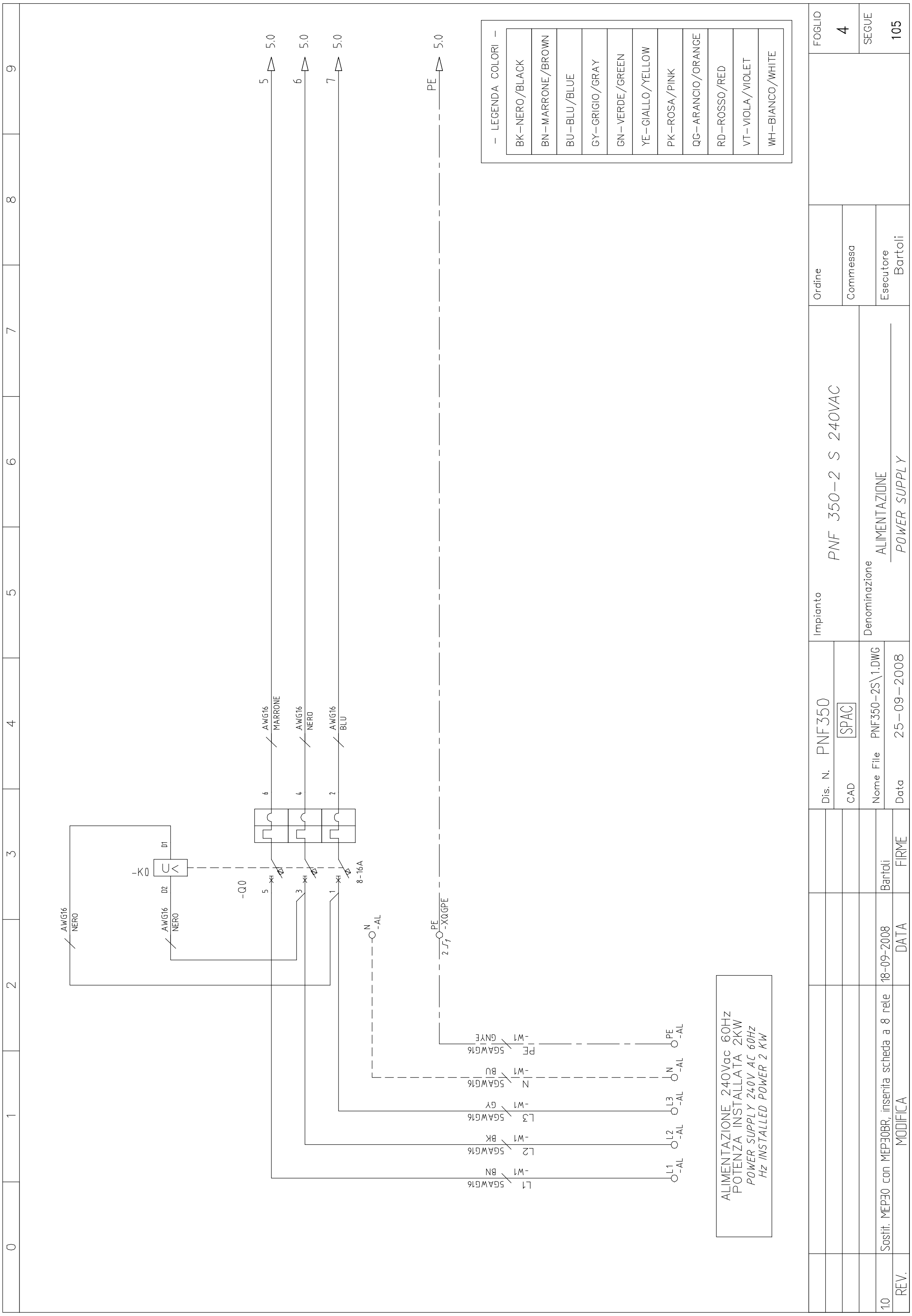
FOGLIO 2
SEGUE 105

Sim.\Sym.	File	Descrizione\Description
	M2	Motore a induzione trifase *THEREE-PHASE INDUCTION MOTOR*
	Q1360	Int. automatico magnetotermico sezionatore tripolare *THEREE-PHASE AUTOMATIC SWITCH*
	R6	Potenziometro *POTENTIOMETER*
	R60	Potenziometro *POTENTIOMETER*
	S2	Comando a Pulsante NO *PUSH BUTTON NO*
	S4C	Pulsante di emergenza NC *EMERGENCY BUTTON NC*
	S5	Comando rotativo a due posizioni NO *SELECTOR TWO POSITION NO*
	S7	Comando a pedale NO *CONTROL PEDAL NO*
	S8	Comandato dalla pressione (pressostato) NO *PRESSURE SWITCH NO*
	S15C	Comandato dal livello di un fluido (livellostato) NC *WATER GAUGE NC*
	S24C	Pulsante di emergenza a posizione stabile NC *EMERGENCY PUSH BUTTON NC*

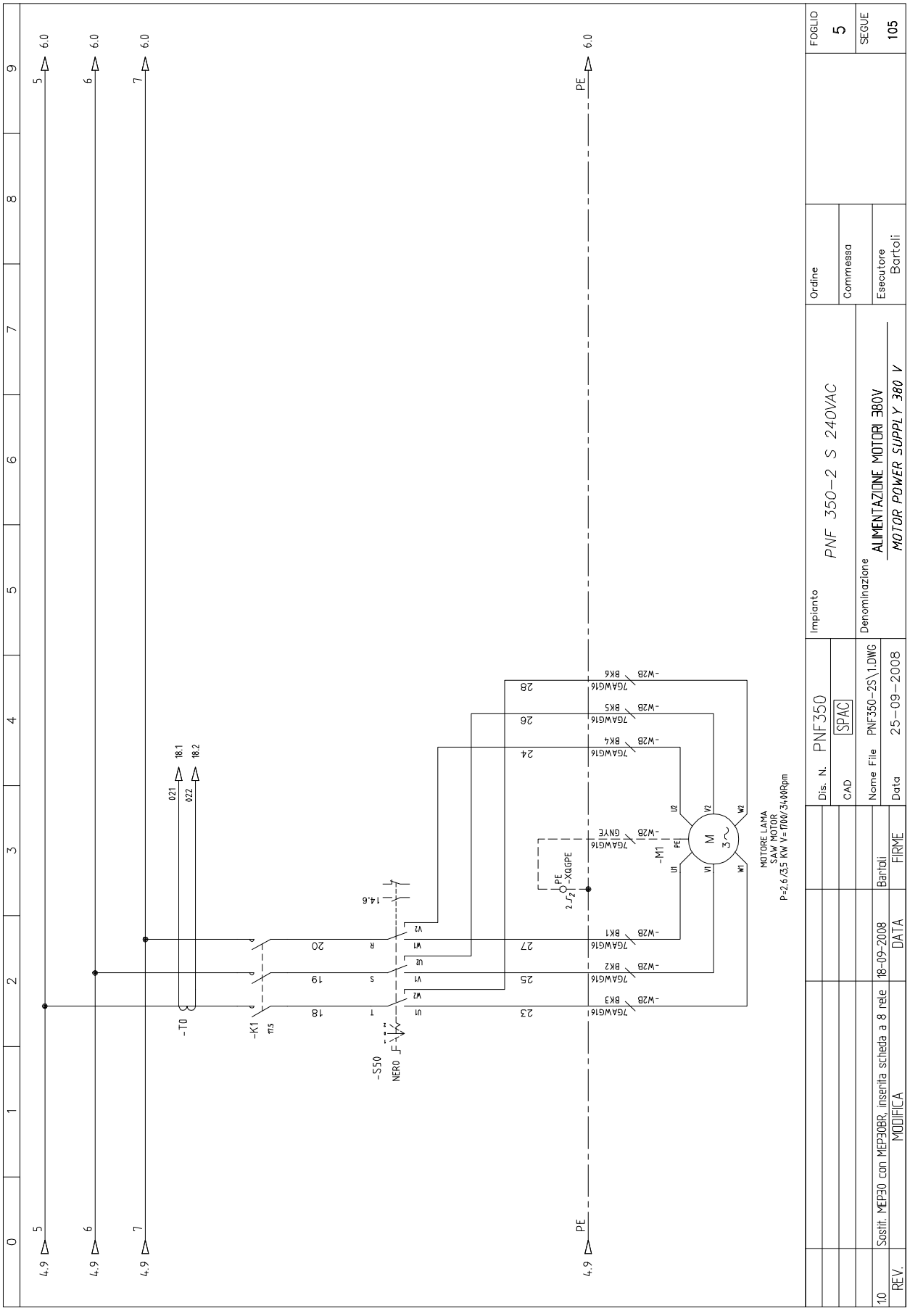
Sim.\Sym.	File	Descrizione\Description
	T1	Trasformatore di corrente *CURRENT TRANSFORMER*
	Y1	Elettrovalvola aperta (in chiusura) *SOLENOID VALVE*
	KA1	Bobina rele' Aux *AUXILIARY RELAY COIL*
	KM1	Bobina contattore *CONTACTOR COIL*
	BLK26	Connettore EV *S.V. CONNECTOR*
	BLK41	Raccordo SX *CONNECTOR SX*
	BLK42	Raccordo DX *CONNECTOR DX*
	BLK43	Tubo corrugato *CORRUGATED PIPE*
	BLK44	Riduzione PG *PG ADAPTER*
	BLK51	Dado PG *PG NUT*
	BLK49	Pressa-cordone PG *PG FLEXIBLE CORD STOP*

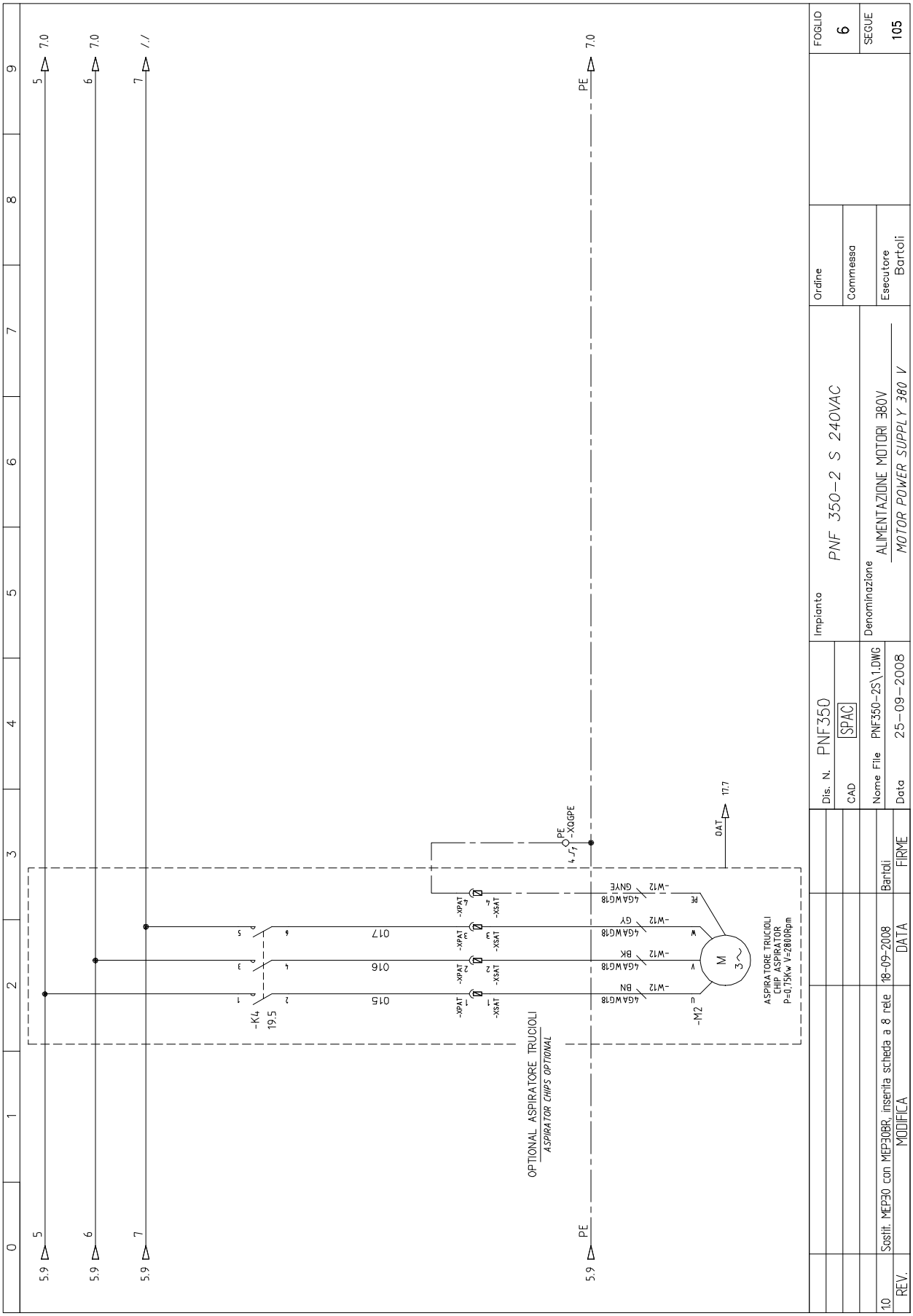
Sim.\Sym.	File	Descrizione\Description
	BLK50	Guaina termorestringente Ø26mm *SHEATH Ø26mm*
	BLK57	Guaina termorestringente Ø10mm *SHEATH Ø10mm*
	BLK55	Flangia di passaggio *LOOSE FLANGE*
	BLK56	Terminale a puntale *TERMINAL*
	BLK57	Filo unipolare *WIRE*
	BLK58	Fascette plastiche di fissaggio *PLASTIC CLAMP*
	BLK60	Terminale a occhiello *TERMINAL*
	BLK66	Sacchetto portafusibile *BAG FUSE*

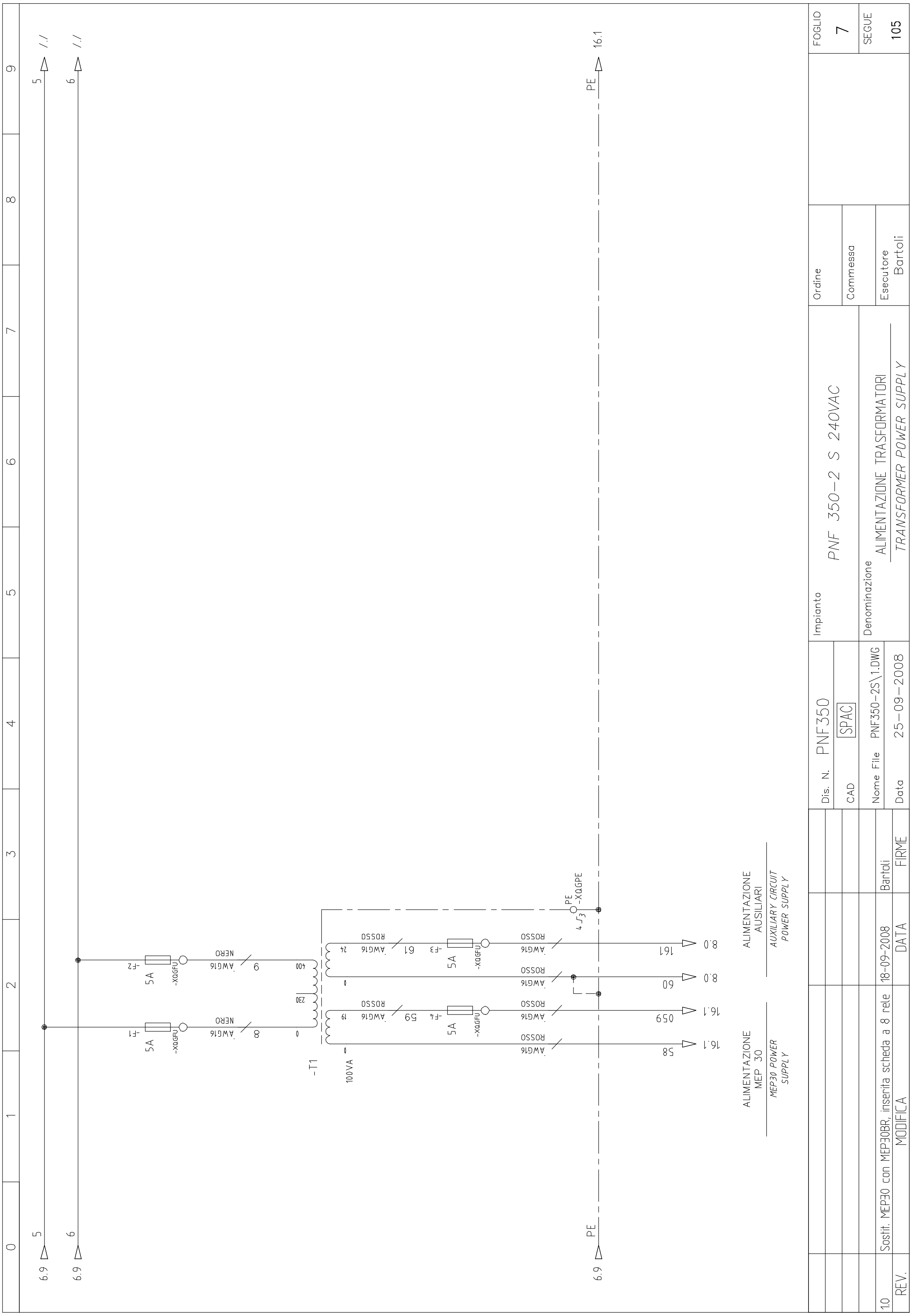
				Dis. N. PNF350	Impianto *PNF 350-2 S 240VAC*	Ordine		FOGLIO 3
				CAD SPAC		Commessa		
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Nome File PNF350-2S\1.DWG	Denominazione LEGENDA SIMBOLI	Esecutore Bartoli		SEGUE 105
REV.	MODIFICA	DATA	FIRME	Data 25-09-2008	*SYMBOL KEY*			

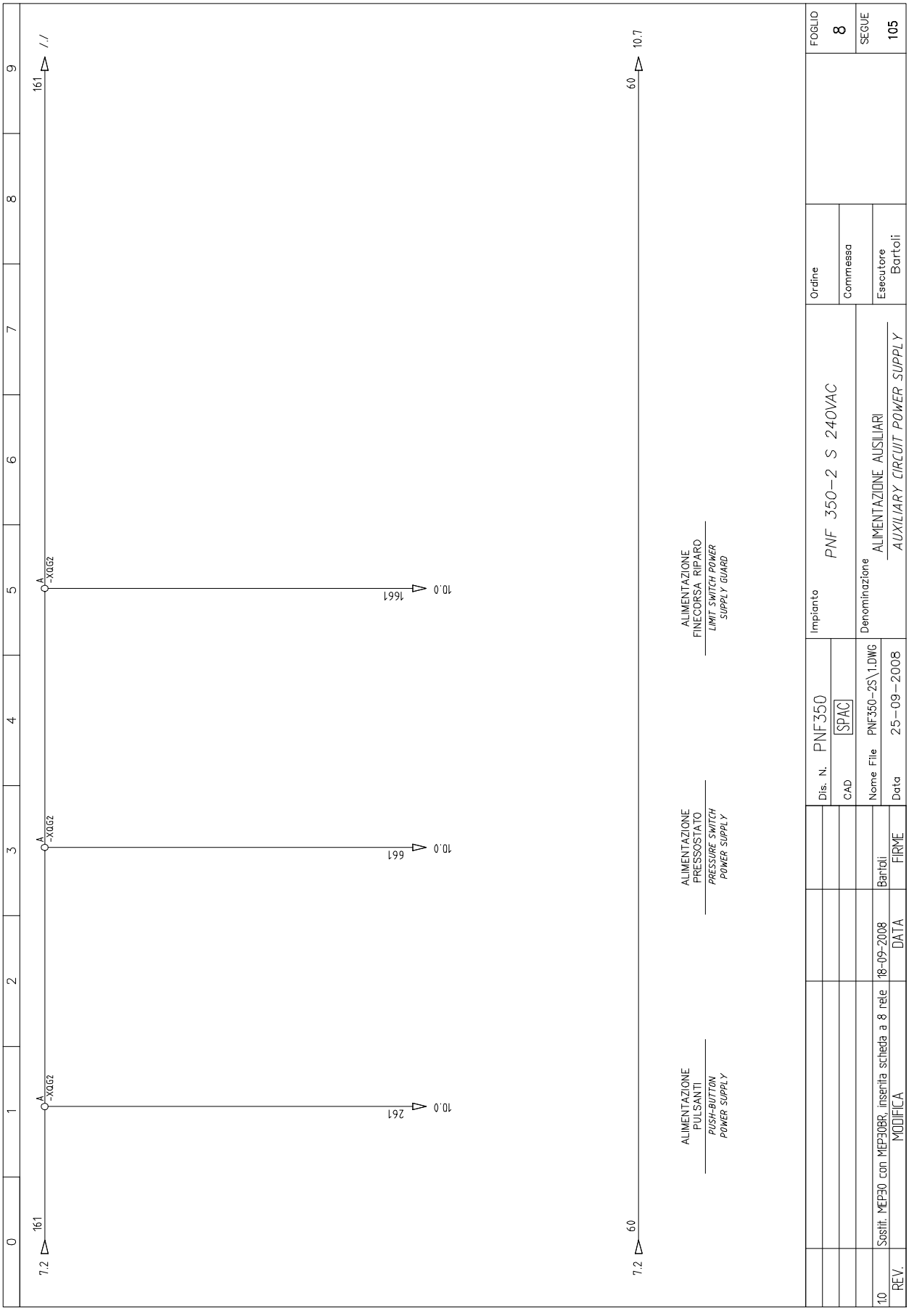


- LEGENDA COLORI -
BK-NERO/BLACK
BN-MARRONE/BROWN
BU-BLU/BLUE
GY-GRIGIO/GRAY
GN-VERDE/GREEN
YE-GIALLO/YELLOW
PK-ROSA/PINK
OG-ARANCIO/ORANGE
RD-ROSSO/RED
VT-VIOLA/VIOLET
WH-BIANCO/WHITE
ALIMENTAZIONE 240Vac 60Hz
POTENZA INSTALLATA 2KW
POWER SUPPLY 240V AC 60Hz
Hz INSTALLED POWER 2 KW
-K0
-Q0
8-16A
AWG16 MARRONE
AWG16 NERO
AWG16 BLU
-XQGPE
5GAWG16
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
ALIMENTAZIONE
POWER SUPPLY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 4
SEGUE 105
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME


PNF 350-2 S 240VAC
ALIMENTAZIONE MOTORI 380V
MOTOR POWER SUPPLY 380 V
PNF350
PNF350-2S\1.DWG
25-09-2008
Bartoli
FOGLIO 5
SEGUE 105
-T0
-K1
-S50
-M1
-XAGPE
MOTORE LAMA
SAW MOTOR
P=2,6/3,5 KW V= 1100/3400Rpm
Sostit. MEP30 con MEP308R, inserita scheda a 8 rele
18-09-2008
MODIFICA
DATA
FIRME

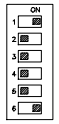

PNF 350-2 S 240VAC
ALIMENTAZIONE MOTORI 380V
MOTOR POWER SUPPLY 380 V
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Bartoli
FIRME
DATA
MODIFICA
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008
REV. 10
Impianto
Denominazione
Ordine
Commessa
Esecutore Bartoli
FOGLIO 6
SEGUE 105
OPTIONAL ASPIRATORE TRUCIOLI
ASPIRATOR CHIPS OPTIONAL
ASPIRATORE TRUCIOLI
CHIP ASPIRATOR
P=0.75Kw V=2800Rpm
-K4 19.5
-M2
-XGGPE
-XPAT
-XSAT
-W12
4GAWG18
BN
BK
GY
GNYE
PE
015
016
017
OAT 11.7
5.9
7.0


ALIMENTAZIONE MEP 30
MEP30 POWER SUPPLY
ALIMENTAZIONE AUSILIARI
AUXILIARY CIRCUIT POWER SUPPLY
-T1
100VA
5A
-XQGFU
-XQGPE
NERO
ROSSO
AWG16
FOGLIO 7
SEGUE 105
Ordine
Commessa
Esecutore Bartoli
Impianto PNF 350-2 S 240VAC
Denominazione ALIMENTAZIONE TRASFORMATORI
TRANSFORMER POWER SUPPLY
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME

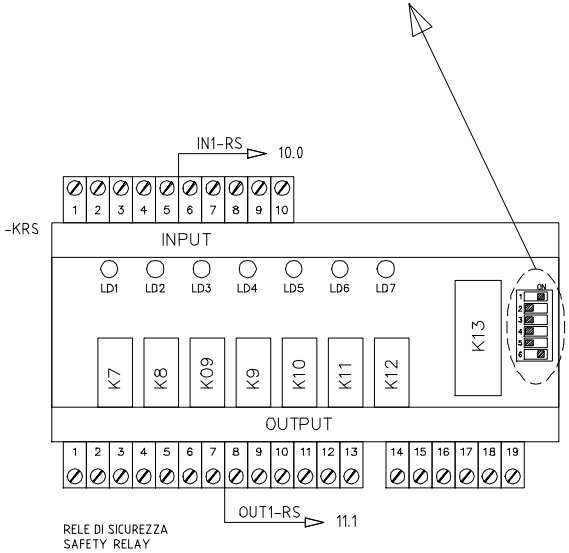

0 1 2 3 4 5 6 7 8 9
7.2
161
-XQG2
261
10.0
-XQG2
661
10.0
-XQG2
1661
10.0
/.//
ALIMENTAZIONE PULSANTI
PUSH-BUTTON POWER SUPPLY
ALIMENTAZIONE PRESSOSTATO
PRESSURE SWITCH POWER SUPPLY
ALIMENTAZIONE FINECORSA RIPARO
LIMIT SWITCH POWER SUPPLY GUARD
7.2
60
10.7
60
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
ALIMENTAZIONE AUSILIARI
AUXILIARY CIRCUIT POWER SUPPLY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 8
SEGUE 105
10 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME

0	1	2	3	4	5	6	7	8	9

TI 352 SX



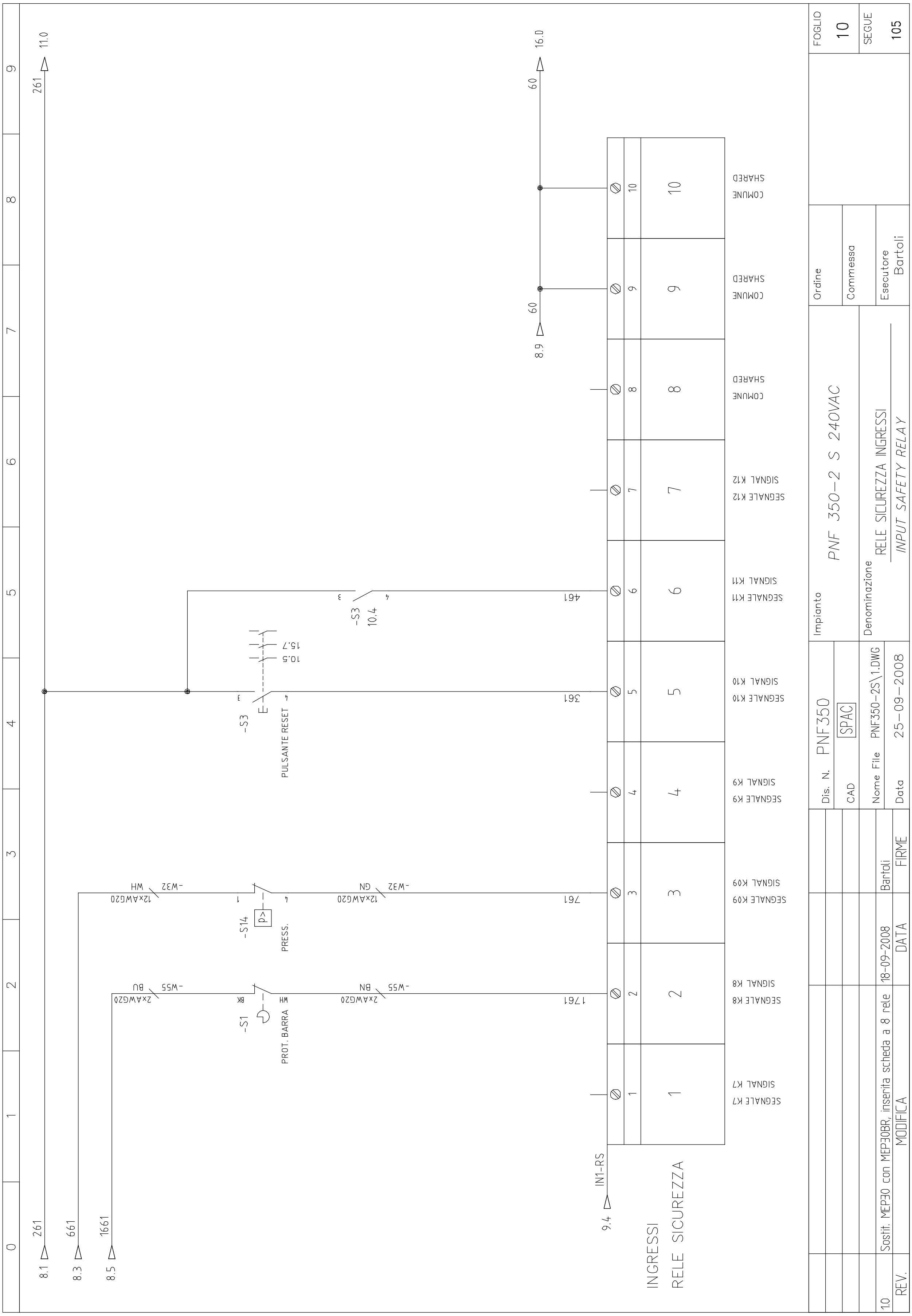
LEGENDA FUNZIONI RELE *RELAY FUNCTION KEY*	
K7 (LD1) =	SCORTA *SPARE*
K8 (LD2) =	PROTEZIONE MACCHINA *MACHINE PROTECTION*
K09 (LD3) =	PRESENZA ARIA *AIR PRESENCE*
K9 (LD4) =	SCORTA *SPARE*
K10 (LD5) =	EMERGENZA AUX 1 *AUX 1 EMERGENCY*
K11 (LD6) =	EMERGENZA AUX 2 *AUX 2 EMERGENCY*
K12 (LD7) =	EMERGENZA *EMERGENCY*
K012 (LD7) =	EMERGENZA (ABIL. AZIONAMENTI) *EMERGENCY (DRIVE ENABL.)*

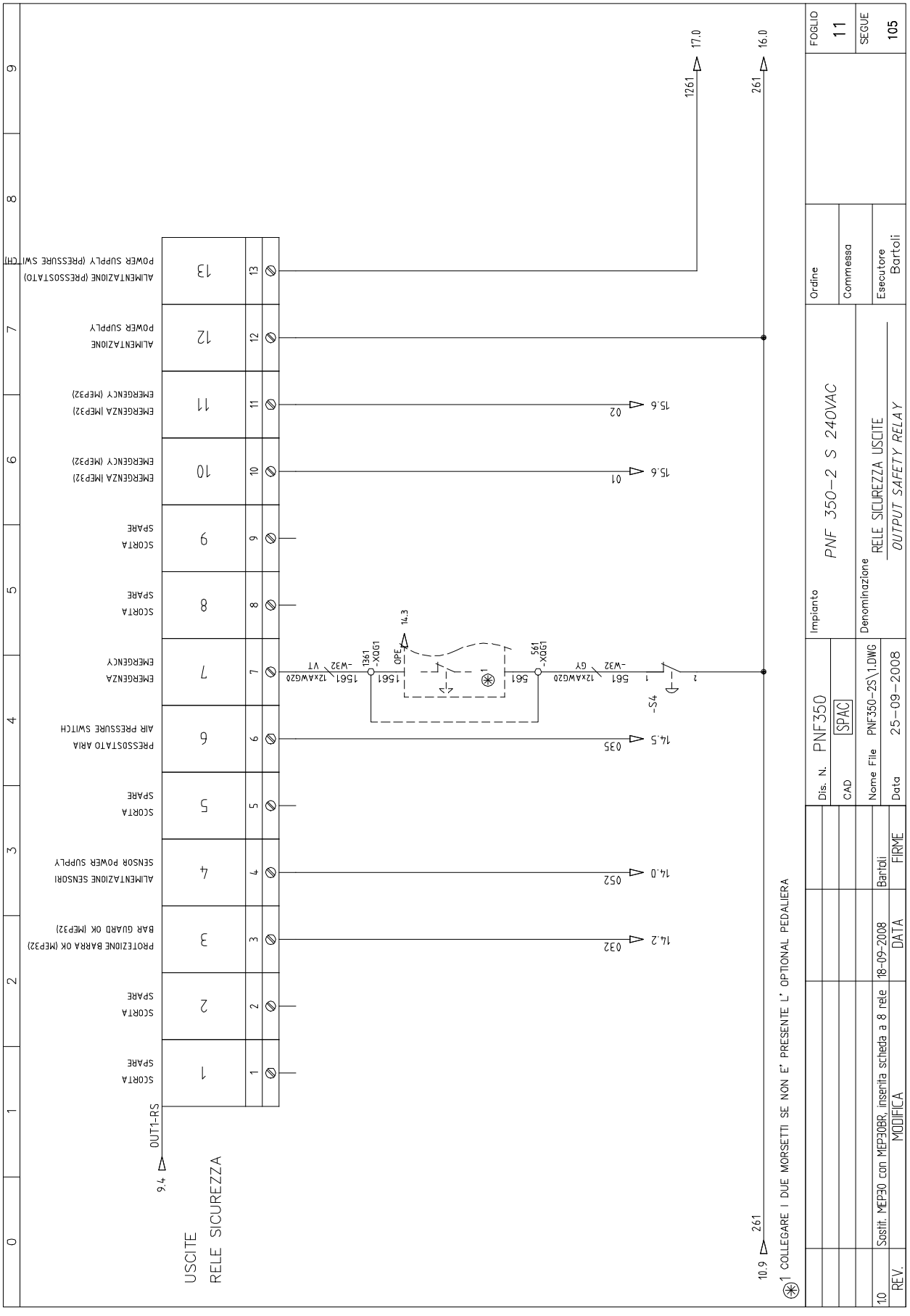


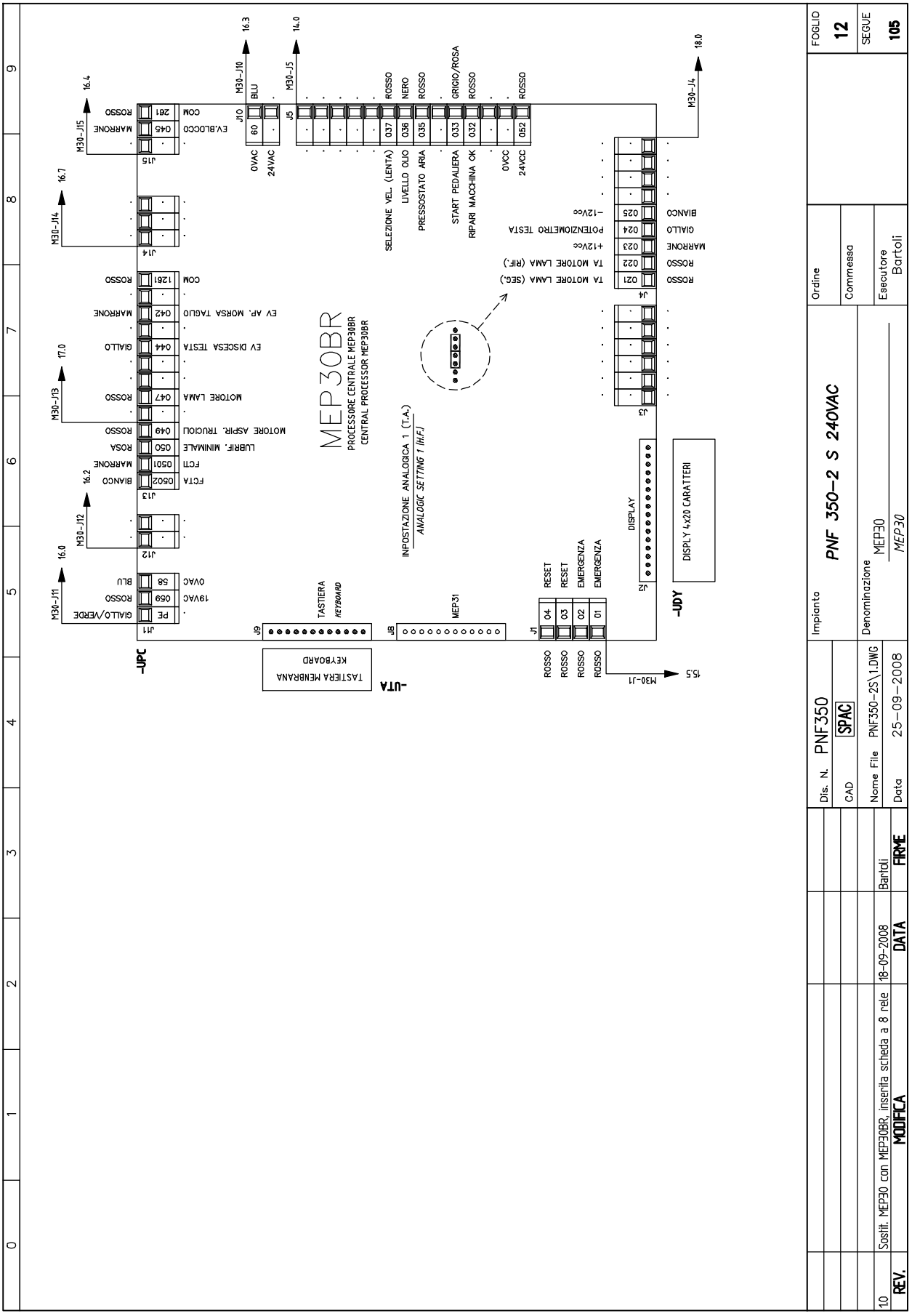
CONTROLLARE LA DISPOSIZIONE DEGLI SWITCH IN FUNZIONE DELLA MACCHINA
CHECK THE SWITCH ARRANGEMENT ACCORDING TO THE MACHINE VERSION

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N.	PNF350	Impianto	PNF 350-2 S 240VAC
CAD	SPAC	Ordine	
Nome File	PNF350-2S\1.DWG	Commessa	
Data	25-09-2008	Denominazione	RELE SICUREZZA *SAFETY RELAY*
		Esecutore	Bartoli
		FOGLIO	9
		SEGUE	105


INGRESSI
RELE SICUREZZA
PNF 350-2 S 240VAC
RELE SICUREZZA INGRESSI
INPUT SAFETY RELAY
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Esecutore Bartoli
FOGLIO 10
SEGUE 105
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME
PULSANTE RESET
PROT. BARRA
PRESS.


USCITE
RELE SICUREZZA
OUT1-RS
SCORTA SPARE
SCORTA SPARE
PROTEZIONE BARRA OK (MEP32) BAR GUARD OK (MEP32)
ALIMENTAZIONE SENSORI SENSOR POWER SUPPLY
SCORTA SPARE
PRESSOSTATO ARIA AIR PRESSURE SWITCH
SCORTA SPARE
EMERGENZA EMERGENCY
SCORTA SPARE
SCORTA SPARE
EMERGENZA (MEP32) EMERGENCY (MEP32)
EMERGENZA (MEP32) EMERGENCY (MEP32)
ALIMENTAZIONE POWER SUPPLY
ALIMENTAZIONE (PRESSOSTATO) POWER SUPPLY (PRESSURE SWITCH)
COLLEGARE I DUE MORSETTI SE NON E' PRESENTE L' OPTIONAL PEDALIERA
RELE SICUREZZA USCITE
OUTPUT SAFETY RELAY
PNF 350-2 S 240VAC
PNF350
PNF350-2S1.DWG
25-09-2008
Bartoli
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
MODIFICA
DATA
FIRME
FOGLIO 11
SEGUE 105


MEP30BR
PROCESSORE CENTRALE MEP30BR
CENTRAL PROCESSOR MEP30BR
INPOSTAZIONE ANALOGICA 1 (T.A.)
ANALOGIC SETTING 1 (H.F.)
TASTIERA
KEYBOARD
MEP31
DISPLAY
DISPLY 4x20 CARATTERI
TASTIERA MENBRANA
KEYBOARD
-UPC
-UTA
-UDY
SELEZIONE VEL. (LENTA)
LIVELLO OLIO
PRESSOSTATO ARIA
START PEDALIERA
RIPARI MACCHINA OK
POTENZIOMETRO TESTA
EV DISCESA TESTA
EV AP. MORSA TAGLIO
MOTORE LAMA
LUBRIF. MINIMALE
MOTORE ASPIR. TRUCIOLI
FCTA
FCTM
RESET
EMERGENZA
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione MEP30
MEP30
Ordine
Commessa
Esecutore Bartoli
FOGLIO 12
SEGUE 105
REV. 10
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
MODIFICA DATA FIRME

0	1	2	3	4	5	6	7	8	9

CONNETTORI MEP30

J1 4PIN — EMERGENZA/RESET / *EMERGENCY/RESET*

01	ROSSO / *RED*	EMERGENZA / *EMERGENCY*
02	ROSSO / *RED*	EMERGENZA / *EMERGENCY*
03	ROSSO / *RED*	RESET / *RESET*
04	ROSSO / *RED*	RESET / *RESET*

J2 16PIN — DISPLAY / *DISPLAY*

J4 9PIN — INGRESSI ANALOGICI / *ANALOG INPUT*

021	ROSSO / *RED*	TA MOTORE LAMA (SEG.) / *BLADE MOTOR HF (SEG.)*
022	ROSSO / *RED*	TA MOTORE LAMA (RIF.) / *BLADE MOTOR HF (RIF.)*
023	MARRONE / *BROWN*	ALIMENTAZIONE POT.(+12V) / *POT. POWER SUPPLY (+ 12 V)*
024	GIALLO / *YELLOW*	POTENZIOMETRO TESTA / *HEAD POTENTIOMETER*
025	BIANCO / *WHITE*	ALIMENTAZIONE POT. (0V) / *POT. POWER SUPPLY (0 V)*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J5 14PIN — INGRESSI DIGITALI MEP 30 / *MEP 30 DIGITAL INPUTS*

052	ROSSO / *RED*	24VCC / *24 VCC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
032	ROSSO / *RED*	RIPARI MACCHINA OK / *RIPARI MACCHINA OK*
033	GRIGIO/ROSA / *GREY/PINK*	START DA PEDALIERA / *START BY PEDAL CONTROL*
//	NC / *NC*	NC / *NC*
035	ROSSO / *RED*	PRESSOSTATO ARIA / *AIR PRESSURE SWITCH*
036	NERO / *BLACK*	LIVELLO OLIO / *OIL LEVEL*
037	ROSSO / *RED*	SELEZ. VELOCITA / *SPEED SELECTION*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J8 12PIN — MEP 31 / *MEP31*

J9 12PIN — TASTIERA / *KEYBOARD*

J10 2PIN — ALIMENTAZIONE USCITE / *OUTPUT POWER SUPPLY*

.	NC / *NC*	NC / *NC*
60	BLU / *BLUE*	0VAC / *0VAC*

J11 3PIN — ALIMENTAZIONE MEP30 / *POWER SUPPLY MEP30*

58	BLU / *BLUE*	0VAC / *0VAC*
059	ROSSO / *RED*	19VAC / *19VAC*
//	GIALLO/VERDE / *YELLOW/GREEN*	PE / *PE*

J12 2PIN — MARCIA INVERTER / *INVERTER RUN*

//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J13 13PIN — USCITE DIGITALI C4–CF / *C4-CF DIGITAL OUTPUTS*

1261	ROSSO / *RED*	COMUNE USCITE C4–CF / *COMMON OUTPUT C4-CF*
//	NC / *NC*	NC / *NC*
042	MARRONE / *BROWN*	EV. APERT. MORSA TAGLIO / *CUTTING VICE OPENING SV*
//	NC / *NC*	NC / *NC*
044	GIALLO / *YELLOW*	EV DISCESA TESTA / *HEAD LOWERING SV*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
047	ROSSO / *RED*	MOTORE LAMA / *SAW MOTOR*
//	NC / *NC*	NC / *NC*
049	ROSSO / *RED*	MOTORE POMPA / *PUMP MOTOR*
050	ROSA / *PINK*	EV. LUBRIF. MINIMALE / *SPRAY MIST SYSTEM S.V.*
0501	MARRONE / *BROWN*	FCTI / *RHLS*
0502	BIANCO / *WHITE*	FCTA / *FHLS*

J14 3PIN — USCITE DIGITALI C2–C3 / *C2-C3 DIGITAL OUTPUTS*

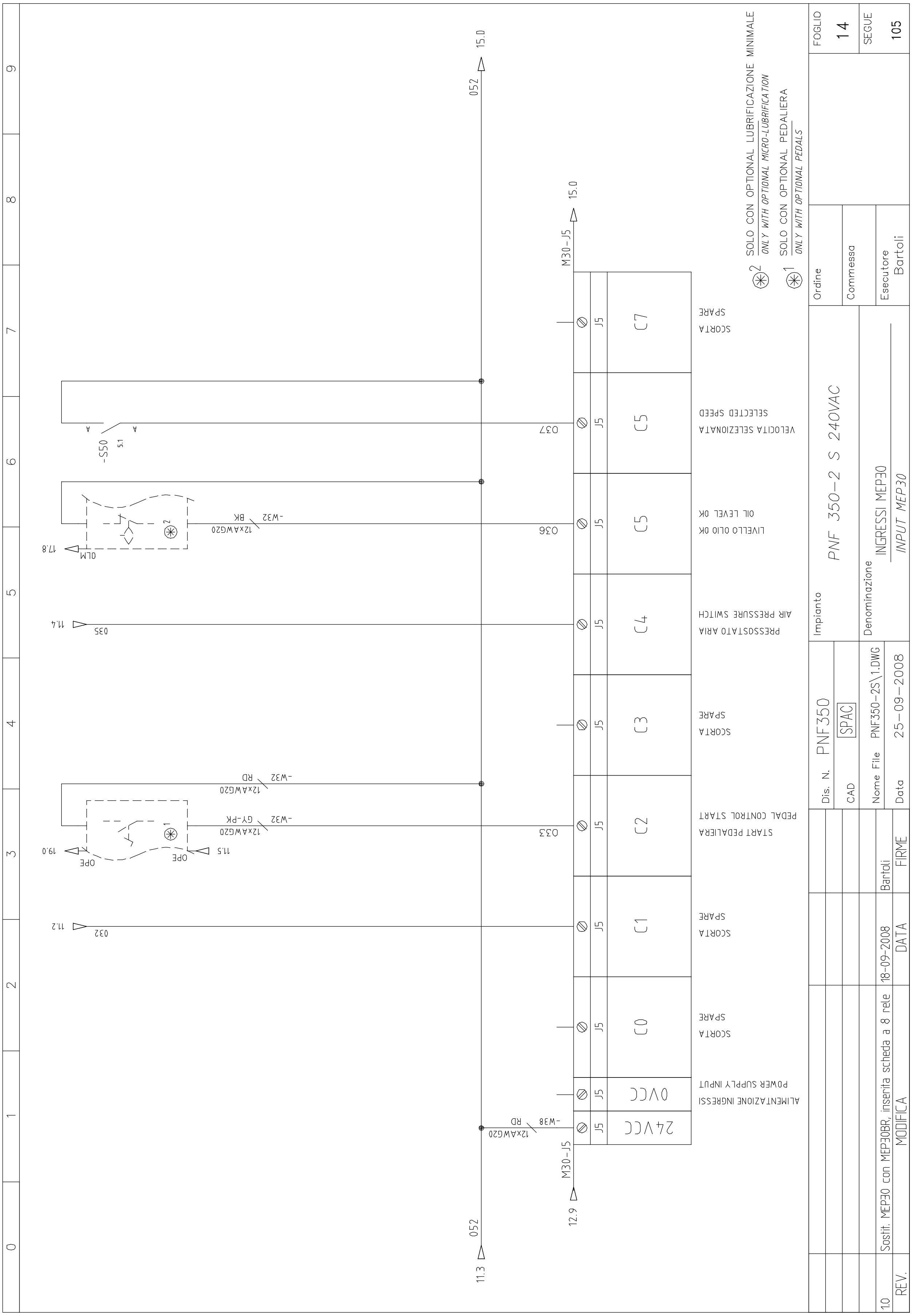
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

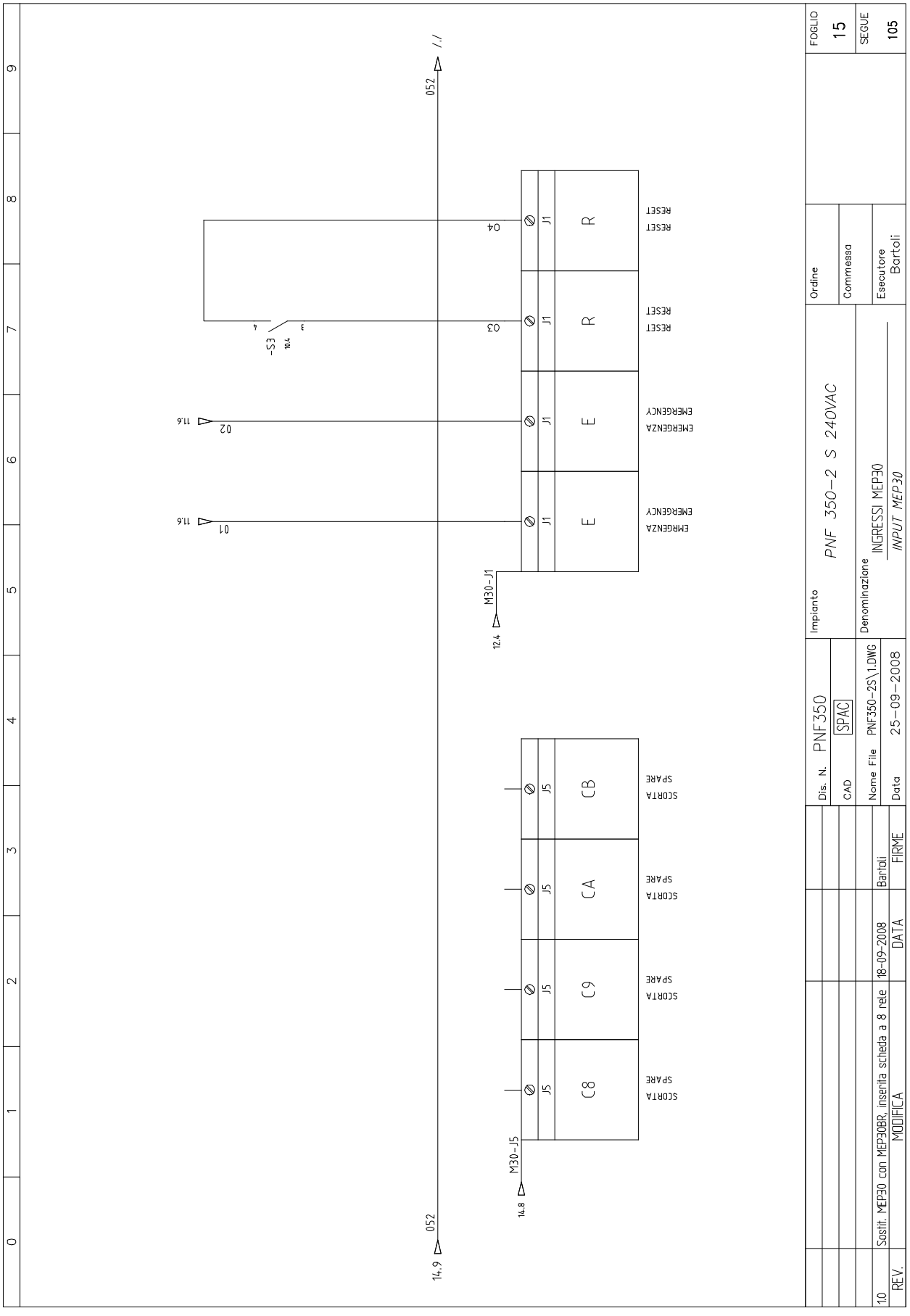
J15 3PIN — USCITE DIGITALI C0–C1 / *C0-C1 DIGITAL OUTPUTS*

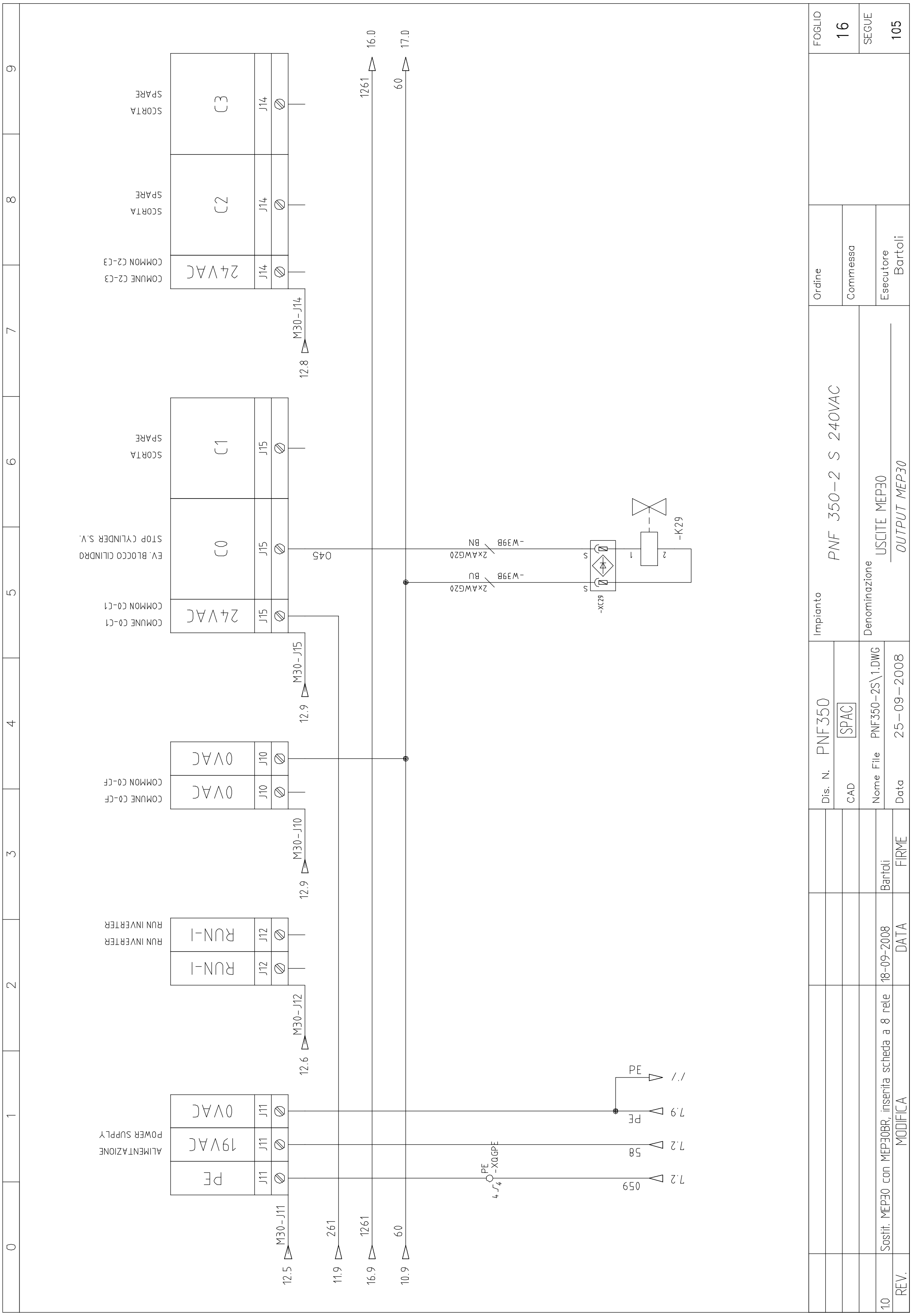
261	ROSSO / *RED*	COMUNE USCITE C0–C1 / *COMMON OUTPUT C0-C1*
045	MARRONE / *BROWN*	EV. BLOCCO CILINDRO / *STOP CILINDER S.V.*
//	GIALLO/VERDE / *YELLOW/GREEN*	PE / *PE*

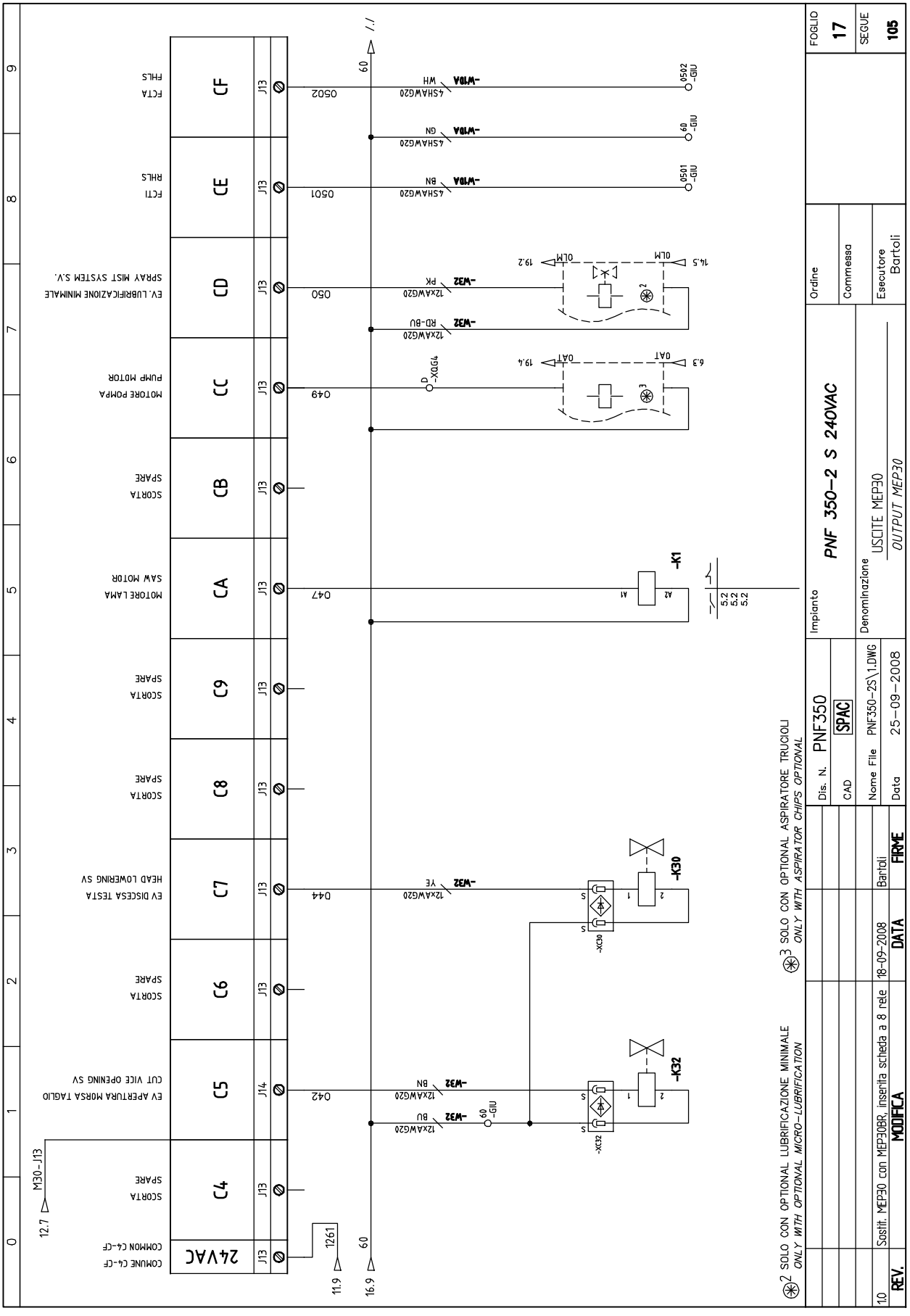
REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

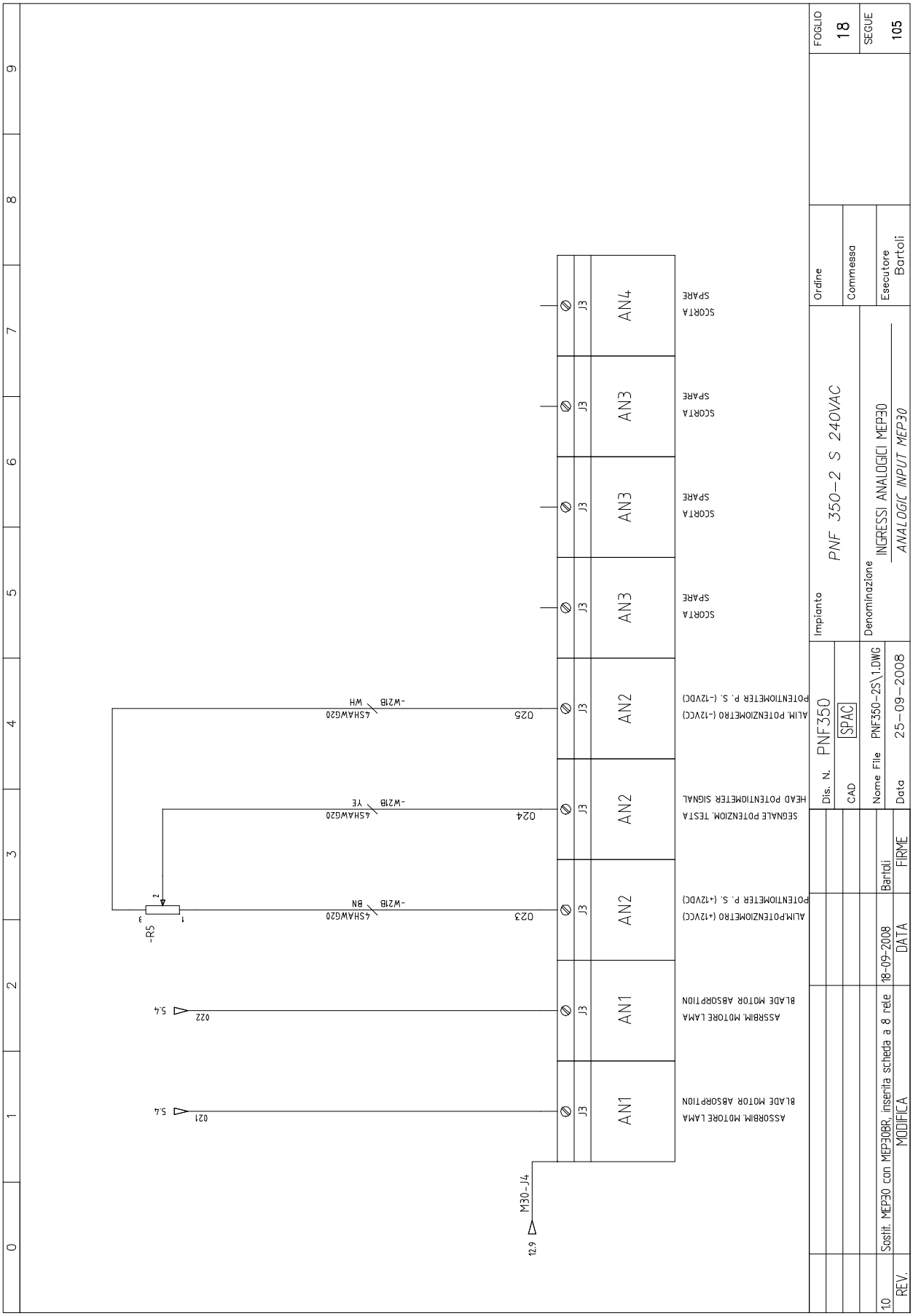
Dis. N.	PNF350	Impianto	PNF 350–2 S 240VAC
CAD	SPAC	Ordine	
Nome File	PNF350-2S\1.DWG	Commessa	
Data	25–09–2008	Denominazione	LISTA INPUT/OUTPUT / *INPUT/OUTPUT LIST*
		Esecutore	Bartoli
		FOGLIO	13
		SEGUE	105

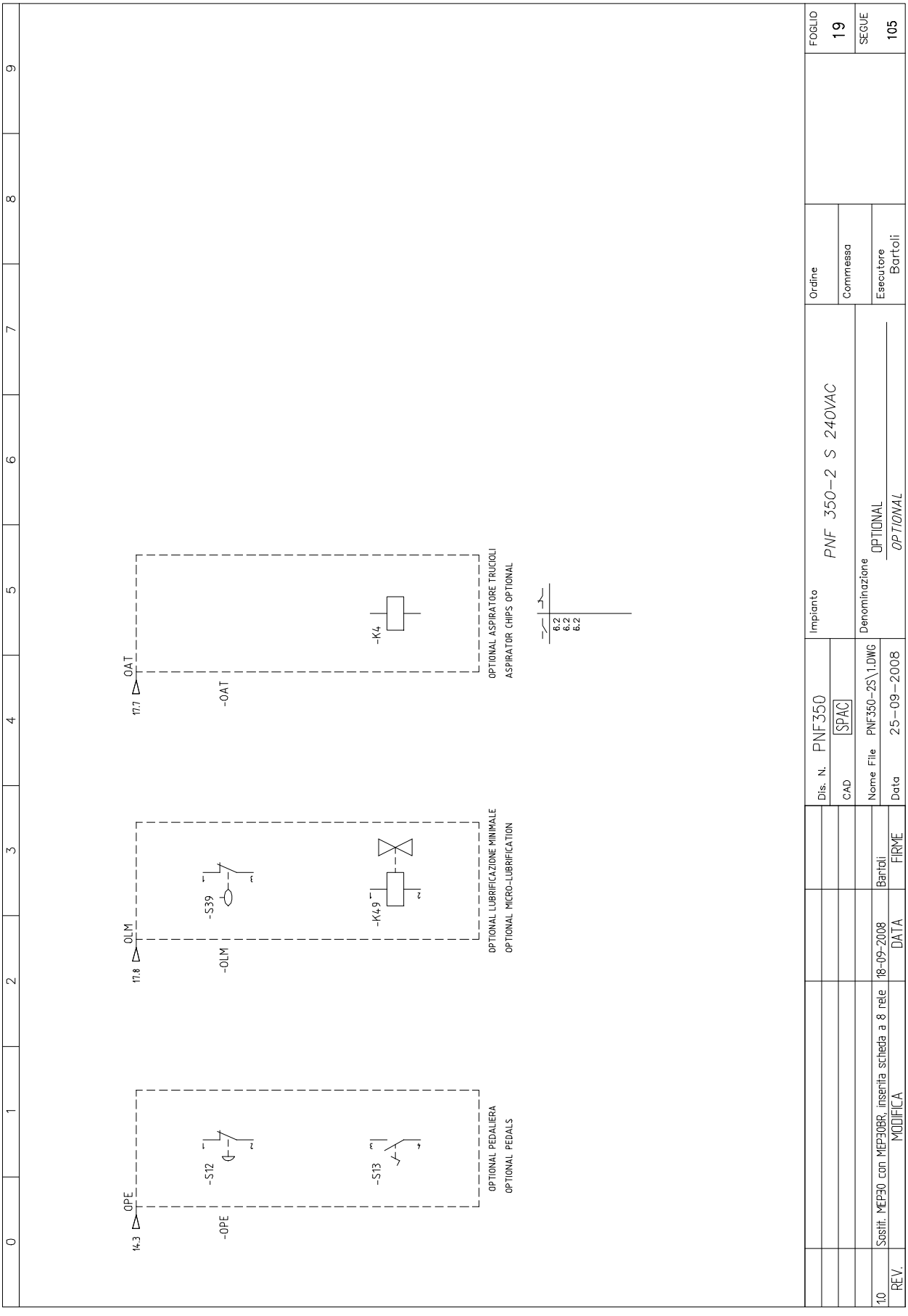

SOLO CON OPTIONAL LUBRIFICAZIONE MINIMALE
ONLY WITH OPTIONAL MICRO-LUBRIFICATION
SOLO CON OPTIONAL PEDALIERA
ONLY WITH OPTIONAL PEDALS
24VCC
0VCC
C0
C1
C2
C3
C4
C5
C7
ALIMENTAZIONE INGRESSI
POWER SUPPLY INPUT
SCORTA
SPARE
START PEDALIERA
PEDAL CONTROL START
PRESSOSTATO ARIA
AIR PRESSURE SWITCH
LIVELLO OLIO OK
OIL LEVEL OK
VELOCITA SELEZIONATA
SELECTED SPEED
M30-J5
052
11.3
12.9
15.0
-W38
RD
12xAWG20
-W32
GY-PK
BK
032
033
035
036
037
OPE
OLM
-S50
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
INGRESSI MEP30
INPUT MEP30
Ordine
Commessa
Esecutore
Bartoli
FOGLIO
14
SEGUE
105
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 relè
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME

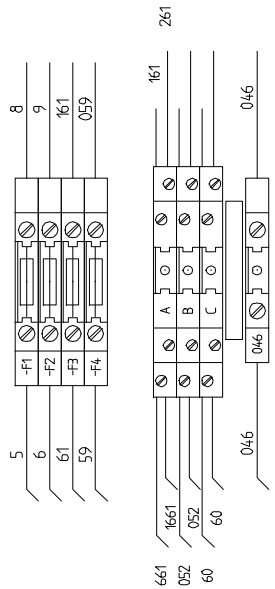

0 1 2 3 4 5 6 7 8 9
052
14.9
M30-J5
14.8
C8
C9
CA
CB
SCORTA
SPARE
M30-J1
12.4
E
R
EMERGENZA
RESET
J1
J5
01
02
03
04
11.6
-S3
10.4
FOGLIO 15
SEGUE 105
Impianto
PNF 350-2 S 240VAC
Ordine
Commessa
Esecutore Bartoli
Denominazione
INGRESSI MEP30
INPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME


PNF 350-2 S 240VAC
Impianto
Denominazione
USCITE MEP30
OUTPUT MEP30
FOGLIO
16
SEGUE
105
Ordine
Commessa
Esecutore
Bartoli
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME


PNF 350-2 S 240VAC
OUTPUT MEP30
USCITE MEP30
PNF350
SPAC
PNF350-2S\1.DWG
25-09-2008
Esecutore Bartoli
FOGLIO 17
SEGUE 105
SOLO CON OPTIONAL LUBRIFICAZIONE MINIMALE
ONLY WITH OPTIONAL MICRO-LUBRIFICATION
SOLO CON OPTIONAL ASPIRATORE TRUCIOLI
ONLY WITH ASPIRATOR CHIPS OPTIONAL
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
MODIFICA
DATA
FIRME


FOGLIO 18
SEGUE 105
Ordine
Commessa
Esecutore Bartoli
Impianto PNF 350-2 S 240VAC
Denominazione INGRESSI ANALOGICI MEP30
ANALOGIC INPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
10 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME
AN1 AN2 AN3 AN4 J3
ASSORBIM. MOTORE LAMA
BLADE MOTOR ABSORPTION
ALIM.POTENZIOMETRO (+12VCC)
POTENTIOMETER P. S. (+12VDC)
SEGNALE POTENZIOM. TESTA
HEAD POTENTIOMETER SIGNAL
ALIM. POTENZIOMETRO (-12VCC)
POTENTIOMETER P. S. (-12VDC)
SCORTA
SPARE
M30-J4
12.9
021
022
023
024
025
5.4
-R5
-W218 BN 4SHAWG20
-W218 YE 4SHAWG20
-W218 WH 4SHAWG20


0
1
2
3
4
5
6
7
8
9
OPE
14.3
-OPE
-S12
-S13
OPTIONAL PEDALIERA
OPTIONAL PEDALS
OLM
17.8
-OLM
-S39
-K49
OPTIONAL LUBRIFICAZIONE MINIMALE
OPTIONAL MICRO-LUBRIFICATION
OAT
17.7
-OAT
-K4
OPTIONAL ASPIRATORE TRUCIOLI
ASPIRATOR CHIPS OPTIONAL
6.2
6.2
6.2
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
OPTIONAL
OPTIONAL
Ordine
Commessa
Esecutore Bartoli
FOGLIO 19
SEGUE 105

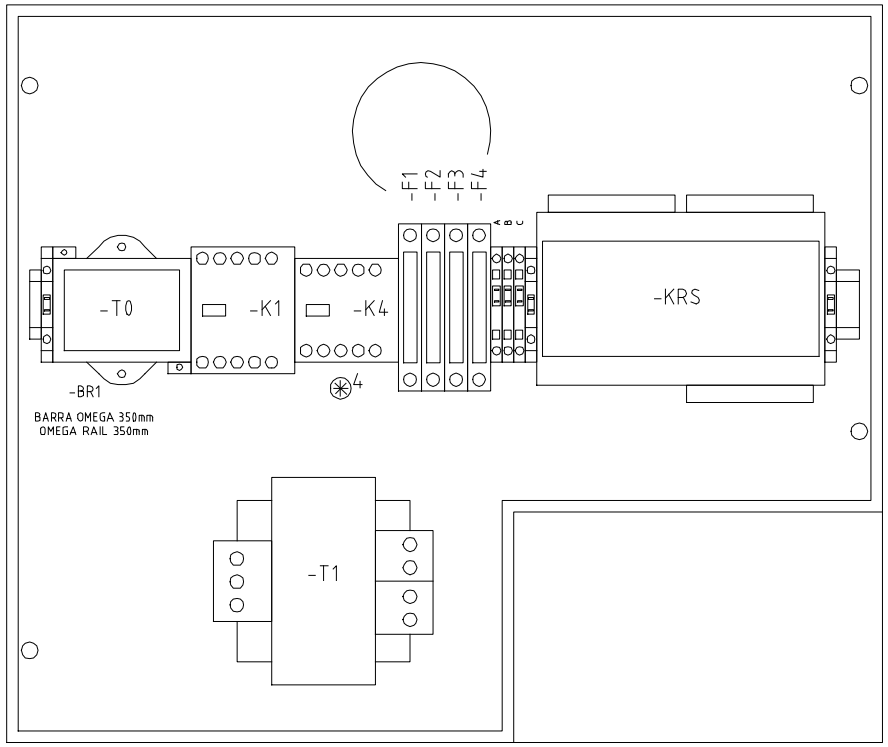


				Dis. N. PNF350	Impianto PNF 350-2 S 240VAC	Ordine		FOGLIO 20
				CAD SPAC		Commessa		
				Nome File PNF350-2S\1.DWG	Denominazione MORSETTIERA QUADRO			SEGUE 105
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Data 25-09-2008	PANEL TERMINAL BOARD	Esecutore Bartoli		
REV.	MODIFICA	DATA	FIRME					

0	1	2	3	4	5	6	7	8	9

-QD1

QUADRO (CARPENTERIA)
BOARD (CARPENTRY)



BARRA OMEGA 350mm
OMEGA RAIL 350mm

-FL1 FILO AWG20 / WIRE AWG20
-FL2 FILO AWG16 / WIRE AWG16
-PT1 PUNTALINO AWG20 / TERMINAL AWG20
-PT3 PUNTALINO AWG16 / TERMINAL AWG16
-CC1 CAPICORDA AWG16 / TERMINAL AWG16

-NM1 NUMERAZIONE FILI / WIRE NUMERATION
-NM2 NUMERAZIONE MORSETTI / TERMINAL NUMERATION
-FS1 FASCETTA 135x2,5 / CLAMP 135x2,5
-SF1 SACCHETTO PORTAFUSIBILI / BAG FUSE
-TF1 TARGA SOSTITUZIONE FUSIBILI / PLATE SUBSTITUTION FUSES
-TF2 GUARNIZIONE AERSTOP / SEAL AERSTOP

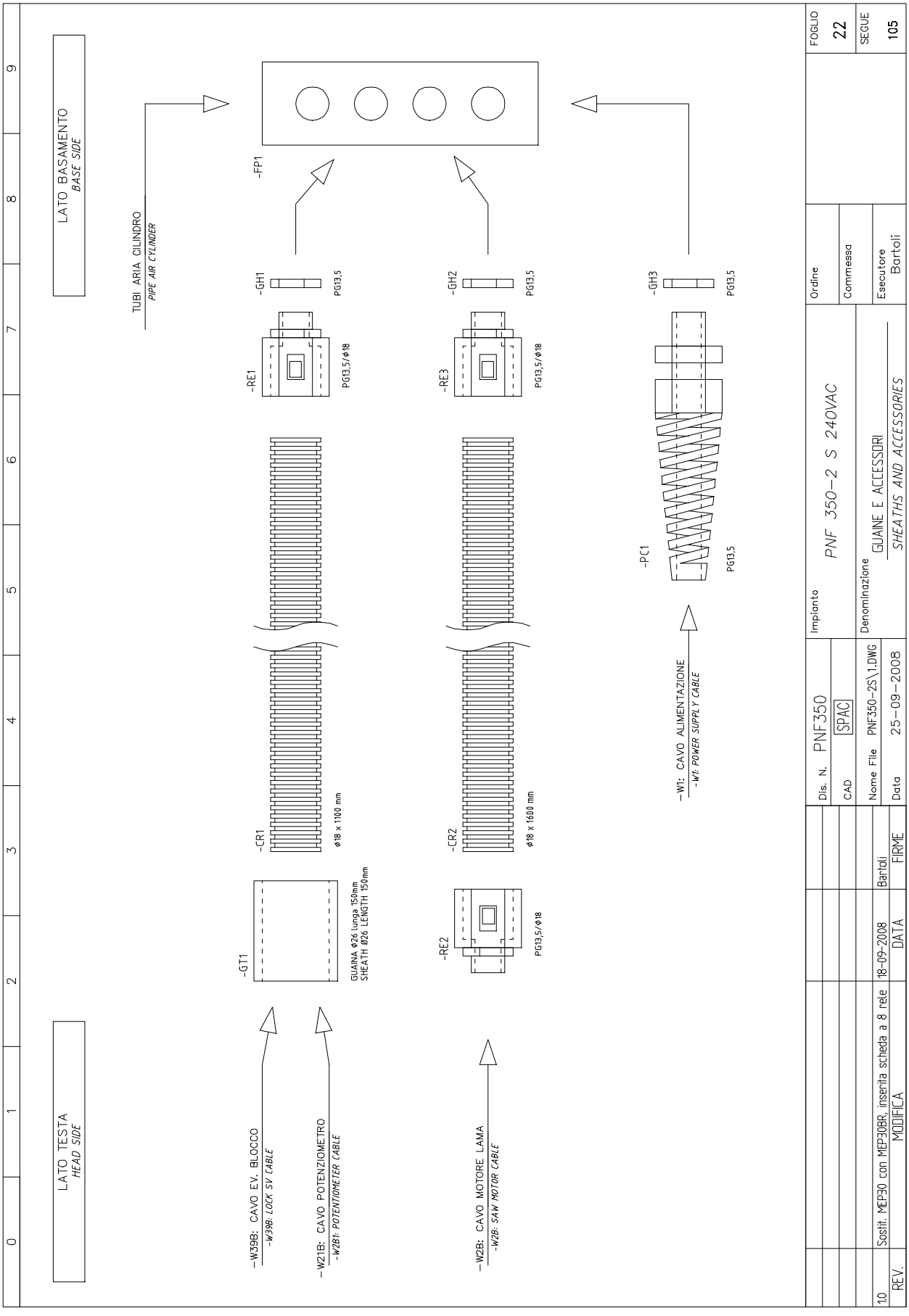
4 SOLO CON OPTIONAL ASPIRATORE TRUCIOLI
ONLY WITH OPTIONAL ASPIRATOR CHIPS

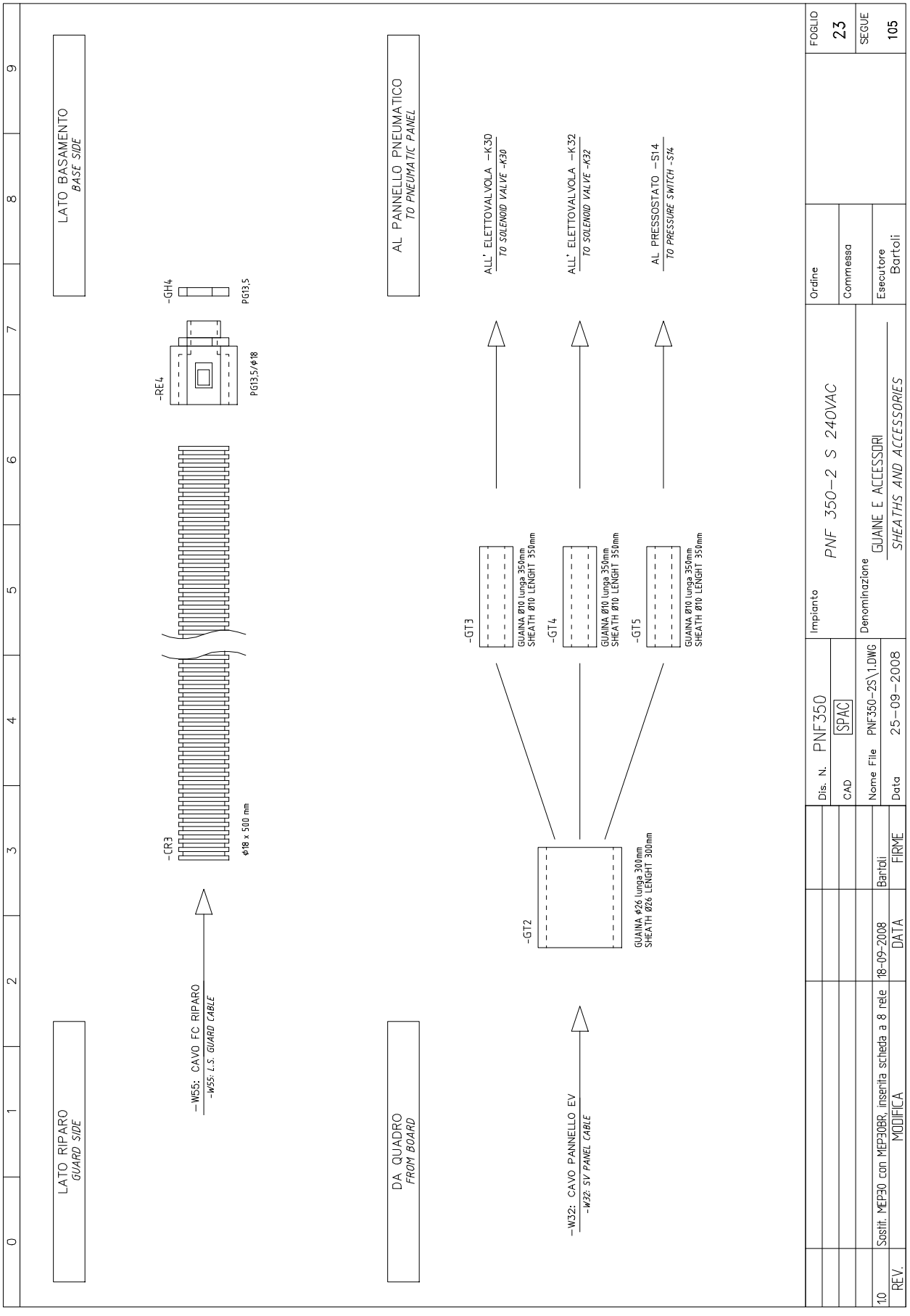
REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008

Impianto: *PNF 350-2 S 240VAC*
Denominazione: INTERNO QUADRO / *BOARD INSIDE*
Ordine
Commessa
Esecutore: Bartoli

FOGLIO 21
SEGUE 105


LATO TESTA
HEAD SIDE
LATO BASAMENTO
BASE SIDE
TUBI ARIA CILINDRO
PIPE AIR CYLINDER
-FP1
-GH1
-GH2
-GH3
PG13,5
-RE1
-RE2
-RE3
PG13,5/Ø18
-CR1
-CR2
Ø18 x 1100 mm
Ø18 x 1600 mm
-GT1
GUAINA Ø26 lunga 150mm
SHEATH Ø26 LENGTH 150mm
-PC1
PG13,5
-W39B: CAVO EV. BLOCCO
-W39B: LOCK SV CABLE
-W21B: CAVO POTENZIOMETRO
-W2Bf: POTENTIOMETER CABLE
-W2B: CAVO MOTORE LAMA
-W2B: SAW MOTOR CABLE
-W1: CAVO ALIMENTAZIONE
-W1: POWER SUPPLY CABLE
0
1
2
3
4
5
6
7
8
9
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
GUAINE E ACCESSORI
SHEATHS AND ACCESSORIES
Ordine
Commessa
Esecutore Bartoli
FOGLIO 22
SEGUE 105
REV. 10
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008 Bartoli
MODIFICA DATA FIRME


LATO BASAMENTO
BASE SIDE
LATO RIPARO
GUARD SIDE
DA QUADRO
FROM BOARD
AL PANNELLO PNEUMATICO
TO PNEUMATIC PANEL
-GH4
PG13,5
-RE4
PG13,5/ø18
-CR3
ø18 x 500 mm
-W55: CAVO FC RIPARO
-W55: L.S. GUARD CABLE
-W32: CAVO PANNELLO EV
-W32: SV PANEL CABLE
-GT2
GUAINA ø26 lunga 300mm
SHEATH ø26 LENGHT 300mm
-GT3
GUAINA ø10 lunga 350mm
SHEATH ø10 LENGHT 350mm
-GT4
GUAINA ø10 lunga 350mm
SHEATH ø10 LENGHT 350mm
-GT5
GUAINA ø10 lunga 350mm
SHEATH ø10 LENGHT 350mm
ALL' ELETTOVALVOLA -K30
TO SOLENOID VALVE -K30
ALL' ELETTOVALVOLA -K32
TO SOLENOID VALVE -K32
AL PRESSOSTATO -S14
TO PRESSURE SWITCH -S14
0 1 2 3 4 5 6 7 8 9
REV.
1.0
Sostit. MEP30 con MEP308R, inserita scheda a 8 rele
MODIFICA
18-09-2008
DATA
Bartoli
FIRME
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
GUAINE E ACCESSORI
SHEATHS AND ACCESSORIES
Ordine
Commessa
Esecutore Bartoli
FOGLIO 23
SEGUE 105

CAVI ESTERNI \ EXTERNAL CABLES

QUADRO \ BOARD								DESTINAZIONE \ LOCATION			
QUADRO BOARD	FOGLIO SHEET	NR. MORSETTO TERMINAL NO.	NR. FILO CONDUCTOR NO.	ID SUL CAVO ID IN CABLE	CAVO CABLE	LUNGHEZZA LENGHT [mt]	DISTURBO NOISE LEVEL	ID SUL CAVO ID IN CABLE	NR. FILO CONDUCTOR NO.	NR. MORSETTO TERMINAL NO.	FOGLIO SHEET	QUADRO BOARD
			L1	BN				BN	L1			
=QgCv -AL	4/1	L1 ○	L2	BK				BK	L2	5	4/3	=QgCv -Q0
=QgCv -AL	4/1	L2 ○	N	BU	-W1 022.0158 5GAWG16	5,5 MT		BU	N	3	4/3	=QgCv -Q0
=QgCv -AL	4/1	N ○	L3	GY	Cavo alimentazione			GY	L3	○ N	4/2	=QgCv -AL
=QgCv -AL	4/1	L3 ○	PE	GNYE				GNYE	PE	1	4/3	=QgCv -Q0
=QgCv -AL	4/2	PE ○								⏊ 2_1	4/2	=QgCv -XQGPE
			0501	BN				BN	0501			
=QgCv -GIU	17/8	0501 ○		YE	-W10A 022.0141 4SHAWG20	3,5Mt		YE		J13	17/8	CE
			0502	WH	Cavo FCTI e FCTA			WH	0502			
=QgCv -GIU	17/9	0502 ○	60	GN				GN	60	J13	17/9	CF
=QgCv -GIU	17/8	60 ○								0	7/2	=QgCv -T1
			27	BK1				BK1	27			
=QgCv -S50	5/2	W1	25	BK2				BK2	25	U1	5/3	=BmMep -M1
=QgCv -S50	5/2	V1	23	BK3				BK3	23	V1	5/3	=BmMep -M1
=QgCv -S50	5/2	U1	24	BK4	-W2B 022.0154 7GAWG16	5 MT		BK4	24	W1	5/3	=BmMep -M1
=QgCv -S50	5/2	V2	26	BK5	Cavo motore lama(2 VEL)			BK5	26	U2	5/3	=BmMep -M1
=QgCv -S50	5/2	U2	28	BK6				BK6	28	V2	5/3	=BmMep -M1
=QgCv -S50	5/2	W2	PE	GNYE				GNYE	PE	W2	5/3	=BmMep -M1
=QgCv -XQGPE	5/3	2_2 ⏊								PE	5/3	=BmMep -M1
			042	BN				BN	042			
C5	17/1	J14	561	GY				GY	561		17/1	=BmCv
=QgCv -XQG1	11/4	561 ○	60	BU				BU	60	1	11/4	=QgCv -S4
=QgCv -GIU	17/1	60 ○	761	GN				GN	761	0	7/2	=QgCv -T1
3	10/3	3	052	RD				RD	052	4	10/3	=BmCv -S14
4	11/3	4	044	YE				YE	044		14/3	
C7	17/3	J13	661	WH	-W32 022.0161 12xAWG20	4,5MT		WH	661		17/3	=BmCv
=QgCv -XQG2	8/3	A ○	050	PK	Cavo pannello EV e optional			PK	050	1	10/3	=BmCv -S14
CD	17/7	J13	036	BK				BK	036		17/7	
C5	14/6	J5	1561	VT				VT	1561		14/6	
=QgCv -XQG1	11/4	1361 ○	60	RD-BU				RD-BU	60	7	11/4	7
	17/7		033	GY-PK				GY-PK	033	0	7/2	=QgCv -T1
C2	14/3	J5									14/3	
			045	BN				BN	045			
C0	16/5	J15	60	BU	-W39B 022.0160 2xAWG20	5Mt		BU	60		16/5	=BmCv
=QgCv -T1	7/2	0			Cavo coll. EV blocco						16/5	=BmCv

REV.	MODIFICA	DATA	FIRMA
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N.	PNF350	Impianto	PNF 350-2 S 240VAC
CAD	SPAC	Ordine	
Nome File	PNF350-2S\1.DWG	Commessa	
Data	25-09-2008	Denominazione	RIASSUNTIVO CAVI / CABLE SUMMARY
		Esecutore	Bartoli
		FOGLIO	24
		SEGUE	105

0	1	2	3	4	5	6	7	8	9

CAVI ESTERNI \ EXTERNAL CABLES

QUADRO \ BOARD								DESTINAZIONE \ LOCATION			
QUADRO BOARD	FOGLIO SHEET	NR. MORSETTO TERMINAL NO.	NR. FILO CONDUCTOR NO.	ID SUL CAVO ID IN CABLE	CAVO CABLE	LUNGHEZZA LENGHT [mt]	DISTURBO NOISE LEVEL	ID SUL CAVO ID IN CABLE	NR. FILO CONDUCTOR NO.	NR. MORSETTO TERMINAL NO.	FOGLIO SHEET	QUADRO BOARD
2	10/2	2	1761	BN	-W55 022.0160 2xAWG20	2Mt		BN	1761			
=QgCv -XQG2	8/5	A O	1661	BU	Cavo coll. fc carter lama			BU	1661	WH	10/2	=QgCv -S1
										BK	10/2	=QgCv -S1
=BmAtCv -XSAT	6/2	1	015	BN				BN	015	U	6/2	=BmAtCv -M2
=BmAtCv -XSAT	6/2	2	016	BK	-W12 022.0162 4GAWG18	4MT		BK	016	V	6/2	=BmAtCv -M2
=BmAtCv -XSAT	6/2	3	017	GY	Collegamento aspir. trucioli			GY	017	W	6/2	=BmAtCv -M2
=BmAtCv -XSAT	6/3	4	PE	GNYE				GNYE	PE	PE	6/3	=BmAtCv -M2
=BmMep -R5	18/3	1	023	BN				BN	023	J3	18/3	AN2
=BmMep -R5	18/3	2	024	YE	-W21B 022.0141 4SHAWG20	4,5Mt		YE	024	J3	18/3	AN2
=BmMep -R5	18/3	3	025	WH	Cavo coll. potenziometro testa			WH	025	J3	18/4	AN2
				GN				GN				

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N.	PNF350	Impianto	PNF 350-2 S 240VAC
CAD	SPAC	Ordine	
Nome File	PNF350-2S\1.DWG	Commessa	
Data	25-09-2008	Denominazione	RIASSUNTIVO CAVI / CABLE SUMMARY
		Esecutore	Bartoli
		FOGLIO	25
		SEGUE	105

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-XSAT	022.0282 + 022.0261	Connettore volante ILME (CK03V + CKM03) 4 poli per evacuatore trucioli	'=BmAtCv	6	1
'-XPAT	022.0283 + 022.0262	Connettore volante ILME (CK03VG + CKF03) 4 poli per evacuatore trucioli	'=BmAtCv	6	1
'-M2	'055.0202	Aspirtore TURBO 2500 240.480.60	'=BmAtCv	6	1
'-GT1	'022.0180	Guaina termoretraibile 26mm	'=BmCv	22	0.15
'-GT2		Guaina termoretraibile 26mm	'=BmCv	23	0.30
'-GT3	'022.0181	Guaina termoretraibile 10mm	'=BmCv	23	0.35
'-GT5		Guaina termoretraibile 10mm	'=BmCv	23	0.35
'-GT4		Guaina termoretraibile 10mm	'=BmCv	23	0.35
'-RE2	'022.0211	Raccordo rapido dritto SEM PG13,5/Ø19	'=BmCv	22	1
'-RE3		Raccordo rapido dritto SEM PG13,5/Ø19	'=BmCv	22	1
'-RE1		Raccordo rapido dritto SEM PG13,5/Ø19	'=BmCv	22	1
'-PC1	'022.0234	Pressacordone 3246 nero PG13,5	'=BmCv	22	1
'-GH1	'022.0244	Dado grigio PG13,5	'=BmCv	22	1
'-GH2		Dado grigio PG13,5	'=BmCv	22	1
'-GH3		Dado grigio PG13,5	'=BmCv	22	1
'-CR1	'022.2602	Guaina POLIFLEX NW 14-1200143 (corrugato diam. 18)	'=BmCv	22	1.10
'-CR2		Guaina POLIFLEX NW 14-1200143 (corrugato diam. 18)	'=BmCv	22	1.60
'-FP1	V.d.G.B.	Vedi distinta Gruppo Basamento	'=BmCv	22	1
'-S14	V.d.P.	Vedi distinta pneumatica	'=BmCv	10	1
'-OLM	'090.1601	Gruppo lubrificazione munimale SHARK	'=BmLmCv	19	1
'-M1	'019.0881	Motore 3.5/4.8HP 2/4P B3 C100L V230.60 S6/60%	'=BmMep	5	1
'-R5	'022.0046	Potenziometro da 2K2 per testa	'=BmMep	18	1
'-RE4	'022.0211	Raccordo rapido dritto SEM PG13,5/Ø19	'=BmMep	23	1
'-GH4	'022.0244	Dado grigio PG13,5	'=BmMep	23	1
'-CR3	'022.2602	Guaina POLIFLEX NW 14-1200143 (corrugato diam. 18)	'=BmMep	23	0.50
'-OPE	'090.0672	Comando supplementare a pedaliera	'=BmPeMep	19	1
'-K32	V.d.P.	Vedi distinta pneumatica	'=PpCv	17	1
'-K30		Vedi distinta pneumatica	'=PpCv	17	1
'-K29		Vedi distinta pneumatica	'=PpCv	16	1
'-K4	'022.3002	Contattore DILM9-10 (24 V. 50.60 HZ) cod.276694	'=QgAtCv	19	1
'-OAT	'090.1601	Gruppo aspiratore trucioli	'=QgAtCv	19	1
'-QD1	'016.0723	Quadro comandi CB SX N.T.	'=QgCv	21	1
'-FS1	'019.5353	Fascetta in plastica 135x2,5	'=QgCv	21	50
'-T0	'022.0069	Trasformatore amperometrico 500/1A	'=QgCv	5	1
'-Q0	'022.0124	Custodia isolante E-PKZO-GR con manopola rossa	'=QgCv	4	1
'-Q0	'022.0125	Blocco luchettabile SBV-PKZO-E cod.35127	'=QgCv	4	1

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\1.DWG
Data 25-09-2008

Impianto: *PNF 350-2 S 240VAC*
Denominazione: DISTINTA MATERIALI
MATERIAL LIST

Ordine
Commessa
Esecutore: Bartoli

FOGLIO 26
SEGUE 105

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-Q0	'022.0126	Barretta per neutro N-PKZO cod. 82160	'=QgCv	4	1
'-FL1	'022.0171	Cordicella unipolare 1 X AWG20	'=QgCv	21	19.00
'-FL2	'022.0172	Cordicella unipolare 1xAWG16	'=QgCv	21	6.00
'-NM1	'022.0290	Etichetta segnafilo	'=QgCv	21	300
'-NM2		Etichetta segnafilo	'=QgCv	21	8
'-CC1	'022.0310	Terminale a occhiello Ø5 da AWG16 (Rosso)	'=QgCv	21	5
'-PT1	'022.0311	Terminale a puntale da AWG20 (Bianco)	'=QgCv	21	90
'-PT3	'022.0312	Terminale a puntale da AWG16 (Nero)	'=QgCv	21	42
'-XQGPE	'022.0377	Morsetto PE da 2.5 mm singolo per 2 fili a molla WK4 SLU	'=QgCv	4	1
'-S1	'022.0507	Finecorsa D4C-1902 2M ALIM. CNCFE	'=QgCv	10	1
'-K0	'022.0553	Sganciatore U-PKZO V.240.60	'=QgCv	4	1
'-UDY	'022.0758	Display MEP32 LCD 4x20	'=QgCv	12	1
'-BR1	'022.0900	Barra omega	'=QgCv	21	0.35
'-S3	'022.0937	Blocchetto NA M22-K10 cod. 216376	'=QgCv	10	1
'-S3		Blocchetto NA M22-K10 cod. 216376	'=QgCv	10	1
'-S3		Blocchetto NA M22-K10 cod. 216376	'=QgCv	10	1
'-SF1	'022.1133	Microfusibile T 1AMP. 250V	'=QgCv	21	1
'-S4	'022.1245	Emergenza M22-PVT cod.263467 + M22-A 216374 + M22-K01 216378	'=QgCv	11	1
'-Q0	'022.1288	Interuttore PKZM0-16 (termica) cod. 46938	'=QgCv	4	1
'-S3	'022.1406	Pulsante M22-D-Y cod. 216598 + M22-A cod 216374	'=QgCv	10	1
'-T1	'022.1651	Trasformatore 100VA V.230-400 S0.24 S0.19	'=QgCv	7	1
'-XQGPE	'022.2247	Morsetto PE da 2.5 mm singolo per 4 fili a molla WK4 D2/2 SLU	'=QgCv	7	1
'-XQG1	'022.2256	Morsetto da 2.5 mm singolo per 2 fili a molla 56.703.0055.0	'=QgCv	11	1
'-XQG1		Morsetto da 2.5 mm singolo per 2 fili a molla 56.703.0055.0	'=QgCv	11	1
'-XQG4		Morsetto da 2.5 mm singolo per 2 fili a molla 56.703.0055.0	'=QgCv	17	1
'-XQGFU	022.2256 + 022.1136 + 022.1136	Morsetto portafusibile a molla + N° 2 fusibili da 500V 5A	'=QgCv	7	1
'-XQGFU		Morsetto portafusibile a molla + N° 2 fusibili da 500V 5A	'=QgCv	7	1
'-XQGFU		Morsetto portafusibile a molla + N° 2 fusibili da 500V 5A	'=QgCv	7	1
'-XQGFU		Morsetto portafusibile a molla + N° 2 fusibili da 500V 5A	'=QgCv	7	1
'-XQG2	'022.2258	Morsetto da 2.5 mm singolo per 4 fili a molla 56.703.5155.0	'=QgCv	8	1
'-XQG4	'022.2288	Piastra di chiusura x morsetto a 4 fili 07.312.7155.0	'=QgCv		1
'-XQGPE	'022.2321	Barra da 15x15mm con 10 fori 6mm	'=QgCv	6	1
'-UPC	'022.2815	Controllore MEP 30/B con rele	'=QgCv	12	1
'-K1	'022.3004	Minicontattore 9 AMP. - DILEM-10 (24V.50.60 HZ) cod. 21417	'=QgCv	17	1
'-S50	'022.3054	Selettore 2 velocita 20A T0-5-70331 GB/E	'=QgCv	5	1
'-KRS	'022.3702	Scheda rele emergenza (8 rele)	'=QgCv	9	1

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N.	PNF350	Impianto	PNF 350-2 S 240VAC
CAD	SPAC		
Nome File	PNF350-2S\1.DWG	Denominazione	DISTINTA MATERIALI / MATERIAL LIST
Data	25-09-2008		

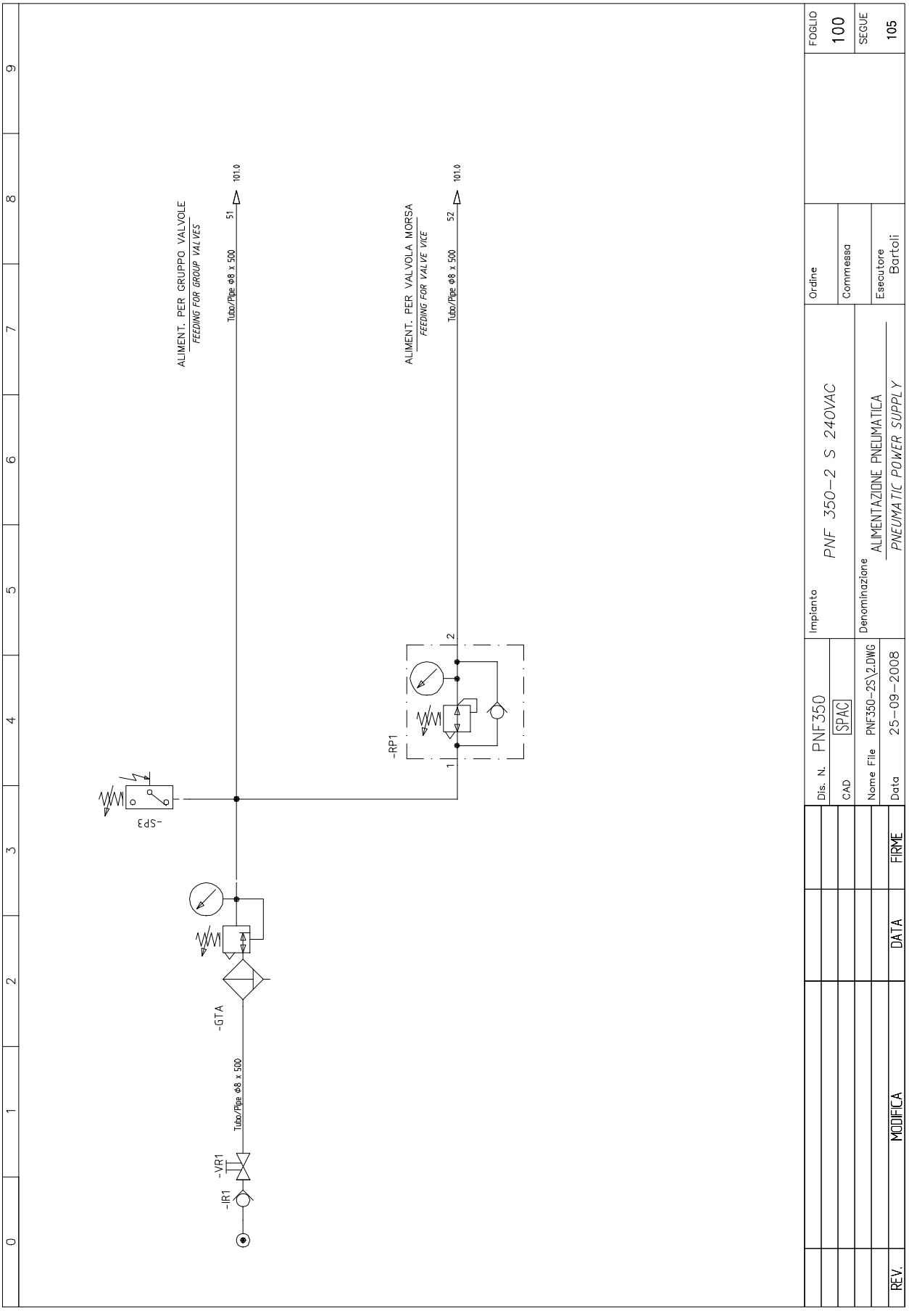
Ordine		FOGLIO 27
Commessa		
Esecutore	Bartoli	SEGUE 105

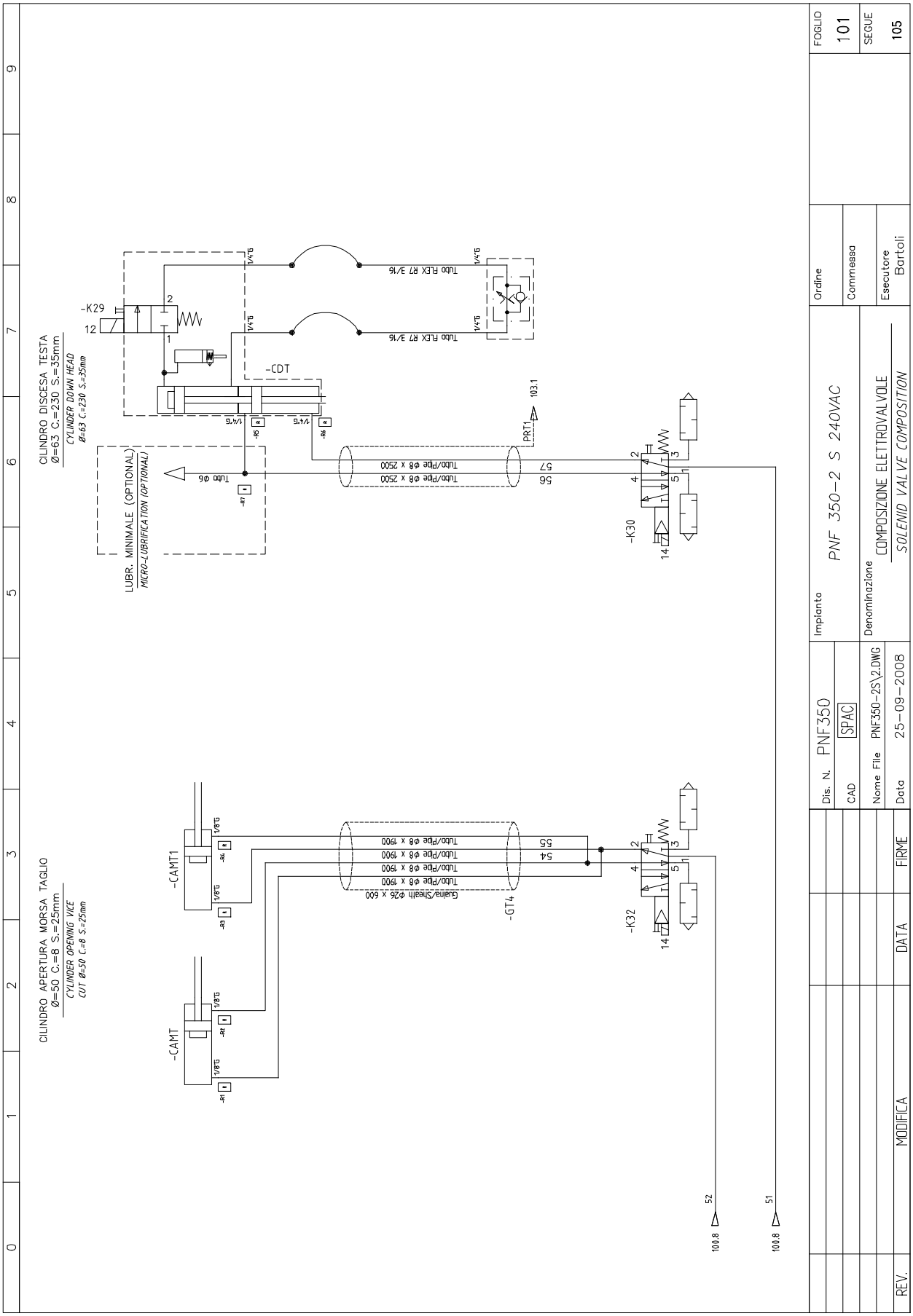
0	1	2	3	4	5	6	7	8	9

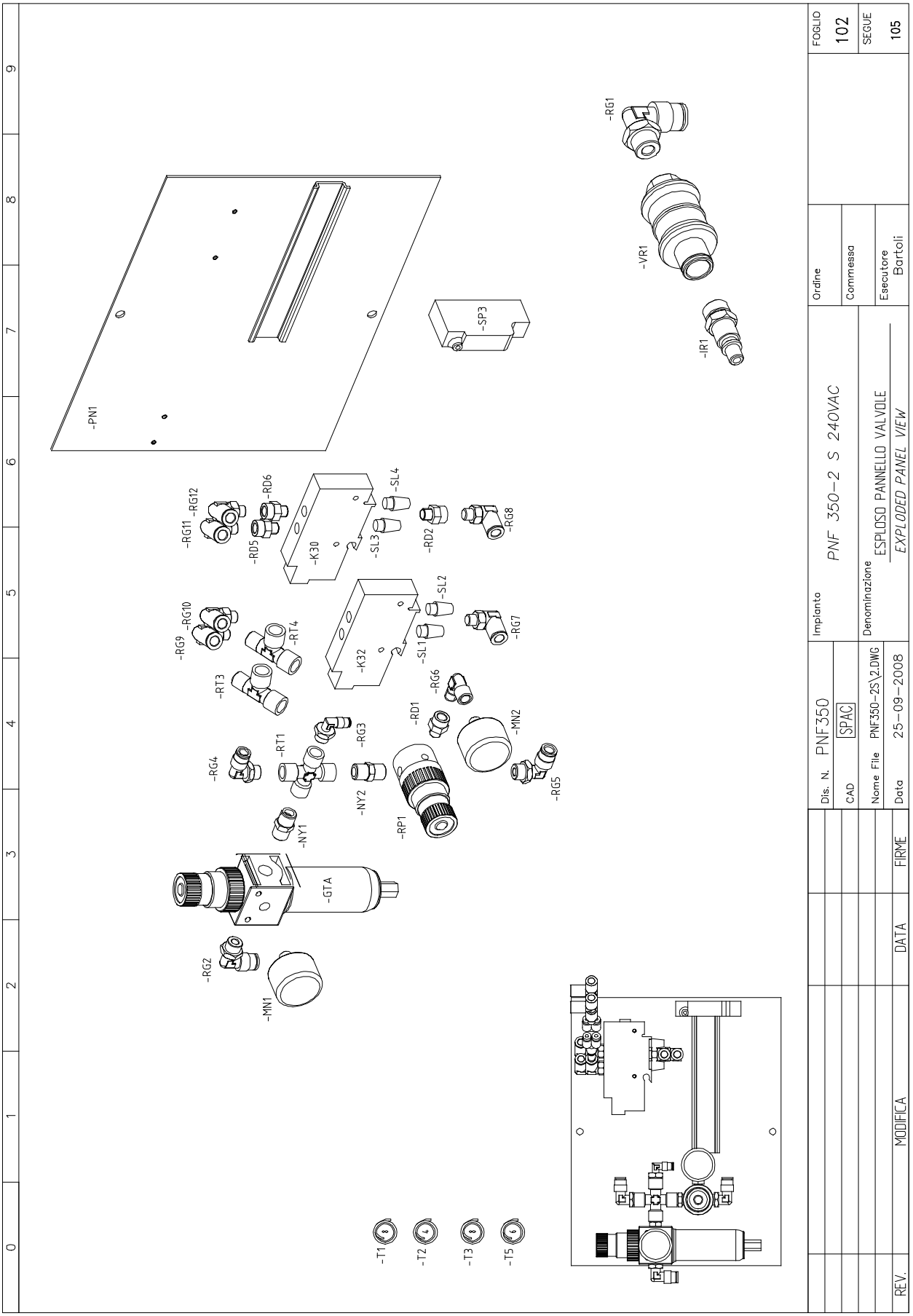
NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-TF2	'025.0604	Guarnizione aerstop	'=QgCv	21	0.42
'-UTA	'031.2018	Consolle di programmazione NC per quadro SX	'=QgCv	12	1
'-TF1	'031.2622	Targa sostituzione fusibili	'=QgCv	21	1
'-SF1	'047.0182	Sacchetto portafusibili	'=QgCv	21	1

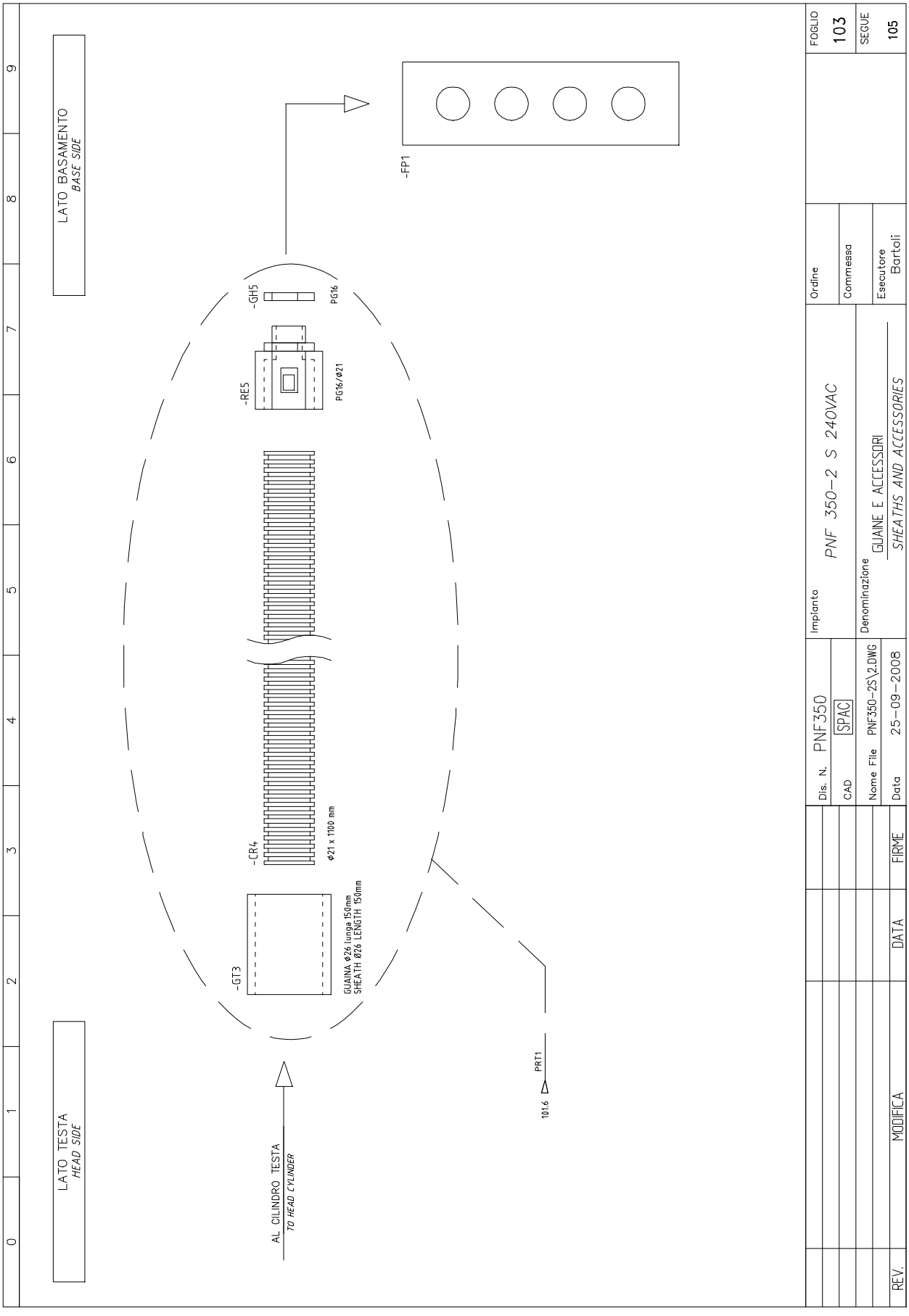
Tipo/Type	Formaz./Format.	Descrizione/Description	Lungh./Lenght
022.0141	4SHAWG20	Cavo schermato per tensionatore e potenziometro	8.00
022.0154	7GAWG16	Cavo 7xAWG16	5.00
022.0158	5GAWG16	Cavo 5xAWG16	5.50
022.0160	2xAWG20	Cavo 2xAWG20	7.00
022.0161	12xAWG20	Cavo 12xAWG16	4.50
022.0162	4GAWG18	Cavo 4xAWG18	4.00

				Dis. N. PNF350	Impianto PNF 350-2 S 240VAC	Ordine		FOGLIO 28
				CAD SPAC		Commessa		
				Nome File PNF350-2S\1.DWG	Denominazione DISTINTA MATERIALI			SEGUE 105
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Data 25-09-2008	MATERIAL LIST	Esecutore Bartoli		
REV.	MODIFICA	DATA	FIRME					


ALIMENT. PER GRUPPO VALVOLE
FEEDING FOR GROUP VALVES
Tubo/Pipe ø8 x 500
51
101.0
ALIMENT. PER VALVOLA MORSA
FEEDING FOR VALVE VICE
Tubo/Pipe ø8 x 500
52
101.0
-SP3
-RP1
-GTA
-VR1
-IR1
Tubo/Pipe ø8 x 500
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\2.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
ALIMENTAZIONE PNEUMATICA
PNEUMATIC POWER SUPPLY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 100
SEGUE 105
REV.
MODIFICA
DATA
FIRME


CILINDRO DISCESA TESTA
Ø=63 C.=230 S.=35mm
CYLINDER DOWN HEAD
Ø=63 C.=230 S.=35mm
CILINDRO APERTURA MORSA TAGLIO
Ø=50 C.=8 S.=25mm
CYLINDER OPENING VICE
CUT Ø=50 C.=8 S.=25mm
LUBR. MINIMALE (OPTIONAL)
MICRO-LUBRIFICATION (OPTIONAL)
-K29
-CDT
-CAMT
-CAMT1
-GT4
-K30
-K32
Tubo FLEX R7 3/16
Tubo/Pipe ø8 x 2500
Tubo/Pipe ø8 x 1900
Guaina/Sheath ø26 x 600
Tubo ø6
PRT1
103.1
100.8
Impianto
PNF 350-2 S 240VAC
Denominazione
COMPOSIZIONE ELETTROVALVOLE
SOLENID VALVE COMPOSITION
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\2.DWG
Data 25-09-2008
Ordine
Commessa
Esecutore Bartoli
FOGLIO 101
SEGUE 105
REV.
MODIFICA
DATA
FIRME


-PN1
-SP3
-VR1
-RG1
-IR1
-RG11
-RG12
-RD5
-RD6
-K30
-SL3
-SL4
-RD2
-RG8
-RG9
-RG10
-RT3
-RT4
-K32
-SL1
-SL2
-RG7
-RG6
-RD1
-MN2
-RG5
-RG4
-RT1
-RG3
-NY2
-RP1
-NY1
-GTA
-RG2
-MN1
-T1
-T2
-T3
-T5
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\2.DWG
Data 25-09-2008
Impianto
PNF 350-2 S 240VAC
Denominazione
ESPLOSO PANNELLO VALVOLE
EXPLODED PANEL VIEW
Ordine
Commessa
Esecutore Bartoli
FOGLIO 102
SEGUE 105
REV.
MODIFICA
DATA
FIRME


LATO BASAMENTO
BASE SIDE
LATO TESTA
HEAD SIDE
-FP1
-GH5
PG16
-RE5
PG16/Ø21
-CR4
Ø21 x 1100 mm
-GT3
GUAINA Ø26 lunga 150mm
SHEATH Ø26 LENGTH 150mm
AL CILINDRO TESTA
TO HEAD CYLINDER
PRT1
101.6
FOGLIO
103
SEGUE
105
Ordine
Commessa
Esecutore
Bartoli
Impianto
PNF 350-2 S 240VAC
Denominazione
GUAINE E ACCESSORI
SHEATHS AND ACCESSORIES
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\2.DWG
Data 25-09-2008
REV.
MODIFICA
DATA
FIRME

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-R7	'043.0210	Giunto a gomito Ø8mm CL 6550	'=BmLmMep	101	1
'-R7	'043.0215	Giunto a "T" Ø8mm	'=BmLmMep	101	1
'-R7	'043.0226	Riduzione M/F da tubo Ø8/Ø6mm	'=BmLmMep	101	1
'-T5	'043.0303	Tubo rilsan 6X4 NERO	'=BmLmMep	102	6,00
'-GT3	'022.0180	Guaina termoretraibile 26mm	'=BmMep	103	0.15
'-GT4	'022.0180	Guaina termoretraibile 26mm	'=BmMep	101	0.60
'-RE5	'022.0212	Raccordo rapido dritto SEM PG16/Ø21	'=BmMep	103	1
'-GH5	'022.0239	Dado nero PG16	'=BmMep	103	1
'-CR4	'022.2603	Guaina POLIFLEX NW 17-1200178 (corrugato diam. 21)	'=BmMep	103	1
'-R1	'043.0202	Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-R2		Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-R3		Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-R4		Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-RG1	'043.0204	Raccordo a gomito da 1/4"G a Ø8mm	'=BmMep	102	1
'-R5		Raccordo a gomito da 1/4"G a Ø8mm	'=BmMep	101	1
'-R6		Raccordo a gomito da 1/4"G a Ø8mm	'=BmMep	101	1
'-RT3	'043.0215	Giunto a "T" Ø8mm	'=BmMep	102	1
'-RT4		Giunto a "T" Ø8mm	'=BmMep	102	1
'-IR1	'043.0294	Innesto rapido ghiotto 1/4"G PB12	'=BmMep	100	1
'-T3	'043.0301	Tubo rilsan 8X6 NERO COD.17257181	'=BmMep	102	17,00
'-VR1	'043.0601	Valvola VMS 114-1/4 08	'=BmMep	100	1
'-PN1	'016.1190	Pannello pneumatico TI-CB-SX-NC con barra omega	'=PpCv	102	1
'-SP3	'043.0143	Pressostato pneumatico montag. barra PS1P1091 Parker	'=PpCv	100	1
'-RG3	'043.0198	Raccordo a gomito da 1/4"G a Ø4mm	'=PpCv	102	1
'-RG2	'043.0204	Raccordo a gomito da 1/4"G a Ø8mm	'=PpCv	102	1
'-RG4		Raccordo a gomito da 1/4"G a Ø8mm	'=PpCv	102	1
'-RG5		Raccordo a gomito da 1/4"G a Ø8mm	'=PpCv	102	1
'-RG7	'043.0208	Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG8		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG9		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG10		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG11		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG12		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RT1	'043.0222	Raccordo a croce CL2033 da 1/4"G	'=PpCv	102	1
'-RD1	'043.0231	Riduzione diritta M/F da 1/8"G	'=PpCv	102	1

REV.	MODIFICA	DATA	FIRME

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\2.DWG
Data 25-09-2008

Impianto: *PNF 350-2 S 240VAC*
Denominazione: DISTINTA MATERIALE PNEUMATICO / *PNEUMATIC MATERIAL LIST*

Ordine
Commessa
Esecutore: Bartoli

FOGLIO 104
SEGUE 105

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-RD2		Riduzione diritta M/F da 1/8"G	'=PpCv	102	1
'-RD5		Riduzione diritta M/F da 1/8"G	'=PpCv	102	1
'-RD6		Riduzione diritta M/F da 1/8"G	'=PpCv	102	1
'-RG6	'043.0251	Riduzione gomito M/F da 1/8"G	'=PpCv	102	1
'-NY1	'043.0275	Nipplo da 1/4"G	'=PpCv	102	1
'-NY2		Nipplo da 1/4"G	'=PpCv	102	1
'-T1	'043.0301	Tubo rilsan 8X6 NERO COD.17257181	'=PpCv	102	1,50
'-T2	'043.0302	Tubo rilsan 4X2.7 NERO C.17257162	'=PpCv	102	0,50
'-SL1	'043.0473	Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-SL2		Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-SL3		Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-SL4		Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-MN1	'043.0552	Manometro Ø40 con attacco assiale da 1/8"G	'=PpCv	102	1
'-MN2		Manometro Ø40 con attacco assiale da 1/8"G	'=PpCv	102	1
'-GTA	'043.0564	Regolatore di pressione da 1/4"G FR042	'=PpCv	100	1
'-RP1	'043.0580	Regolatore di pressione da 1/4"G MR038	'=PpCv	100	1
'-K32	043.0608 + 022.586	Elettrovalvola pneumatica montaggio singolo 5/2 da 1/8 PVLB111618 PARKER + bobina 24VAC	'=PpCv	101	1
'-K30		Elettrovalvola pneumatica montaggio singolo 5/2 da 1/8 PVLB111618 PARKER + bobina 24VAC	'=PpCv	101	1

REV.	MODIFICA	DATA	FIRME

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S\2.DWG
Data 25-09-2008

Impianto
PNF 350-2 S 240VAC

Denominazione
DISTINTA MATERIALE PNEUMATICO
PNEUMATIC MATERIAL LIST

Ordine
Commessa
Esecutore
Bartoli

FOGLIO
105
SEGUE
105

0	1	2	3	4	5	6	7	8	9

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisione \ Revision 0	1	2	3	4	5	6	7	8	9
1	INDICE CONTENUTI										
	CONTENT INDEX										
2	INDICE CONTENUTI										
	CONTENT INDEX										
3	LEGENDA SIMBOLI										
	SYMBOL KEY										
4	ALIMENTAZIONE										
	POWER SUPPLY										
5	ALIMENTAZIONE MOTORI 380V										
	MOTOR POWER SUPPLY 380 V										
6	ALIMENTAZIONE MOTORI 380V										
	MOTOR POWER SUPPLY 380 V										
7	ALIMENTAZIONE TRASFORMATORI										
	TRANSFORMER POWER SUPPLY										
8	ALIMENTAZIONE AUSILIARI										
	AUXILIARY CIRCUIT POWER SUPPLY										
9	RELE SICUREZZA										
	SAFETY RELAY										
10	RELE SICUREZZA INGRESSI										
	INPUT SAFETY RELAY										
11	RELE SICUREZZA USCITE										
	OUTPUT SAFETY RELAY										
12	MEP30										
	MEP30										
13	LISTA INPUT/OUTPUT										
	INPUT/OUTPUT LIST										

Foglio Sheet	Descrizione Description	Revisione \ Revision 0	1	2	3	4	5	6	7	8	9
14	INGRESSI MEP30										
	INPUT MEP30										
15	INGRESSI MEP30										
	INPUT MEP30										
16	USCITE MEP30										
	OUTPUT MEP30										
17	USCITE MEP30										
	OUTPUT MEP30										
18	INGRESSI ANALOGICI MEP30										
	ANALOGIC INPUT MEP30										
19	OPTIONAL										
	OPTIONAL										
20	MORSETTIERA QUADRO										
	PANEL TERMINAL BOARD										
21	INTERNO QUADRO										
	BOARD INSIDE										
22	GUAINE E ACCESSORI										
	SHEATHS AND ACCESSORIES										
23	GUAINE E ACCESSORI										
	SHEATHS AND ACCESSORIES										
24	RIASSUNTIVO CAVI										
	CABLE SUMMARY										
25	RIASSUNTIVO CAVI										
	CABLE SUMMARY										
26	DISTINTA MATERIALI										
	MATERIAL LIST										

Note :

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008

Impianto
PNF 350-2 S 480VAC

Denominazione
INDICE CONTENUTI
CONTENT INDEX

Ordine
Commessa
Esecutore
Bartoli

FOGLIO 1
SEGUE 105

0	1	2	3	4	5	6	7	8	9

LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Revisione \ Revision 0	1	2	3	4	5	6	7	8	9	Foglio Sheet	Descrizione Description	Revisione \ Revision 0	1	2	3	4	5	6	7	8	9
27	DISTINTA MATERIALI																						
	MATERIAL LIST																						
28	DISTINTA MATERIALI																						
	MATERIAL LIST																						
100	ALIMENTAZIONE PNEUMATICA																						
	PNEUMATIC POWER SUPPLY																						
101	COMPOSIZIONE ELETTROVALVOLE																						
	SOLENID VALVE COMPOSITION																						
102	ESPLOSO PANNELLO VALVOLE																						
	EXPLODED PANEL VIEW																						
103	GUAINE E ACCESSORI																						
	SHEATHS AND ACCESSORIES																						
104	DISTINTA MATERIALE PNEUMATICO																						
	PNEUMATIC MATERIAL LIST																						
105	DISTINTA MATERIALE PNEUMATICO																						
	PNEUMATIC MATERIAL LIST																						

Note :

				Dis. N. PNF350	Impianto PNF 350-2 S 480VAC	Ordine	FOGLIO 2
				CAD SPAC		Commessa	
				Nome File PNF350-2S-480\1.DWG	Denominazione INDICE CONTENUTI	Esecutore Bartoli	SEGUE 105
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Data 29-09-2008	CONTENT INDEX		
REV.	MODIFICA	DATA	FIRME				

Sim.\Sym.	File	Descrizione\Description
	M2	Motore a induzione trifase *THEREE-PHASE INDUCTION MOTOR*
	Q1360	Int. automatico magnetotermico sezionatore tripolare *THEREE-PHASE AUTOMATIC SWITCH*
	R6	Potenziometro *POTENTIOMETER*
	R60	Potenziometro *POTENTIOMETER*
	S2	Comando a Pulsante NO *PUSH BUTTON NO*
	S4C	Pulsante di emergenza NC *EMERGENCY BUTTON NC*
	S5	Comando rotativo a due posizioni NO *SELECTOR TWO POSITION NO*
	S7	Comando a pedale NO *CONTROL PEDAL NO*
	S8	Comandato dalla pressione (pressostato) NO *PRESSURE SWITCH NO*
	S15C	Comandato dal livello di un fluido (livellostato) NC *WATER GAUGE NC*
	S24C	Pulsante di emergenza a posizione stabile NC *EMERGENCY PUSH BUTTON NC*

Sim.\Sym.	File	Descrizione\Description
	T1	Trasformatore di corrente *CURRENT TRANSFORMER*
	Y1	Elettrovalvola aperta (in chiusura) *SOLENOID VALVE*
	KA1	Bobina rele' Aux *AUXILIARY RELAY COIL*
	KM1	Bobina contattore *CONTACTOR COIL*
	BLK26	Connettore EV *S.V. CONNECTOR*
	BLK41	Raccordo SX *CONNECTOR SX*
	BLK42	Raccordo DX *CONNECTOR DX*
	BLK43	Tubo corrugato *CORRUGATED PIPE*
	BLK44	Riduzione PG *PG ADAPTER*
	BLK51	Dado PG *PG NUT*
	BLK49	Pressa-cordone PG *PG FLEXIBLE CORD STOP*

Sim.\Sym.	File	Descrizione\Description
	BLK50	Guaina termorestringente Ø26mm *SHEATH Ø26mm*
	BLK57	Guaina termorestringente Ø10mm *SHEATH Ø10mm*
	BLK55	Flangia di passaggio *LOOSE FLANGE*
	BLK56	Terminale a puntale *TERMINAL*
	BLK57	Filo unipolare *WIRE*
	BLK58	Fascette plastiche di fissaggio *PLASTIC CLAMP*
	BLK60	Terminale a occhiello *TERMINAL*
	BLK66	Sacchetto portafusibile *BAG FUSE*

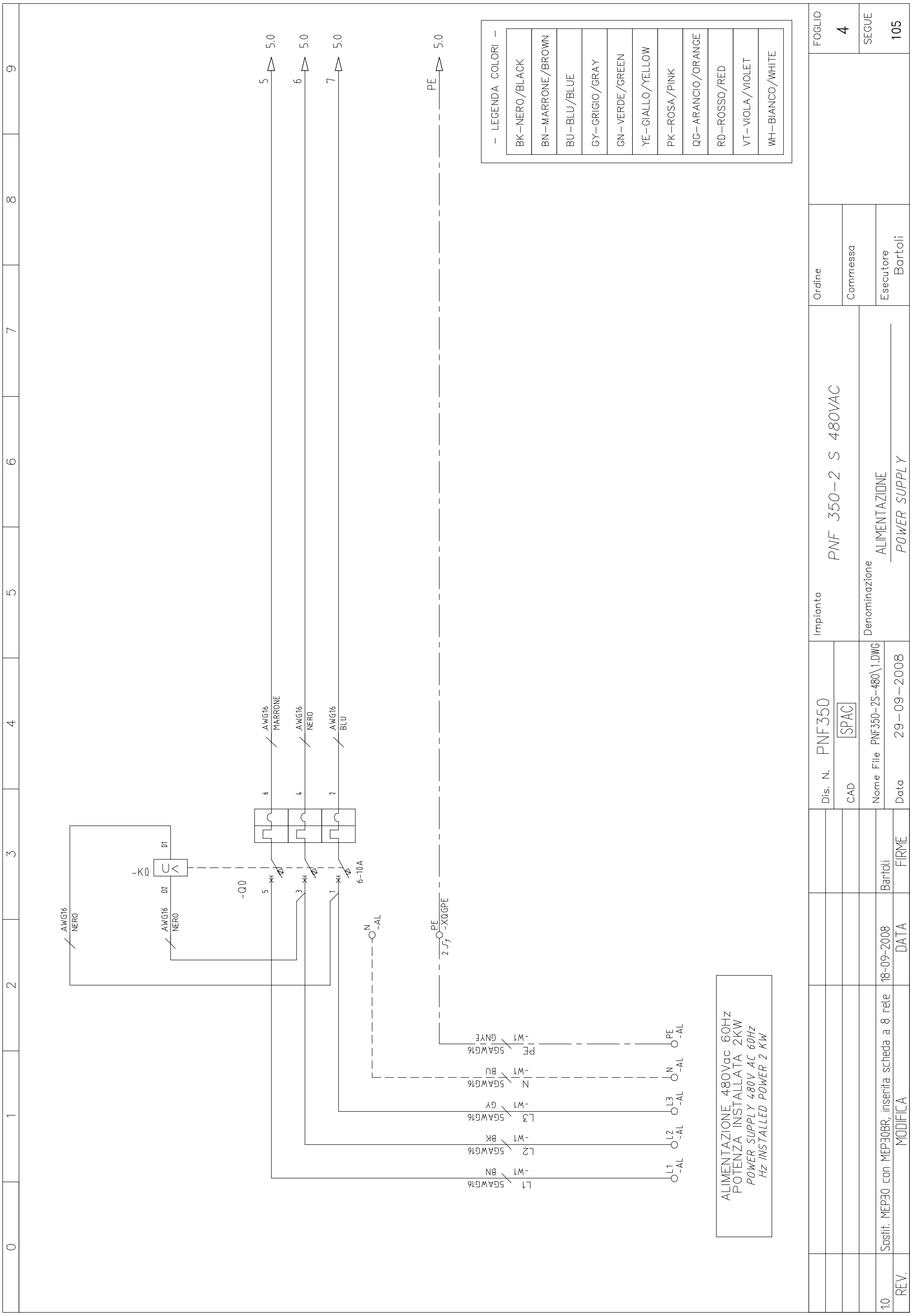
REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

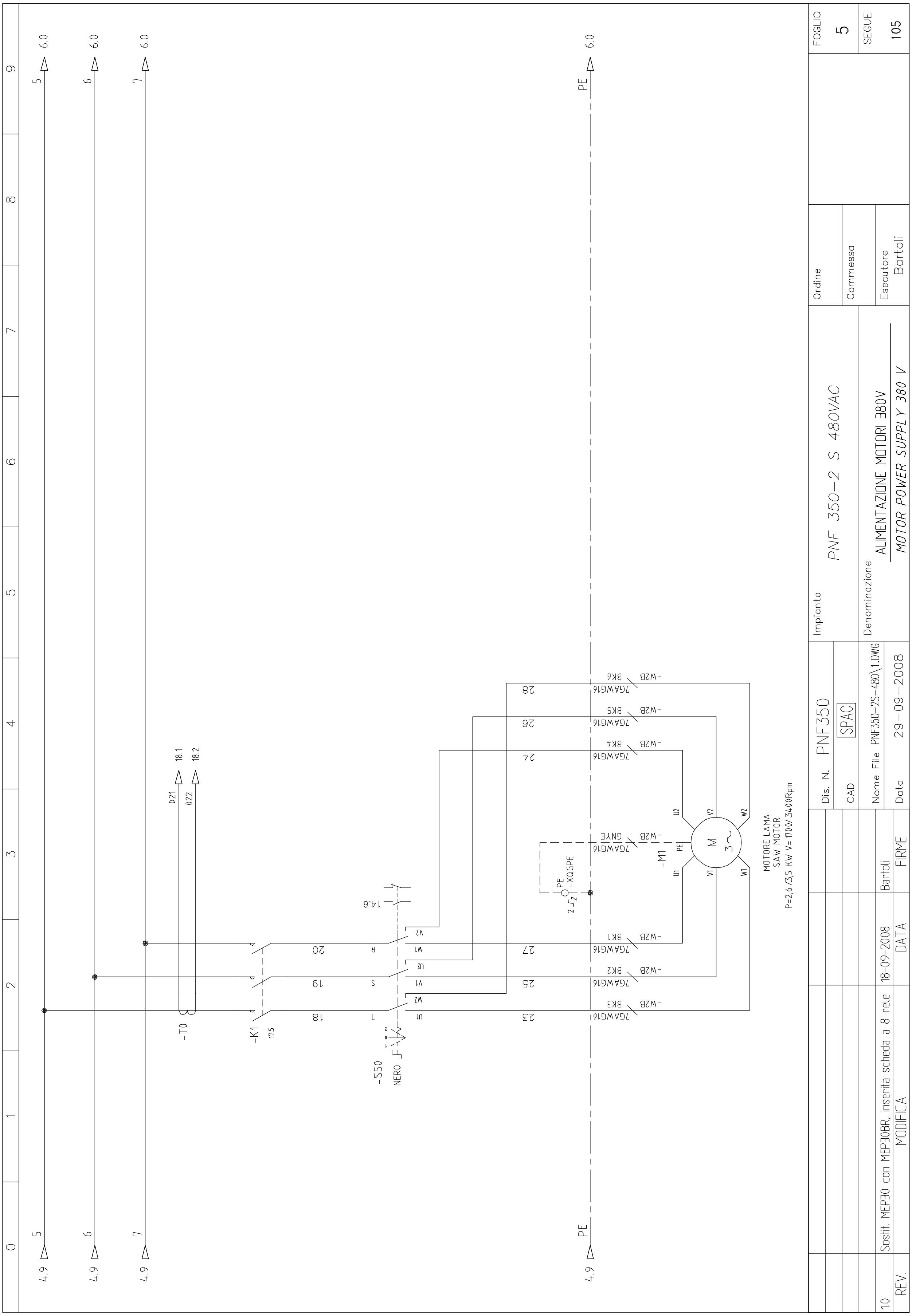
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008

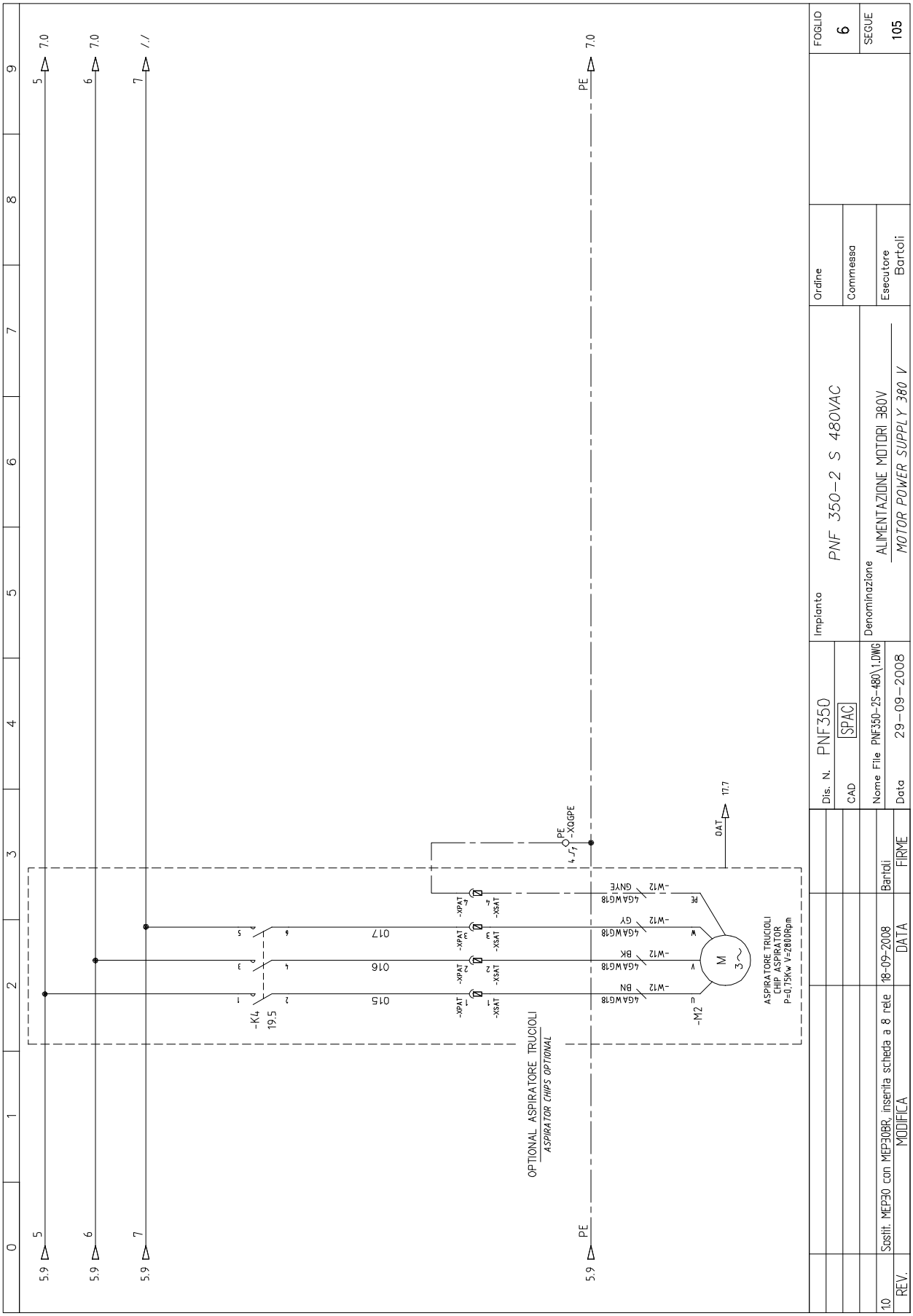
Impianto: *PNF 350-2 S 480VAC*
Denominazione: LEGENDA SIMBOLI
SYMBOL KEY

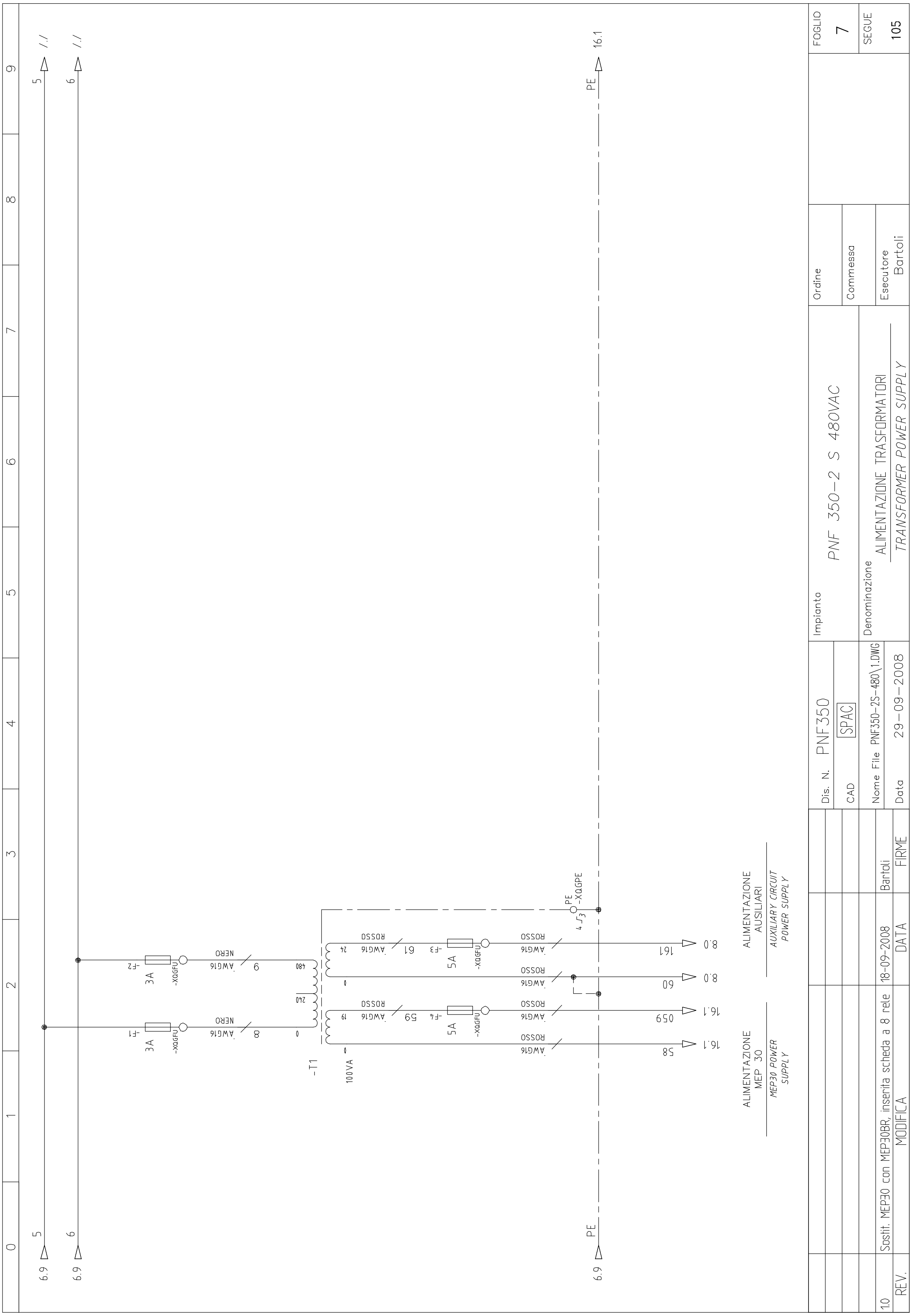
Ordine
Commessa
Esecutore: Bartoli

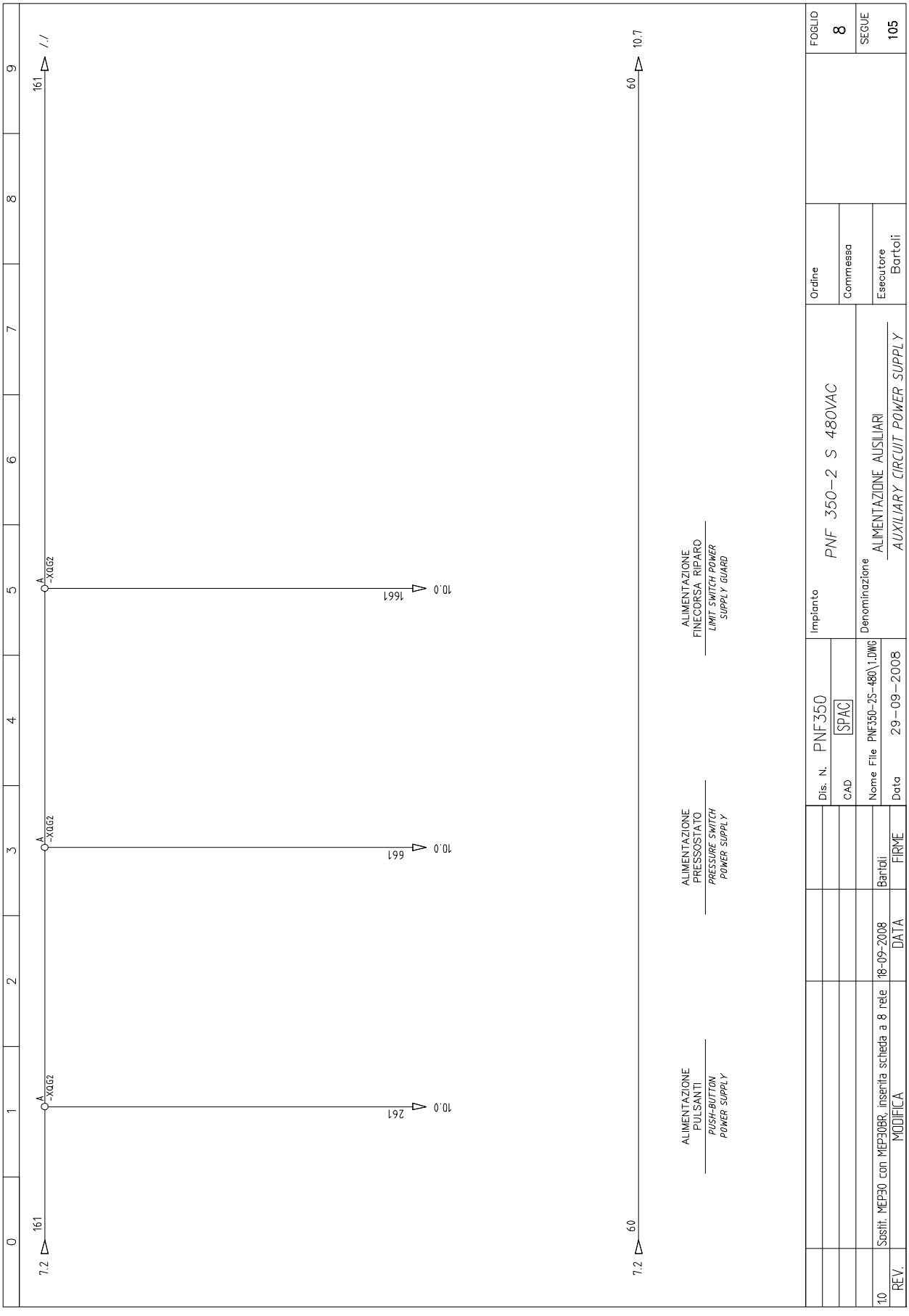
FOGLIO 3
SEGUE 105


ALIMENTAZIONE 480Vac 60Hz
POTENZA INSTALLATA 2KW
POWER SUPPLY 480V AC 60Hz
Hz INSTALLED POWER 2 KW
- LEGENDA COLORI -
BK-NERO/BLACK
BN-MARRONE/BROWN
BU-BLU/BLUE
GY-GRIGIO/GRAY
GN-VERDE/GREEN
YE-GIALLO/YELLOW
PK-ROSA/PINK
OG-ARANCIO/ORANGE
RD-ROSSO/RED
VT-VIOLA/VIOLET
WH-BIANCO/WHITE
-K0
-Q0
6-10A
-XQGPE
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Impianto PNF 350-2 S 480VAC
Denominazione ALIMENTAZIONE POWER SUPPLY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 4
SEGUE 105
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 relè 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME


MOTORE LAMA
SAW MOTOR
P=2,6/3,5 KW V= 1700/3400Rpm
FOGLIO
5
SEGUE
105
Ordine
Commessa
Esecutore
Bartoli
Impianto
PNF 350-2 S 480VAC
Denominazione
ALIMENTAZIONE MOTORI 380V
MOTOR POWER SUPPLY 380 V
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 relè
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME

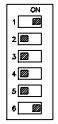

OPTIONAL ASPIRATORE TRUCIOLI
ASPIRATOR CHIPS OPTIONAL
ASPIRATORE TRUCIOLI
CHIP ASPIRATOR
P=0,75Kw V=2800Rpm
-K4
19.5
-M2
-XQGPE
-XPAT
-XSAT
-W12
4GAWG18
PNF 350-2 S 480VAC
ALIMENTAZIONE MOTORI 380V
MOTOR POWER SUPPLY 380 V
PNF350
SPAC
PNF350-2S-480\1.DWG
29-09-2008
Bartoli
18-09-2008
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
MODIFICA
FOGLIO 6
SEGUE 105


ALIMENTAZIONE MEP 30
MEP30 POWER SUPPLY
ALIMENTAZIONE AUSILIARI
AUXILIARY CIRCUIT POWER SUPPLY
-T1
100VA
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Impianto
PNF 350-2 S 480VAC
Denominazione
ALIMENTAZIONE TRASFORMATORI
TRANSFORMER POWER SUPPLY
Ordine
Commessa
Esecutore
Bartoli
FOGLIO
7
SEGUE
105
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME

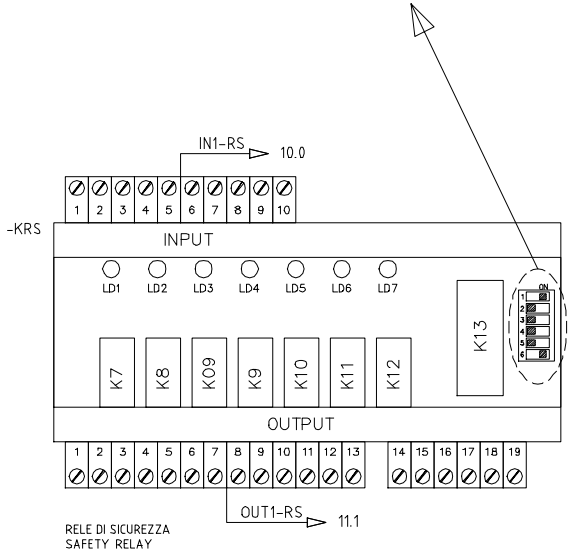

0 1 2 3 4 5 6 7 8 9
7.2
161
-XQG2
261
10.0
-XQG2
661
10.0
-XQG2
1661
10.0
ALIMENTAZIONE PULSANTI
PUSH-BUTTON POWER SUPPLY
ALIMENTAZIONE PRESSOSTATO
PRESSURE SWITCH POWER SUPPLY
ALIMENTAZIONE FINECORSA RIPARO
LIMIT SWITCH POWER SUPPLY GUARD
7.2
60
10.7
Dis. N. PNF350
CAD SPAC
Impianto
PNF 350-2 S 480VAC
Denominazione
ALIMENTAZIONE AUSILIARI
AUXILIARY CIRCUIT POWER SUPPLY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 8
SEGUE 105
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
10 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME

0	1	2	3	4	5	6	7	8	9

PNF350−2S



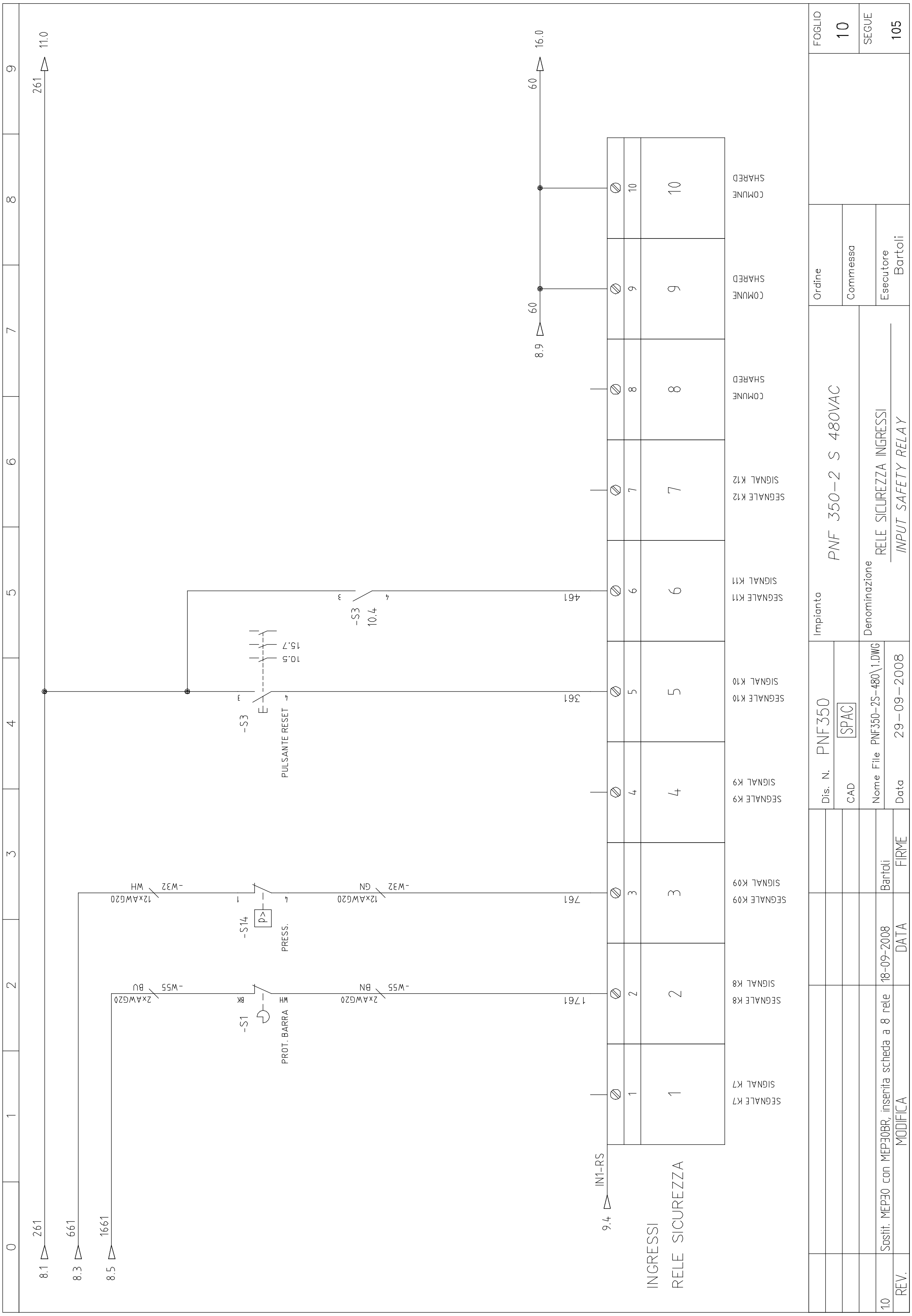
LEGENDA FUNZIONI RELE *RELAY FUNCTION KEY*	
K7 (LD1) =	SCORTA *SPARE*
K8 (LD2) =	PROTEZIONE MACCHINA *MACHINE PROTECTION*
K09 (LD3) =	PRESENZA ARIA *AIR PRESENCE*
K9 (LD4) =	SCORTA *SPARE*
K10 (LD5) =	EMERGENZA AUX 1 *AUX 1 EMERGENCY*
K11 (LD6) =	EMERGENZA AUX 2 *AUX 2 EMERGENCY*
K12 (LD7) =	EMERGENZA *EMERGENCY*
K012 (LD7) =	EMERGENZA (ABIL. AZIONAMENTI) *EMERGENCY (DRIVE ENABL.)*

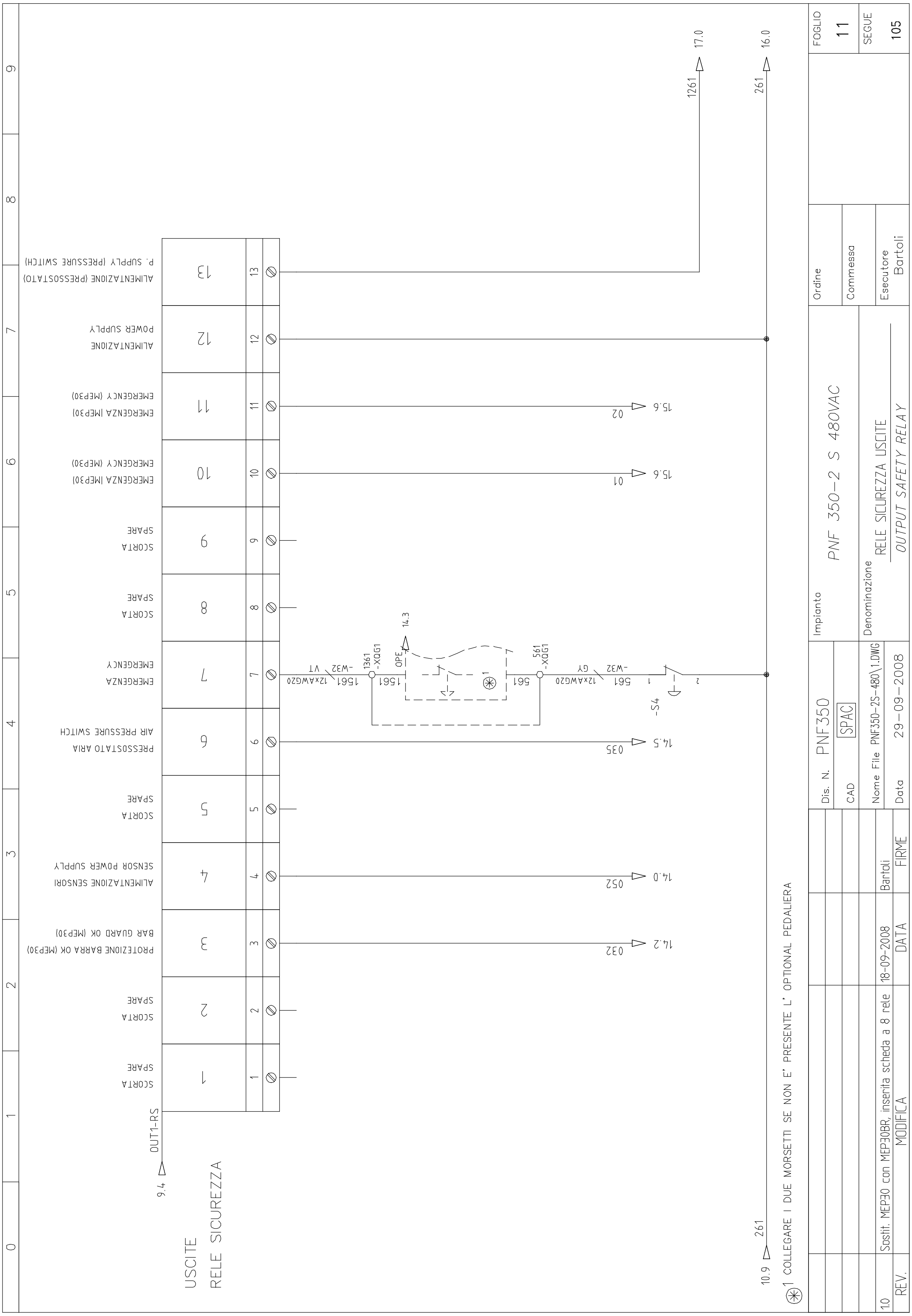


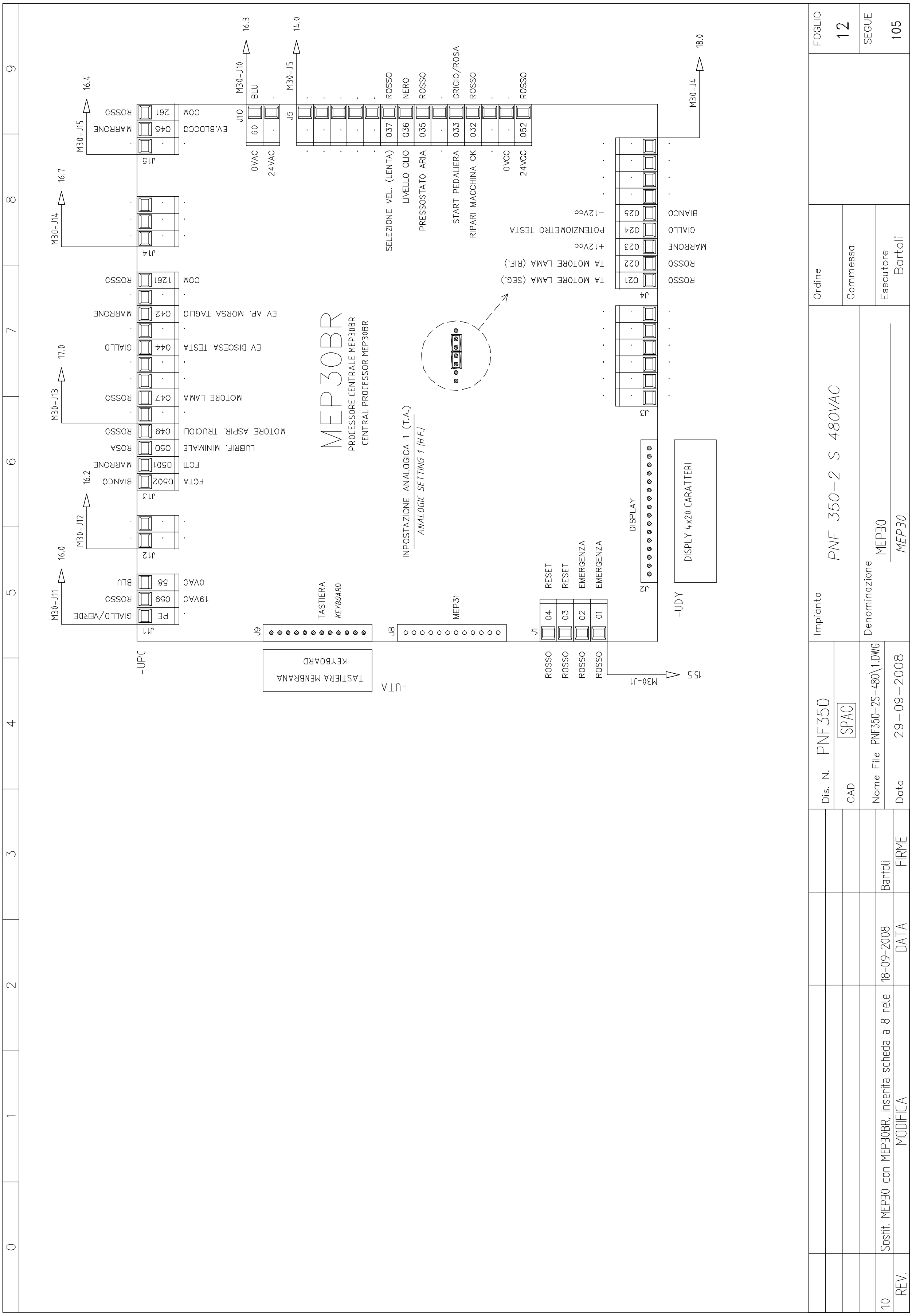
CONTROLLARE LA DISPOSIZIONE DEGLI SWITCH IN FUNZIONE DELLA MACCHINA
CHECK THE SWITCH ARRANGEMENT ACCORDING TO THE MACHINE VERSION

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N.	PNF350	Impianto	PNF 350−2 S 480VAC
CAD	SPAC	Ordine	
Nome File	PNF350-2S-480\1.DWG	Commessa	
Data	29−09−2008	Denominazione	RELE SICUREZZA *SAFETY RELAY*
		Esecutore	Bartoli
		FOGLIO	9
		SEGUE	105


INGRESSI
RELE SICUREZZA
IN1-RS
SEGNALE K7
SIGNAL K7
SEGNALE K8
SIGNAL K8
SEGNALE K09
SIGNAL K09
SEGNALE K9
SIGNAL K9
SEGNALE K10
SIGNAL K10
SEGNALE K11
SIGNAL K11
SEGNALE K12
SIGNAL K12
COMUNE
SHARED
PROT. BARRA
PRESS.
PULSANTE RESET
-S1
-S14
-S3
-W55
-W32
2xAWG20
12xAWG20
Impianto
PNF 350-2 S 480VAC
Denominazione
RELE SICUREZZA INGRESSI
INPUT SAFETY RELAY
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Ordine
Commessa
Esecutore
Bartoli
FOGLIO
10
SEGUE
105
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME


USCITE
RELE SICUREZZA
OUT1-RS
SCORTA
SPARE
PROTEZIONE BARRA OK (MEP30)
BAR GUARD OK (MEP30)
ALIMENTAZIONE SENSORI
SENSOR POWER SUPPLY
PRESSOSTATO ARIA
AIR PRESSURE SWITCH
EMERGENZA
EMERGENCY
EMERGENZA (MEP30)
EMERGENCY (MEP30)
ALIMENTAZIONE
POWER SUPPLY
ALIMENTAZIONE (PRESSOSTATO)
P. SUPPLY (PRESSURE SWITCH)
1 COLLEGARE I DUE MORSETTI SE NON E' PRESENTE L' OPTIONAL PEDALIERA
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Impianto PNF 350-2 S 480VAC
Denominazione RELE SICUREZZA USCITE
OUTPUT SAFETY RELAY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 11
SEGUE 105
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME


MEP30BR
PROCESSORE CENTRALE MEP30BR
CENTRAL PROCESSOR MEP30BR
INPOSTAZIONE ANALOGICA 1 (T.A.)
ANALOGIC SETTING 1 (H.F.)
TASTIERA MENBRANA
KEYBOARD
DISPLAY
DISPLY 4x20 CARATTERI
MOTORE LAMA
EV DISCESA TESTA
EV AP. MORSA TAGLIO
MOTORE ASPIR. TRUCIOLI
LUBRIF. MINIMALE
EV.BLOCCO
SELEZIONE VEL. (LENTA)
LIVELLO OLIO
PRESSOSTATO ARIA
START PEDALIERA
RIPARI MACCHINA OK
TA MOTORE LAMA (SEG.)
TA MOTORE LAMA (RIF.)
POTENZIOMETRO TESTA
RESET
EMERGENZA
-UPC
-UTA
-UDY
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Impianto PNF 350-2 S 480VAC
Denominazione MEP30
Esecutore Bartoli
FOGLIO 12
SEGUE 105
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME

CONNETTORI MEP30

J1 4PIN — EMERGENZA/RESET / *EMERGENCY/RESET*

01	ROSSO / *RED*	EMERGENZA / *EMERGENCY*
02	ROSSO / *RED*	EMERGENZA / *EMERGENCY*
03	ROSSO / *RED*	RESET / *RESET*
04	ROSSO / *RED*	RESET / *RESET*

J2 16PIN — DISPLAY / *DISPLAY*

J4 9PIN — INGRESSI ANALOGICI / *ANALOG INPUT*

021	ROSSO / *RED*	TA MOTORE LAMA (SEG.) / *BLADE MOTOR HF (SEG.)*
022	ROSSO / *RED*	TA MOTORE LAMA (RIF.) / *BLADE MOTOR HF (RIF.)*
023	MARRONE / *BROWN*	ALIMENTAZIONE POT.(+12V) / *POT. POWER SUPPLY (+ 12 V)*
024	GIALLO / *YELLOW*	POTENZIOMETRO TESTA / *HEAD POTENTIOMETER*
025	BIANCO / *WHITE*	ALIMENTAZIONE POT. (0V) / *POT. POWER SUPPLY (0 V)*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J5 14PIN — INGRESSI DIGITALI MEP 30 / *MEP 30 DIGITAL INPUTS*

052	ROSSO / *RED*	24VCC / *24 VCC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
032	ROSSO / *RED*	RIPARI MACCHINA OK / *BAR GUARD OK*
033	GRIGIO/ROSA / *GREY/PINK*	START DA PEDALIERA / *START BY PEDAL CONTROL*
//	NC / *NC*	NC / *NC*
035	ROSSO / *RED*	PRESSOSTATO ARIA / *AIR PRESSURE SWITCH*
036	NERO / *BLACK*	LIVELLO OLIO / *OIL LEVEL*
037	ROSSO / *RED*	SELEZ. VELOCITA / *SPEED SELECTION*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J8 12PIN — MEP 31 / *MEP31*

J9 12PIN — TASTIERA / *KEYBOARD*

J10 2PIN — ALIMENTAZIONE USCITE / *OUTPUT POWER SUPPLY*

.	NC / *NC*	NC / *NC*
60	BLU / *BLUE*	0VAC / *0VAC*

J11 3PIN — ALIMENTAZIONE MEP30 / *POWER SUPPLY MEP30*

58	BLU / *BLUE*	0VAC / *0VAC*
059	ROSSO / *RED*	19VAC / *19VAC*
//	GIALLO/VERDE / *YELLOW/GREEN*	PE / *PE*

J12 2PIN — MARCIA INVERTER / *INVERTER RUN*

//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J13 13PIN — USCITE DIGITALI C4–CF / *C4-CF DIGITAL OUTPUTS*

1261	ROSSO / *RED*	COMUNE USCITE C4–CF / *COMMON OUTPUT C4-CF*
//	NC / *NC*	NC / *NC*
042	MARRONE / *BROWN*	EV. APERT. MORSA TAGLIO / *CUTTING VICE OPENING SV*
//	NC / *NC*	NC / *NC*
044	GIALLO / *YELLOW*	EV DISCESA TESTA / *HEAD LOWERING SV*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
047	ROSSO / *RED*	MOTORE LAMA / *SAW MOTOR*
//	NC / *NC*	NC / *NC*
049	ROSSO / *RED*	MOTORE POMPA / *PUMP MOTOR*
050	ROSA / *PINK*	EV. LUBRIF. MINIMALE / *SPRAY MIST SYSTEM S.V.*
0501	MARRONE / *BROWN*	FCTI / *RHLS*
0502	BIANCO / *WHITE*	FCTA / *FHLS*

J14 3PIN — USCITE DIGITALI C2–C3 / *C2-C3 DIGITAL OUTPUTS*

//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*
//	NC / *NC*	NC / *NC*

J15 3PIN — USCITE DIGITALI C0–C1 / *C0-C1 DIGITAL OUTPUTS*

261	ROSSO / *RED*	COMUNE USCITE C0–C1 / *COMMON OUTPUT C0-C1*
045	MARRONE / *BROWN*	EV. BLOCCO CILINDRO / *STOP CILINDER S.V.*
//	NC / *NC*	NC / *NC*

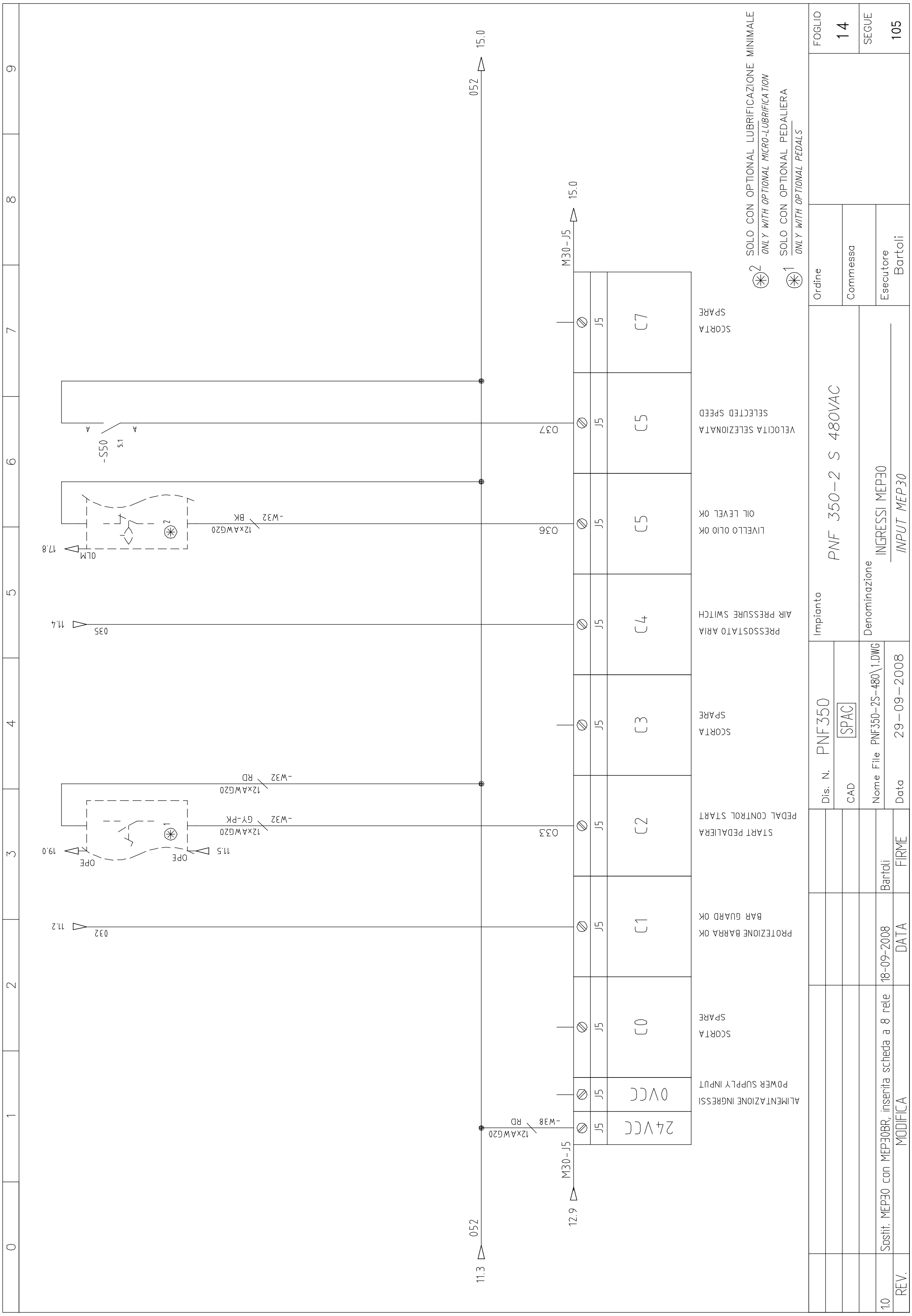
REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

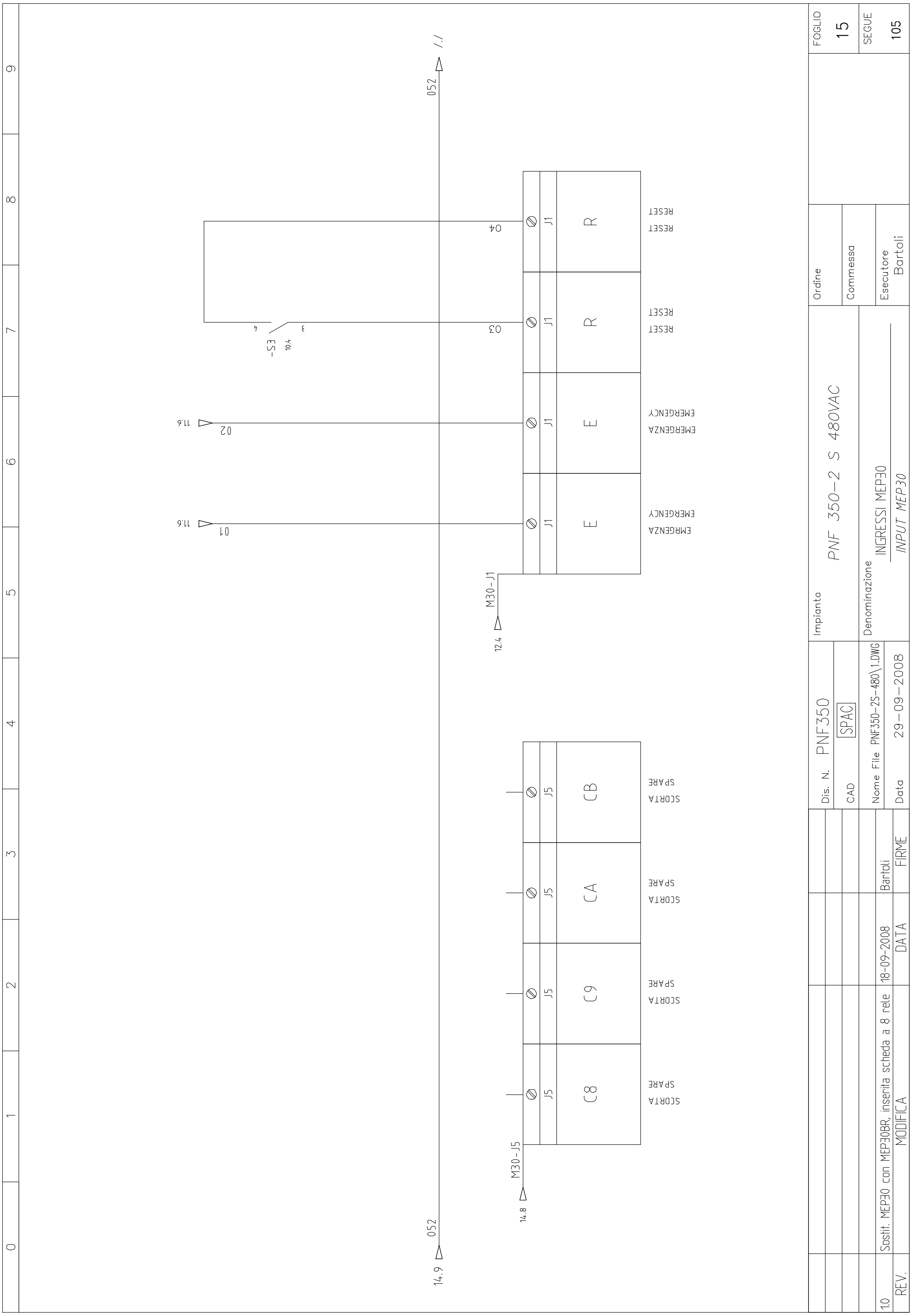
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008

Impianto: *PNF 350-2 S 480VAC*
Denominazione: LISTA INPUT/OUTPUT / *INPUT/OUTPUT LIST*

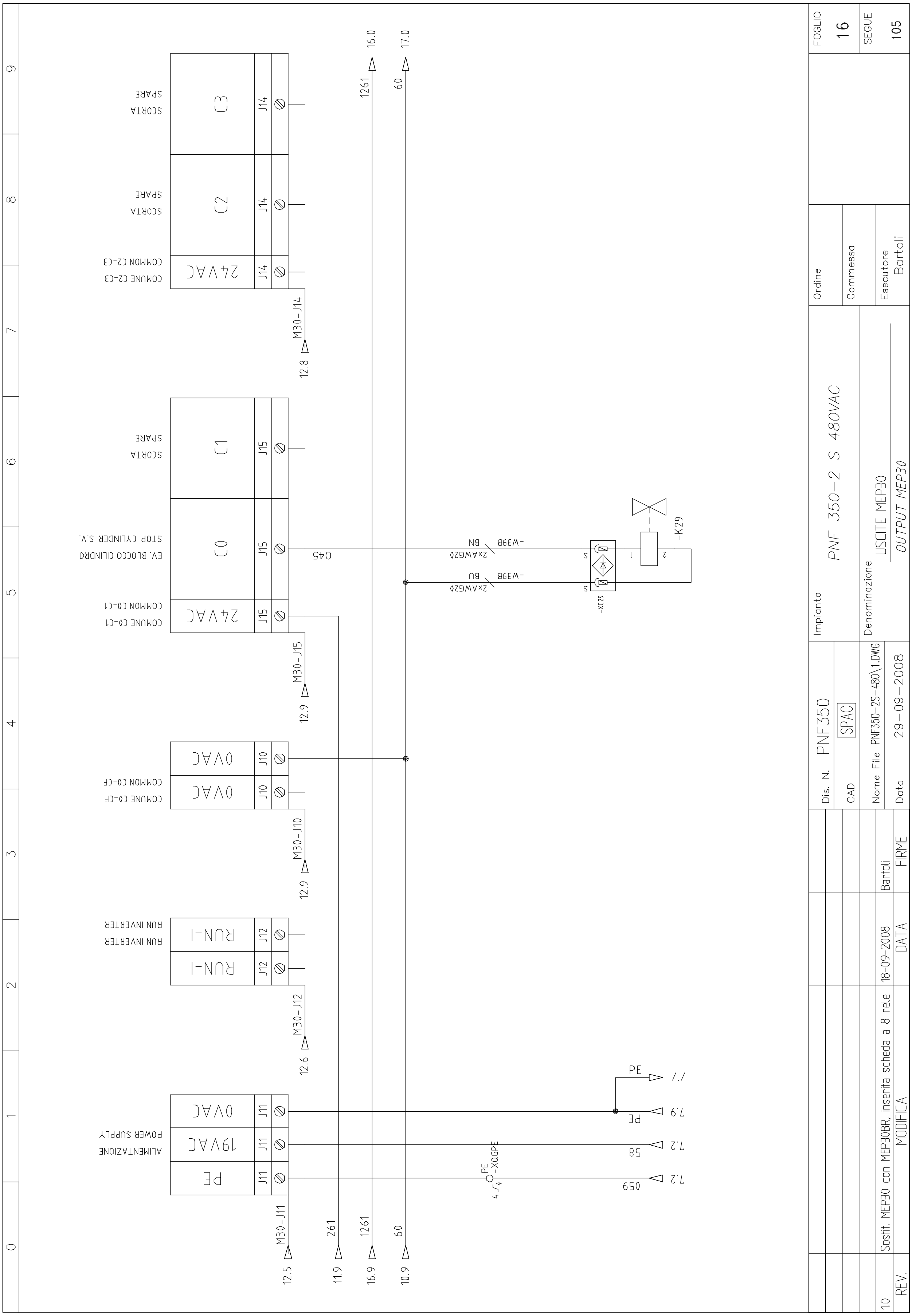
Ordine
Commessa
Esecutore: Bartoli

FOGLIO 13
SEGUE 105

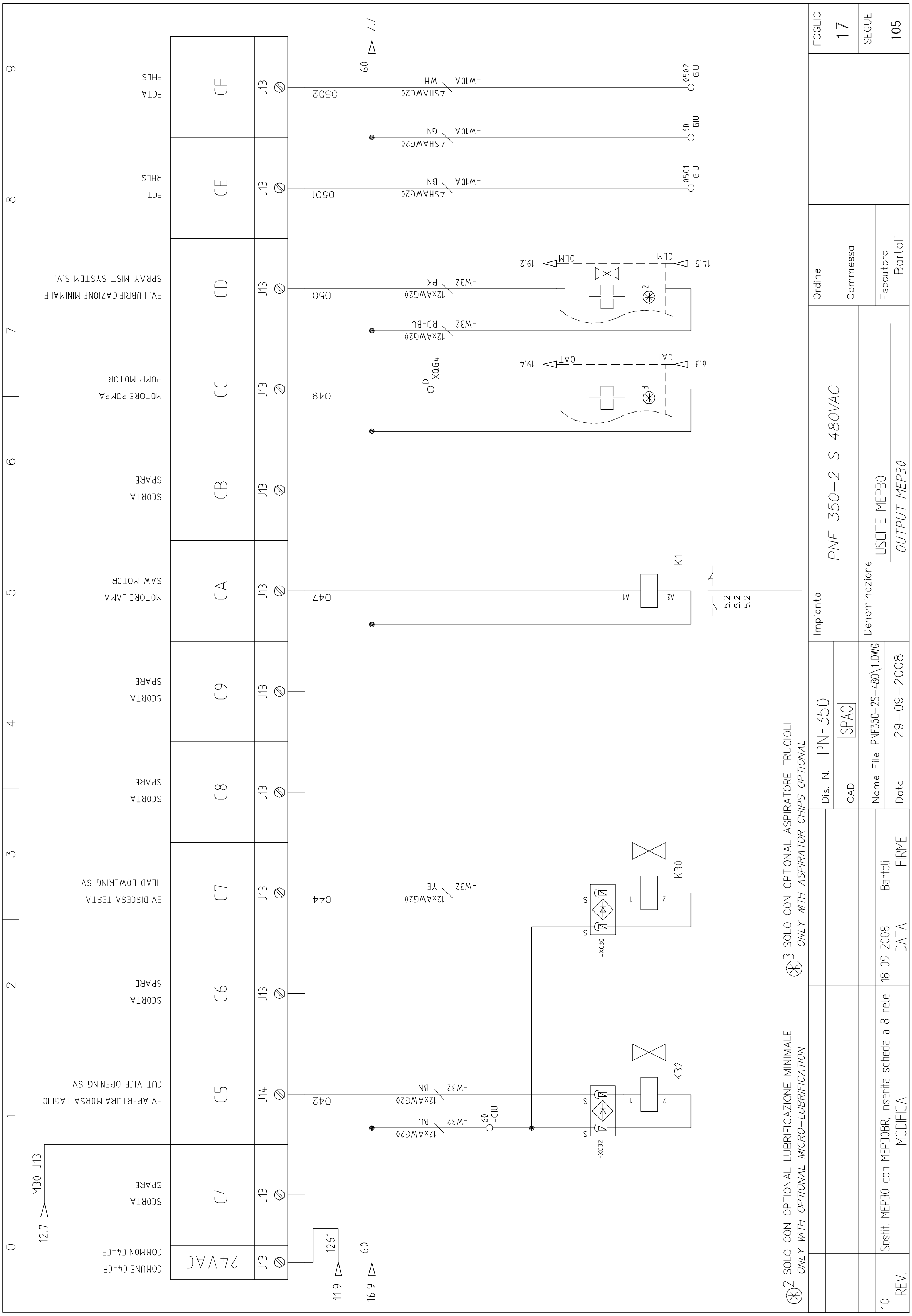

SOLO CON OPTIONAL LUBRIFICAZIONE MINIMALE
ONLY WITH OPTIONAL MICRO-LUBRIFICATION
SOLO CON OPTIONAL PEDALIERA
ONLY WITH OPTIONAL PEDALS
24VCC
0VCC
C0
C1
C2
C3
C4
C5
C7
ALIMENTAZIONE INGRESSI
POWER SUPPLY INPUT
SCORTA
SPARE
PROTEZIONE BARRA OK
BAR GUARD OK
START PEDALIERA
PEDAL CONTROL START
PRESSOSTATO ARIA
AIR PRESSURE SWITCH
LIVELLO OLIO OK
OIL LEVEL OK
VELOCITA SELEZIONATA
SELECTED SPEED
FOGLIO 14
SEGUE 105
Ordine
Commessa
Esecutore Bartoli
Impianto PNF 350-2 S 480VAC
Denominazione INGRESSI MEP30
INPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME

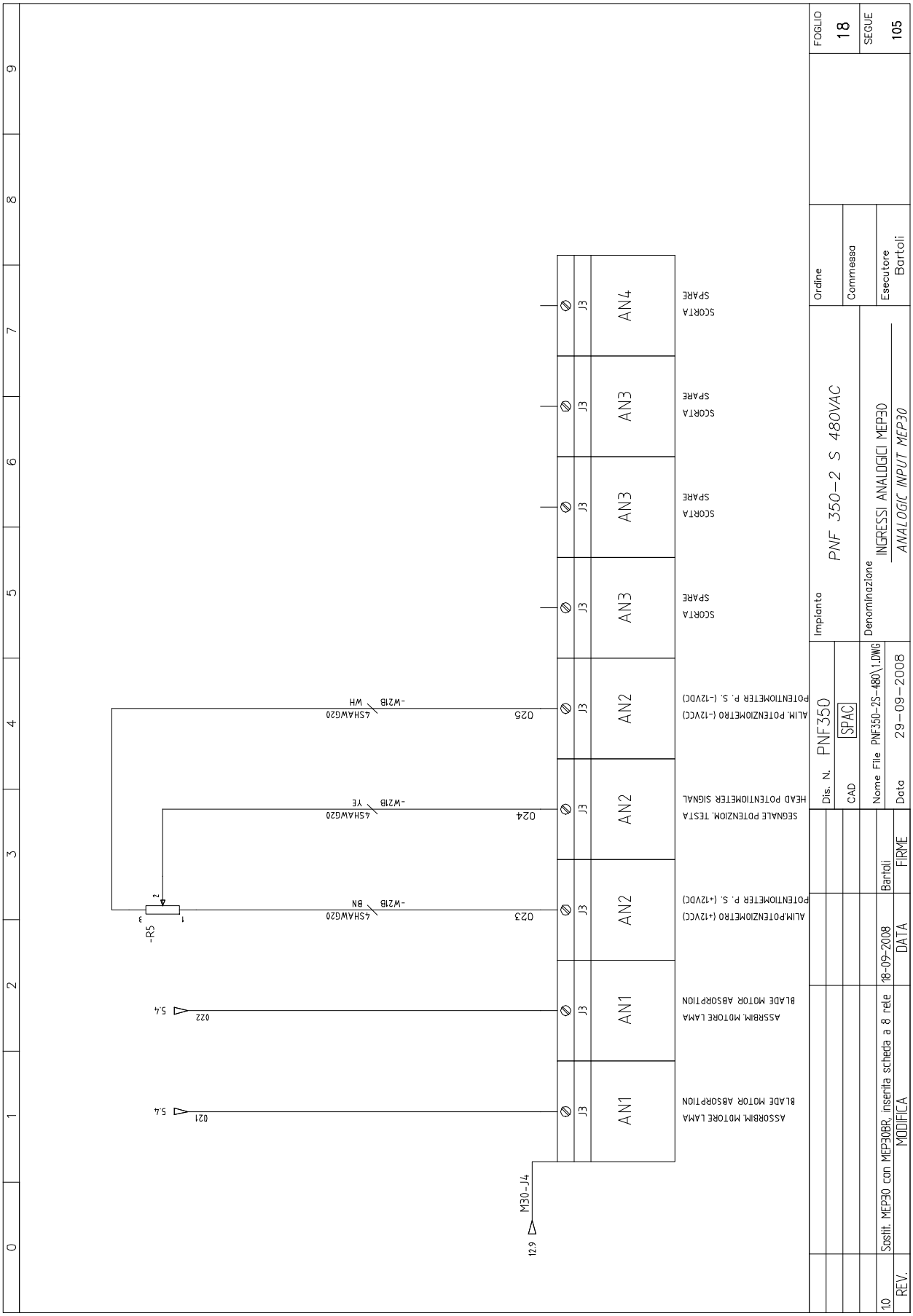


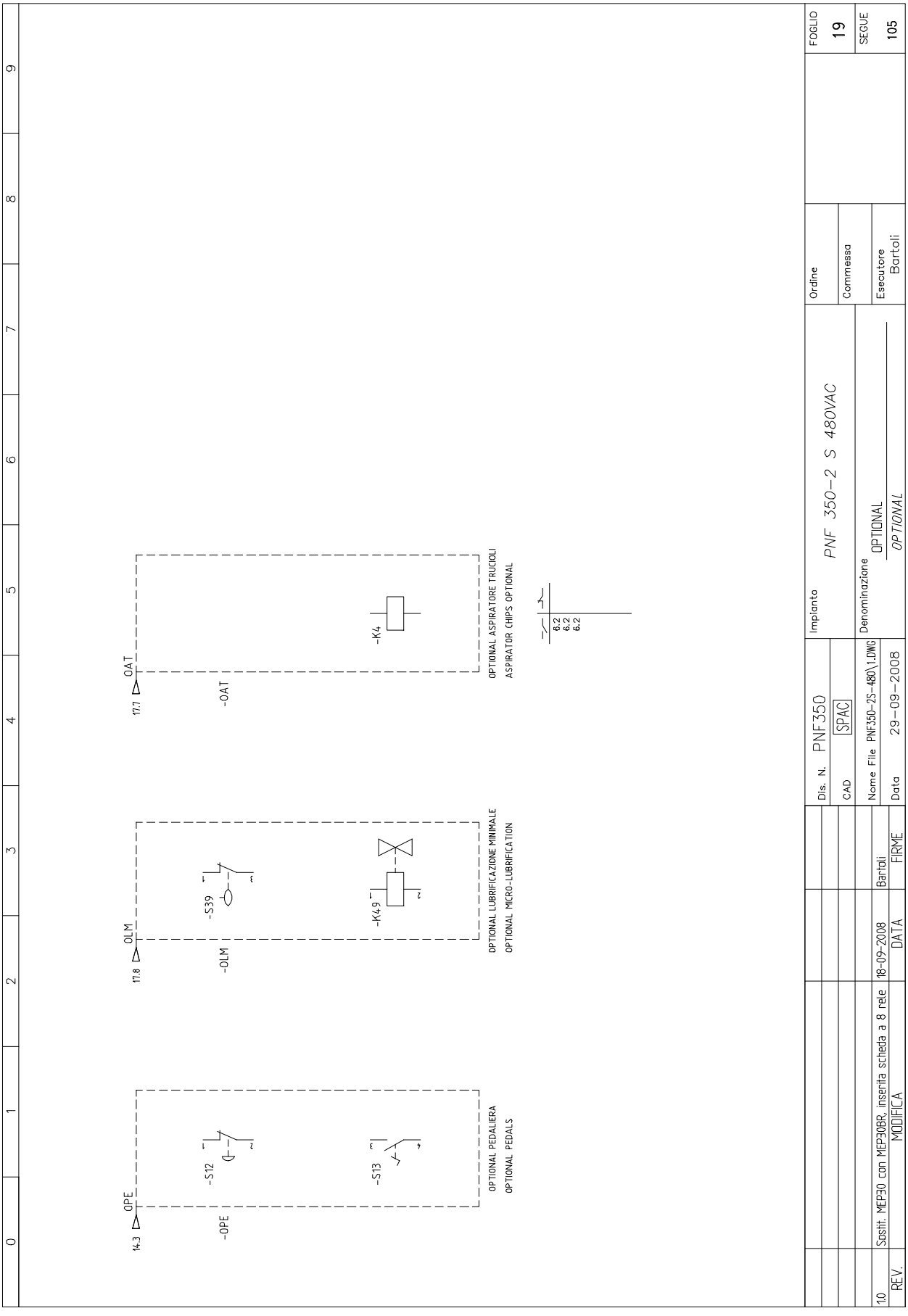
052
./.
04
03
02
01
11.6
-S3
10.4
J1
R
E
RESET
EMERGENCY
EMERGENZA
M30-J1
12.4
J5
C8
C9
CA
CB
SCORTA
SPARE
M30-J5
14.8
14.9
FOGLIO
15
SEGUE
105
Ordine
Commessa
Esecutore
Bartoli
Impianto
PNF 350-2 S 480VAC
Denominazione
INGRESSI MEP30
INPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME



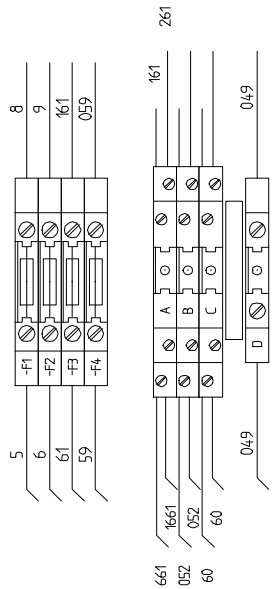
FOGLIO 16
SEGUE 105
Ordine
Commessa
Esecutore Bartoli
Impianto
PNF 350-2 S 480VAC
Denominazione
USCITE MEP30
OUTPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 relè 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME
ALIMENTAZIONE
POWER SUPPLY
PE
19VAC
0VAC
J11
M30-J11
RUN INVERTER
RUN-I
J12
M30-J12
COMUNE C0-CF
COMMON C0-CF
0VAC
J10
M30-J10
COMUNE C0-C1
COMMON C0-C1
24VAC
J15
M30-J15
EV. BLOCCO CILINDRO
STOP CYLINDER S.V.
C0
SCORTA
SPARE
C1
COMUNE C2-C3
COMMON C2-C3
C2
C3
J14
M30-J14
045
-W39B
BN
BU
2xAWG20
-XC29
-K29
-XQGPE
PE
059
58
1261
261
60
12.5
11.9
16.9
10.9
12.6
12.9
12.8
16.0
17.0
7.2
7.9
7.7


2 SOLO CON OPTIONAL LUBRIFICAZIONE MINIMALE
ONLY WITH OPTIONAL MICRO-LUBRIFICATION
3 SOLO CON OPTIONAL ASPIRATORE TRUCIOLI
ONLY WITH ASPIRATOR CHIPS OPTIONAL
PNF 350-2 S 480VAC
USCITE MEP30
OUTPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Esecutore Bartoli
FOGLIO 17
SEGUE 105
1.0 Sostit. MEP30 con MEP30BR, inserita scheda a 8 relè 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME


0 1 2 3 4 5 6 7 8 9
M30-J4
12.9
ASSORBIM. MOTORE LAMA
BLADE MOTOR ABSORPTION
021
5.4
ASSORBIM. MOTORE LAMA
BLADE MOTOR ABSORPTION
022
5.4
-RS
ALIM.POTENZIOMETRO (+12VCC)
POTENTIOMETER P. S. (+12VDC)
023
-W218 BN
4SHAWG20
SEGNALE POTENZIOM. TESTA
HEAD POTENTIOMETER SIGNAL
024
-W218 YE
4SHAWG20
ALIM. POTENZIOMETRO (-12VCC)
POTENTIOMETER P. S. (-12VDC)
025
-W218 WH
4SHAWG20
AN1
AN1
AN2
AN2
AN2
AN3
AN3
AN3
AN4
J3
SCORTA
SPARE
FOGLIO 18
SEGUE 105
Ordine
Commessa
Esecutore Bartoli
Impianto PNF 350-2 S 480VAC
Denominazione INGRESSI ANALOGICI MEP30
ANALOGIC INPUT MEP30
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Bartoli
FIRME
18-09-2008
DATA
10 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
REV. MODIFICA


0
1
2
3
4
5
6
7
8
9
OPE
14.3
-OPE
-S12
-S13
OPTIONAL PEDALIERA
OPTIONAL PEDALS
OLM
17.8
-OLM
-S39
-K49
OPTIONAL LUBRIFICAZIONE MINIMALE
OPTIONAL MICRO-LUBRIFICATION
OAT
17.7
-OAT
-K4
OPTIONAL ASPIRATORE TRUCIOLI
ASPIRATOR CHIPS OPTIONAL
6.2
6.2
6.2
1.0
Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele
18-09-2008
Bartoli
REV.
MODIFICA
DATA
FIRME
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Impianto
PNF 350-2 S 480VAC
Denominazione
OPTIONAL
OPTIONAL
Ordine
Commessa
Esecutore Bartoli
FOGLIO 19
SEGUE 105

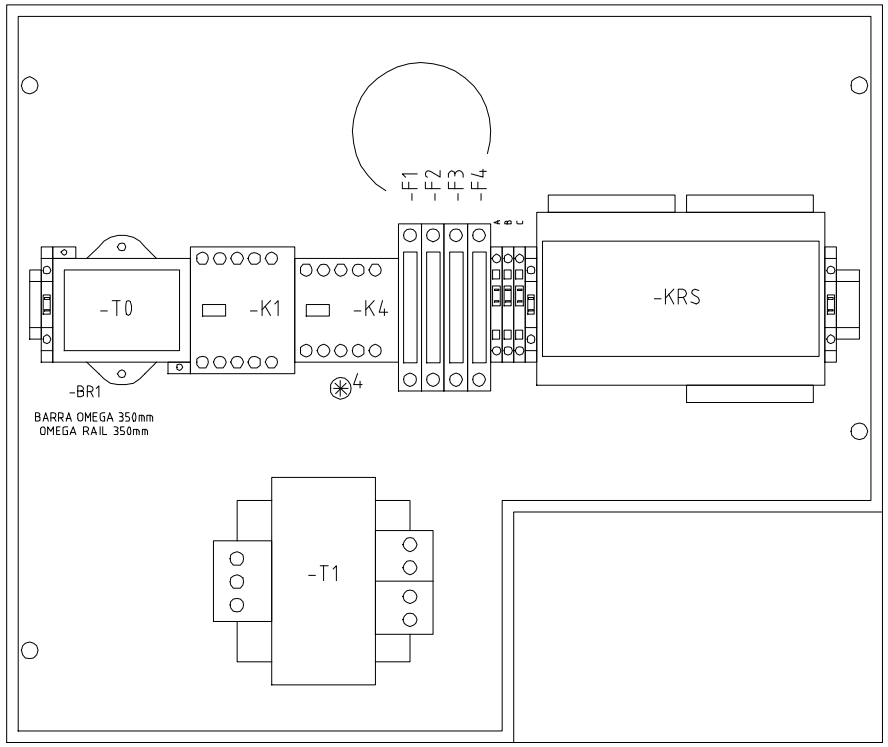
0	1	2	3	4	5	6	7	8	9



				Dis. N. PNF350	Impianto PNF 350-2 S 480VAC	Ordine		FOGLIO 20
				CAD SPAC		Commessa		
				Nome File PNF350-2S-480\1.DWG	Denominazione MORSETTIERA QUADRO			SEGUE 105
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Data 29-09-2008	PANEL TERMINAL BOARD	Esecutore Bartoli		
REV.	MODIFICA	DATA	FIRME					

-QD1

QUADRO (CARPENTERIA)
BOARD (CARPENTRY)



BARRA OMEGA 350mm
OMEGA RAIL 350mm

-FL1	FILO AWG20 WIRE AWG20
-FL2	FILO AWG16 WIRE AWG16
-PT1	PUNTALINO AWG20 TERMINAL AWG20
-PT3	PUNTALINO AWG16 TERMINAL AWG16
-CC1	CAPICORDA AWG16 TERMINAL AWG16

-NM1	NUMERAZIONE FILI WIRE NUMERATION
-NM2	NUMERAZIONE MORSETTI TERMINAL NUMERATION
-FS1	FASCETTA 135x2,5 CLAMP 135x2,5
-SF1	SACCHETTO PORTAFUSIBILI BAG FUSE
-TF1	TARGA SOSTITUZIONE FUSIBILI PLATE SUBSTITUTION FUSES
-TF2	GUARNIZIONE AERSTOP SEAL AERSTOP

(*)4 SOLO CON OPTIONAL ASPIRATORE TRUCIOLI
ONLY WITH OPTIONAL ASPIRATOR CHIPS

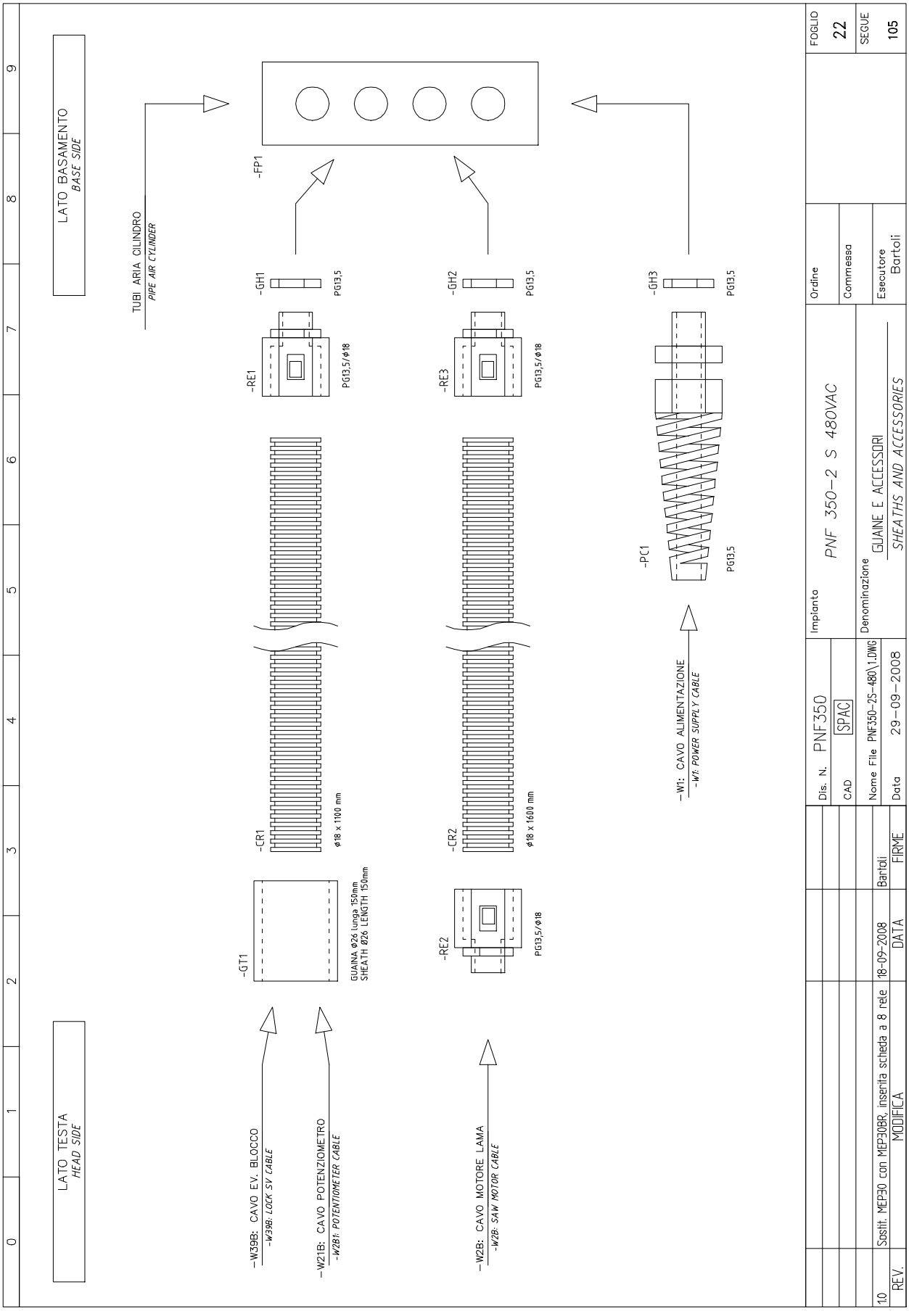
REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

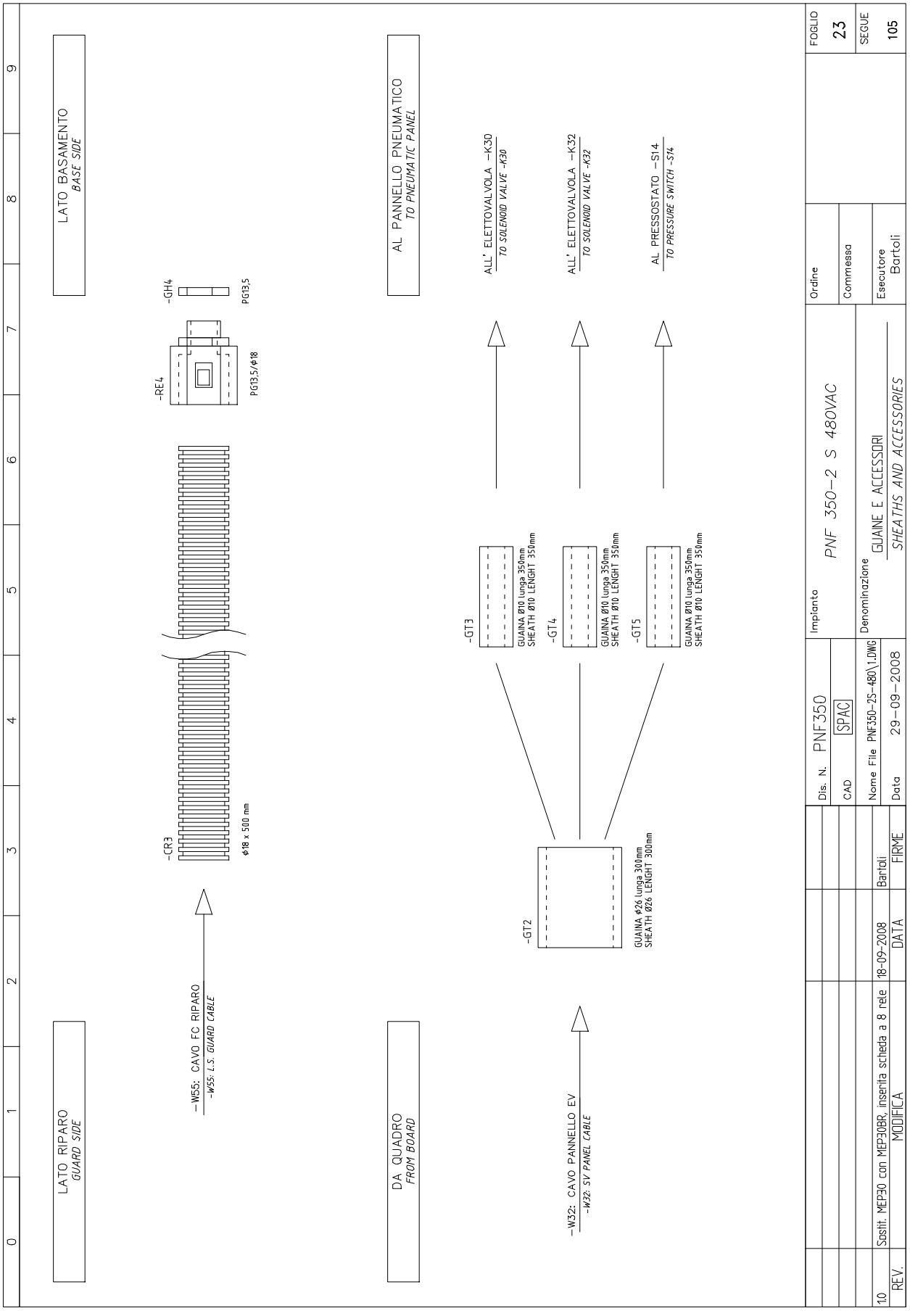
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008

Impianto: *PNF 350-2 S 480VAC*
Denominazione: INTERNO QUADRO / *BOARD INSIDE*

Ordine
Commessa
Esecutore: Bartoli

FOGLIO 21
SEGUE 105


LATO TESTA
HEAD SIDE
LATO BASAMENTO
BASE SIDE
TUBI ARIA CILINDRO
PIPE AIR CYLINDER
-FP1
-GH1
-GH2
-GH3
PG13,5
-RE1
-RE2
-RE3
PG13,5/Ø18
-CR1
-CR2
Ø18 x 1100 mm
Ø18 x 1600 mm
-GT1
GUAINA Ø26 lunga 150mm
SHEATH Ø26 LENGTH 150mm
-W39B: CAVO EV. BLOCCO
-W39B: LOCK SV CABLE
-W21B: CAVO POTENZIOMETRO
-W2B1: POTENTIOMETER CABLE
-W2B: CAVO MOTORE LAMA
-W2B: SAW MOTOR CABLE
-PC1
PG13,5
-W1: CAVO ALIMENTAZIONE
-W1: POWER SUPPLY CABLE
Dis. N. PNF350
CAD SPAC
Impianto
PNF 350-2 S 480VAC
Denominazione
GUAINE E ACCESSORI
SHEATHS AND ACCESSORIES
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Ordine
Commessa
Esecutore Bartoli
FOGLIO 22
SEGUE 105
10 Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME


LATO BASAMENTO
BASE SIDE
LATO RIPARO
GUARD SIDE
DA QUADRO
FROM BOARD
AL PANNELLO PNEUMATICO
TO PNEUMATIC PANEL
-W55: CAVO FC RIPARO
-W55: L.S. GUARD CABLE
-W32: CAVO PANNELLO EV
-W32: SV PANEL CABLE
-CR3
ø18 x 500 mm
-RE4
PG13,5/ø18
-GH4
PG13,5
-GT2
GUAINA Ø26 lunga 300mm
SHEATH Ø26 LENGHT 300mm
-GT3
GUAINA Ø10 lunga 350mm
SHEATH Ø10 LENGHT 350mm
-GT4
GUAINA Ø10 lunga 350mm
SHEATH Ø10 LENGHT 350mm
-GT5
GUAINA Ø10 lunga 350mm
SHEATH Ø10 LENGHT 350mm
ALL' ELETTOVALVOLA -K30
TO SOLENOID VALVE -K30
ALL' ELETTOVALVOLA -K32
TO SOLENOID VALVE -K32
AL PRESSOSTATO -S14
TO PRESSURE SWITCH -S14
Dis. N. PNF350
CAD SPAC
Impianto
PNF 350-2 S 480VAC
Denominazione
GUAINE E ACCESSORI
SHEATHS AND ACCESSORIES
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008
Ordine
Commessa
Esecutore Bartoli
FOGLIO 23
SEGUE 105
1.0 Sostit. MEP30 con MEP308R, inserita scheda a 8 rele 18-09-2008 Bartoli
REV. MODIFICA DATA FIRME

CAVI ESTERNI \ EXTERNAL CABLES

QUADRO \ BOARD								DESTINAZIONE \ LOCATION			
QUADRO BOARD	FOGLIO SHEET	NR. MORSETTO TERMINAL NO.	NR. FILO CONDUCTOR NO.	ID SUL CAVO ID IN CABLE	CAVO CABLE	LUNGHEZZA LENGHT [mt]	DISTURBO NOISE LEVEL	ID SUL CAVO ID IN CABLE	NR. FILO CONDUCTOR NO.	NR. MORSETTO TERMINAL NO.	FOGLIO SHEET	QUADRO BOARD
			L1	BN				BN	L1			
=QgCv -AL	4/1	L1 ○	L2	BK				BK	L2	5	4/3	=QgCv -Q0
=QgCv -AL	4/1	L2 ○	N	BU	-W1 022.0158 5GAWG16	5,5 MT		BU	N	3	4/3	=QgCv -Q0
=QgCv -AL	4/1	N ○	L3	GY	Cavo alimentazione			GY	L3	○ N	4/2	=QgCv -AL
=QgCv -AL	4/1	L3 ○	PE	GNYE				GNYE	PE	1	4/3	=QgCv -Q0
=QgCv -AL	4/2	PE ○								⏊ 2_1	4/2	=QgCv -XQGPE
			0501	BN				BN	0501			
=QgCv -GIU	17/8	0501 ○		YE	-W10A 022.0141 4SHAWG20	3,5Mt		YE		J13	17/8	CE
			0502	WH	Cavo FCTI e FCTA			WH	0502			
=QgCv -GIU	17/9	0502 ○	60	GN				GN	60	J13	17/9	CF
=QgCv -GIU	17/8	60 ○								0	7/2	=QgCv -T1
			27	BK1				BK1	27			
=QgCv -S50	5/2	W1	25	BK2				BK2	25	U1	5/3	=BmMep -M1
=QgCv -S50	5/2	V1	23	BK3				BK3	23	V1	5/3	=BmMep -M1
=QgCv -S50	5/2	U1	24	BK4	-W2B 022.0154 7GAWG16	5 MT		BK4	24	W1	5/3	=BmMep -M1
=QgCv -S50	5/2	V2	26	BK5	Cavo motore lama(2 VEL)			BK5	26	U2	5/3	=BmMep -M1
=QgCv -S50	5/2	U2	28	BK6				BK6	28	V2	5/3	=BmMep -M1
=QgCv -S50	5/2	W2	PE	GNYE				GNYE	PE	W2	5/3	=BmMep -M1
=QgCv -XQGPE	5/3	2_2 ⏊								PE	5/3	=BmMep -M1
			042	BN				BN	042			
C5	17/1	J14	561	GY				GY	561		17/1	=BmCv
=QgCv -XQG1	11/4	561 ○	60	BU				BU	60	1	11/4	=QgCv -S4
=QgCv -GIU	17/1	60 ○	761	GN				GN	761	0	7/2	=QgCv -T1
3	10/3	3	052	RD				RD	052	4	10/3	=BmCv -S14
4	11/3	4	044	YE				YE	044		14/3	
C7	17/3	J13	661	WH	-W32 022.0161 12xAWG20	4,5MT		WH	661		17/3	=BmCv
=QgCv -XQG2	8/3	A ○	050	PK	Cavo pannello EV e optional			PK	050	1	10/3	=BmCv -S14
CD	17/7	J13	036	BK				BK	036		17/7	
C5	14/6	J5	1561	VT				VT	1561		14/6	
=QgCv -XQG1	11/4	1361 ○	60	RD-BU				RD-BU	60	7	11/4	7
	17/7		033	GY-PK				GY-PK	033	0	7/2	=QgCv -T1
C2	14/3	J5									14/3	
			045	BN	-W39B 022.0160 2xAWG20	5Mt		BN	045			
C0	16/5	J15	60	BU	Cavo coll. EV blocco			BU	60		16/5	=BmCv
=QgCv -T1	7/2	0									16/5	=BmCv

				Dis. N. PNF350	Impianto PNF 350-2 S 480VAC	Ordine	FOGLIO 24
				CAD SPAC		Commessa	
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Nome File PNF350-2S-480\1.DWG	Denominazione RIASSUNTIVO CAVI	Esecutore Bartoli	SEGUE 105
REV.	MODIFICA	DATA	FIRME	Data 29-09-2008	CABLE SUMMARY		

0	1	2	3	4	5	6	7	8	9

CAVI ESTERNI \ EXTERNAL CABLES

QUADRO \ BOARD								DESTINAZIONE \ LOCATION			
QUADRO BOARD	FOGLIO SHEET	NR. MORSETTO TERMINAL NO.	NR. FILO CONDUCTOR NO.	ID SUL CAVO ID IN CABLE	CAVO CABLE	LUNGHEZZA LENGHT [mt]	DISTURBO NOISE LEVEL	ID SUL CAVO ID IN CABLE	NR. FILO CONDUCTOR NO.	NR. MORSETTO TERMINAL NO.	FOGLIO SHEET	QUADRO BOARD
			1761	BN	-W55 022.0160 2xAWG20	2Mt		BN	1761			
2	10/2	2	1661	BU				BU	1661	WH	10/2	=QgCv -S1
=QgCv -XQG2	8/5	A O			Cavo coll. fc carter lama					BK	10/2	=QgCv -S1
			015	BN				BN	015	U	6/2	=BmAtCv -M2
=BmAtCv -XSAT	6/2	1	016	BK	-W12 022.0162 4GAWG18	4MT		BK	016	V	6/2	=BmAtCv -M2
=BmAtCv -XSAT	6/2	2	017	GY				GY	017	W	6/2	=BmAtCv -M2
=BmAtCv -XSAT	6/2	3	PE	GNYE	Collegamento aspir. trucioli			GNYE	PE	PE	6/3	=BmAtCv -M2
=BmAtCv -XSAT	6/3	4										
			023	BN				BN	023			
=BmMep -R5	18/3	1	024	YE	-W21B 022.0141 4SHAWG20	4,5Mt		YE	024	J3	18/3	AN2
=BmMep -R5	18/3	2	025	WH				WH	025	J3	18/3	AN2
=BmMep -R5	18/3	3		GN	Cavo coll. potenziometro testa			GN		J3	18/4	AN2

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N.	PNF350	Impianto	PNF 350-2 S 480VAC
CAD	SPAC	Ordine	
Nome File	PNF350-2S-480\1.DWG	Commessa	
Data	29-09-2008	Denominazione	RIASSUNTIVO CAVI / CABLE SUMMARY
		Esecutore	Bartoli
		FOGLIO	25
		SEGUE	105

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-XSAT	022.0282 + 022.0261	Connettore volante ILME (CK03V + CKM03) 4 poli per evacuatore trucioli	'=BmAtCv	6	1
'-XPAT	022.0283 + 022.0262	Connettore volante ILME (CK03VG + CKF03) 4 poli per evacuatore trucioli	'=BmAtCv	6	1
'-M2	'055.0202	Aspirtore TURBO 2500 240.480.60	'=BmAtCv	6	1
'-GT1	'022.0180	Guaina termoretraibile 26mm	'=BmCv	22	0.15
'-GT2		Guaina termoretraibile 26mm	'=BmCv	23	0.30
'-GT3	'022.0181	Guaina termoretraibile 10mm	'=BmCv	23	0.35
'-GT5		Guaina termoretraibile 10mm	'=BmCv	23	0.35
'-GT4		Guaina termoretraibile 10mm	'=BmCv	23	0.35
'-RE2	'022.0211	Raccordo rapido dritto SEM PG13,5/Ø19	'=BmCv	22	1
'-RE3		Raccordo rapido dritto SEM PG13,5/Ø19	'=BmCv	22	1
'-RE1		Raccordo rapido dritto SEM PG13,5/Ø19	'=BmCv	22	1
'-PC1	'022.0234	Pressacordone 3246 nero PG13,5	'=BmCv	22	1
'-GH1	'022.0244	Dado grigio PG13,5	'=BmCv	22	1
'-GH2		Dado grigio PG13,5	'=BmCv	22	1
'-GH3		Dado grigio PG13,5	'=BmCv	22	1
'-CR1	'022.2602	Guaina POLIFLEX NW 14-1200143 (corrugato diam. 18)	'=BmCv	22	1.10
'-CR2		Guaina POLIFLEX NW 14-1200143 (corrugato diam. 18)	'=BmCv	22	1.60
'-FP1	V.d.G.B.	Vedi distinta Gruppo Basamento	'=BmCv	22	1
'-S14	V.d.P.	Vedi distinta pneumatica	'=BmCv	10	1
'-OLM	'090.1601	Gruppo lubrificazione munimale SHARK	'=BmLmCv	19	1
'-M1	'019.0852	Motore 3.5/4.8HP 2/4P B3 C100L V480.60 S6/60%	'=BmMep	5	1
'-R5	'022.0046	Potenziometro da 2K2 per testa	'=BmMep	18	1
'-RE4	'022.0211	Raccordo rapido dritto SEM PG13,5/Ø19	'=BmMep	23	1
'-GH4	'022.0244	Dado grigio PG13,5	'=BmMep	23	1
'-CR3	'022.2602	Guaina POLIFLEX NW 14-1200143 (corrugato diam. 18)	'=BmMep	23	0.50
'-OPE	'090.0672	Comando supplementare a pedaliera	'=BmPeMep	19	1
'-K32	V.d.P.	Vedi distinta pneumatica	'=PpCv	17	1
'-K30		Vedi distinta pneumatica	'=PpCv	17	1
'-K29		Vedi distinta pneumatica	'=PpCv	16	1
'-K4	'022.3002	Contattore DILM9-10 (24 V. 50.60 HZ) cod.276694	'=QgAtCv	19	1
'-OAT	'090.1601	Gruppo aspiratore trucioli	'=QgAtCv	19	1
'-QD1	'016.0723	Quadro comandi CB SX N.T.	'=QgCv	21	1
'-FS1	'019.5353	Fascetta in plastica 135x2,5	'=QgCv	21	50
'-T0	'022.0069	Trasformatore amperometrico 500/1A	'=QgCv	5	1
'-Q0	'022.0124	Custodia isolante E-PKZ0-GR con manopola rossa	'=QgCv	4	1
'-Q0	'022.0125	Blocco luchettabile SBV-PKZ0-E cod.35127	'=QgCv	4	1

				Dis. N. PNF350	Impianto PNF 350-2 S 480VAC	Ordine	FOGLIO 26
				CAD SPAC		Commessa	
				Nome File PNF350-2S-480\1.DWG	Denominazione DISTINTA MATERIALI	Esecutore Bartoli	SEGUE 105
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Data 29-09-2008	MATERIAL LIST		
REV.	MODIFICA	DATA	FIRME				

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-Q0	'022.0126	Barretta per neutro N-PKZ0 cod. 82160	'=QgCv	4	1
'-FL1	'022.0171	Cordicella unipolare 1 X AWG20	'=QgCv	21	19.00
'-FL2	'022.0172	Cordicella unipolare 1xAWG16	'=QgCv	21	6.00
'-NM1	'022.0290	Etichetta segnafilo	'=QgCv	21	300
'-NM2		Etichetta segnafilo	'=QgCv	21	8
'-CC1	'022.0310	Terminale a occhiello Ø5 da AWG16 (Rosso)	'=QgCv	21	5
'-PT1	'022.0311	Terminale a puntale da AWG20 (Bianco)	'=QgCv	21	90
'-PT3	'022.0312	Terminale a puntale da AWG16 (Nero)	'=QgCv	21	42
'-XQGPE	'022.0377	Morsetto PE da 2.5 mm singolo per 2 fili a molla WK4 SLU	'=QgCv	4	1
'-S1	'022.0507	Finecorsa D4C-1902 2M ALIM. CNCFE	'=QgCv	10	1
'-K0	'022.0556	Sganciatore U-PKZ0 V.480.60	'=QgCv	4	1
'-UDY	'022.0758	Display MEP32 LCD 4x20	'=QgCv	12	1
'-BR1	'022.0900	Barra omega	'=QgCv	21	0.35
'-S3	'022.0937	Blocchetto NA M22-K10 cod. 216376	'=QgCv	10	1
'-S3		Blocchetto NA M22-K10 cod. 216376	'=QgCv	10	1
'-S3		Blocchetto NA M22-K10 cod. 216376	'=QgCv	10	1
'-SF1	'022.1133	Microfusibile T 1AMP. 250V	'=QgCv	21	1
'-S4	'022.1245	Emergenza M22-PVT cod.263467 + M22-A 216374 + M22-K01 216378	'=QgCv	11	1
'-Q0	'022.1287	Interuttore PKZM0-10 (termica) cod. 72739	'=QgCv	4	1
'-S3	'022.1406	Pulsante M22-D-Y cod. 216598 + M22-A cod 216374	'=QgCv	10	1
'-T1	'022.1671	Trasformatore 100VA V.240-480 S0.24 S0.19	'=QgCv	7	1
'-XQGPE	'022.2247	Morsetto PE da 2.5 mm singolo per 4 fili a molla WK4 D2/2 SLU	'=QgCv	7	1
'-XQG1	'022.2256	Morsetto da 2.5 mm singolo per 2 fili a molla 56.703.0055.0	'=QgCv	11	1
'-XQG1		Morsetto da 2.5 mm singolo per 2 fili a molla 56.703.0055.0	'=QgCv	11	1
'-XQG4		Morsetto da 2.5 mm singolo per 2 fili a molla 56.703.0055.0	'=QgCv	17	1
'-XQGFU	022.2253 + 022.1140	Morsetto portafusibile PCH10.3X38 690V + fusibili 3A	'=QgCv	7	1
'-XQGFU		Morsetto portafusibile PCH10.3X38 690V + fusibili 3A	'=QgCv	7	1
'-XQGFU	022.2256 + 022.1136 + 022.1136	Morsetto portafusibile a molla + N° 2 fusibili da 500V 5A	'=QgCv	7	1
'-XQGFU		Morsetto portafusibile a molla + N° 2 fusibili da 500V 5A	'=QgCv	7	1
'-XQG2	'022.2258	Morsetto da 2.5 mm singolo per 4 fili a molla 56.703.5155.0	'=QgCv	8	1
'-XQG4	'022.2288	Piastra di chiusura x morsetto a 4 fili 07.312.7155.0	'=QgCv		1
'-XQGPE	'022.2321	Barra da 15x15mm con 10 fori 6mm	'=QgCv	6	1
'-UPC	'022.2815	Controllore MEP 30/B con rele	'=QgCv	12	1
'-K1	'022.3004	Minicontattore 9 AMP. - DILEM-10 (24V.50.60 HZ) cod. 21417	'=QgCv	17	1
'-S50	'022.3054	Selettore 2 velocita 20A T0-5-70331 GB/E	'=QgCv	5	1
'-KRS	'022.3702	Scheda rele emergenza (8 rele)	'=QgCv	9	1

REV.	MODIFICA	DATA	FIRME
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\1.DWG
Data 29-09-2008

Impianto
PNF 350-2 S 480VAC

Denominazione
DISTINTA MATERIALI
MATERIAL LIST

Ordine
Commessa
Esecutore
Bartoli

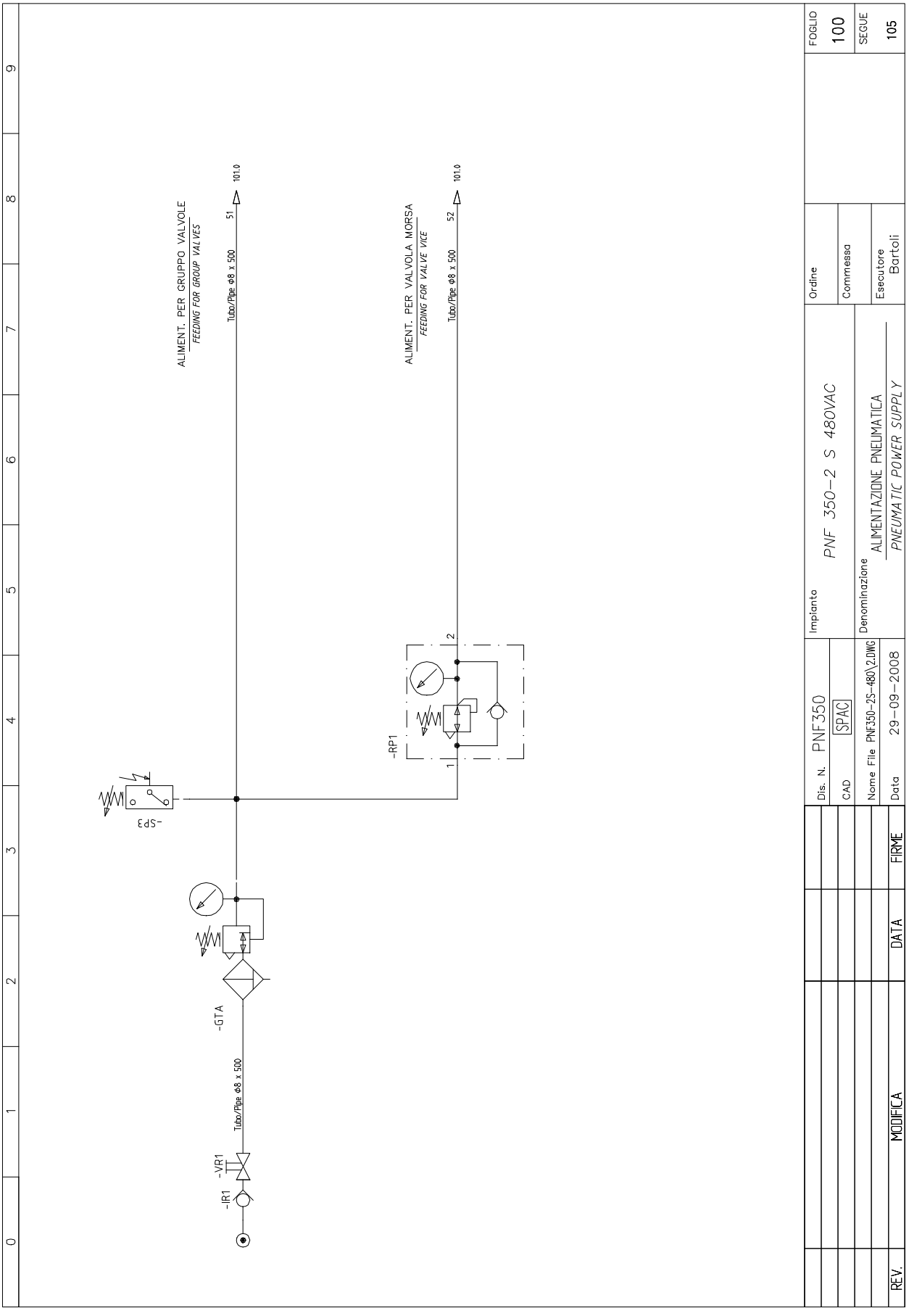
FOGLIO
27
SEGUE
105

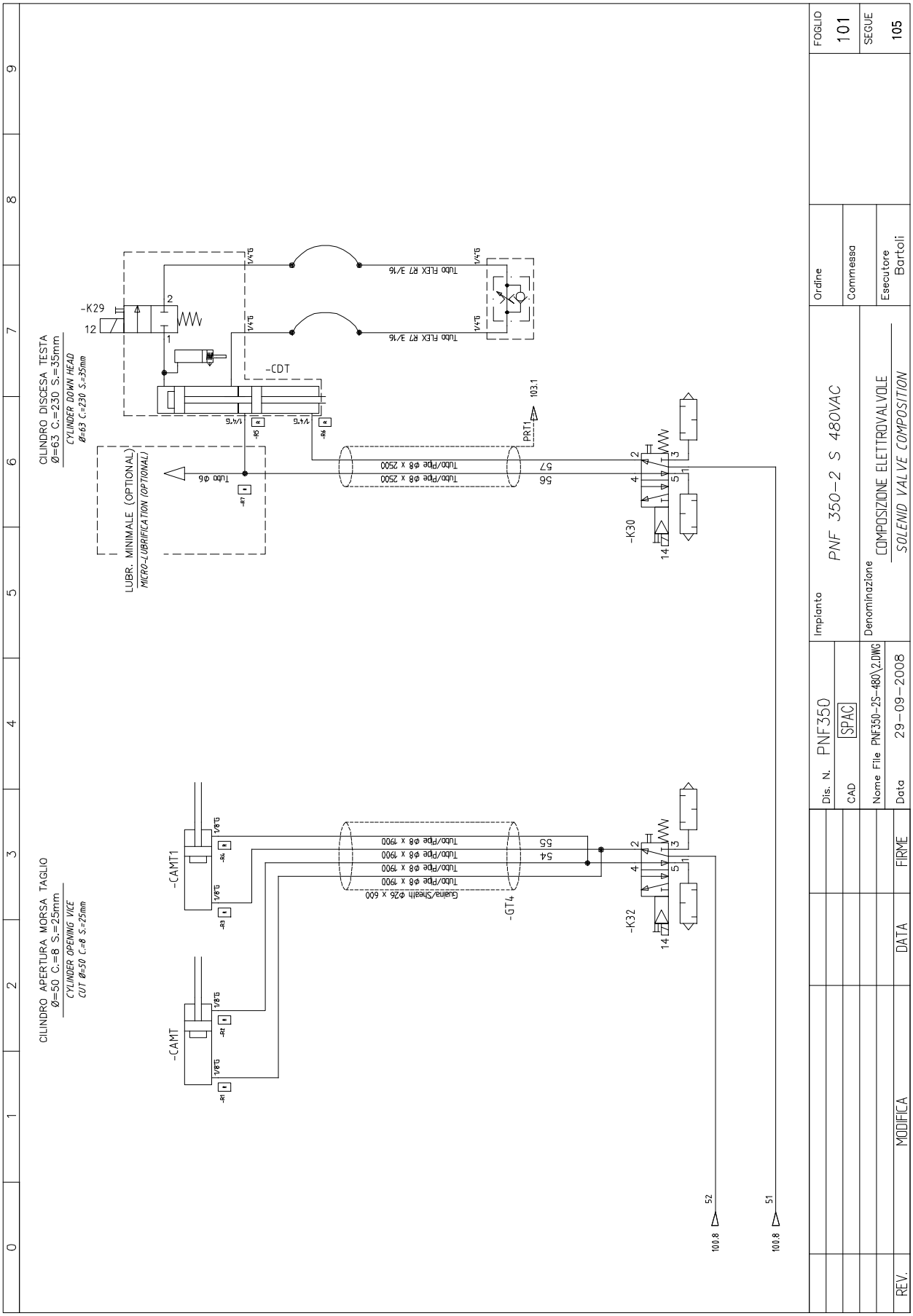
0	1	2	3	4	5	6	7	8	9

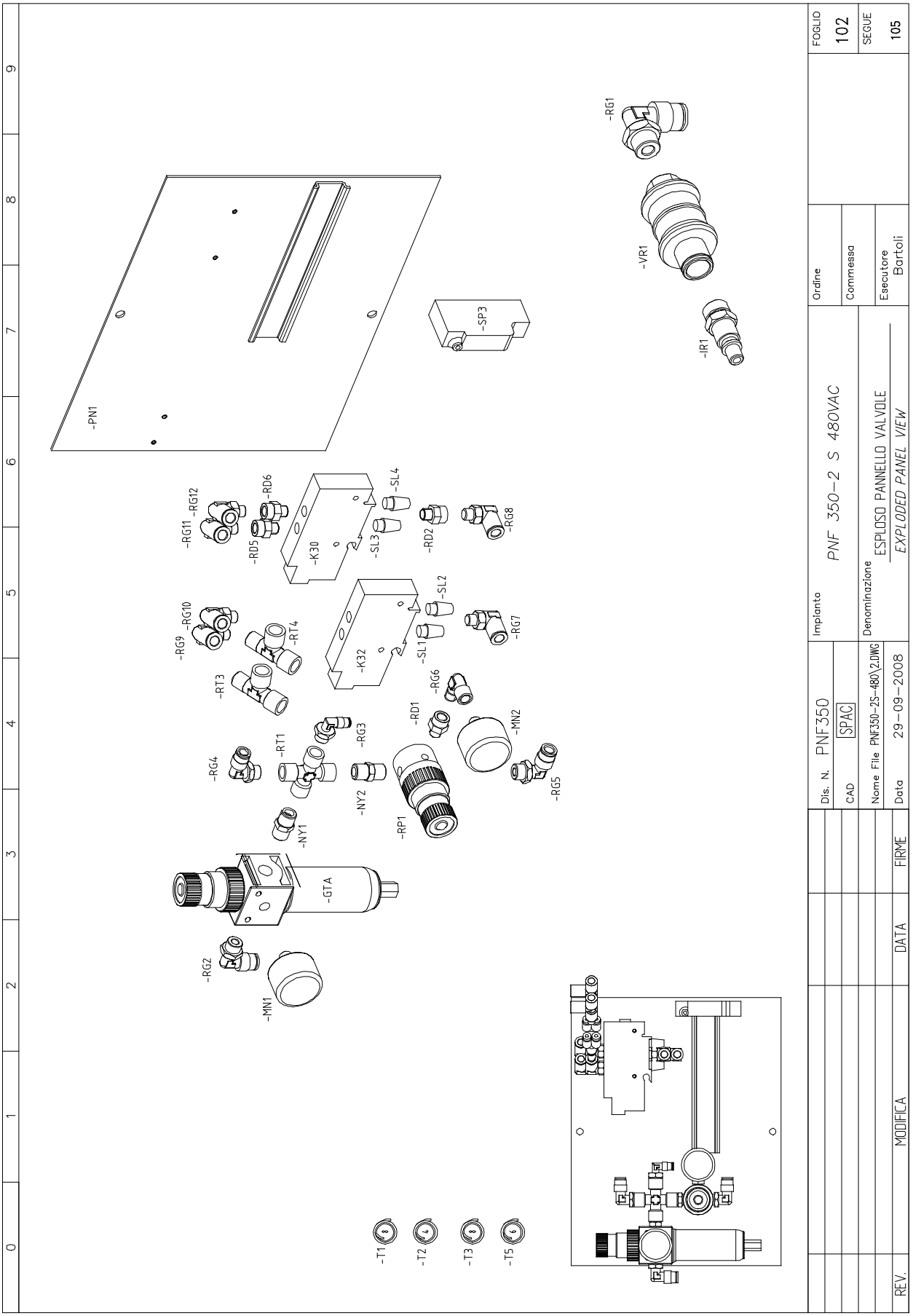
NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-TF2	'025.0604	Guarnizione aerstop	'=QgCv	21	0.42
'-UTA	'031.2018	Consolle di programmazione NC per quadro SX	'=QgCv	12	1
'-TF1	'031.2622	Targa sostituzione fusibili	'=QgCv	21	1
'-SF1	'047.0182	Sacchetto portafusibili	'=QgCv	21	1

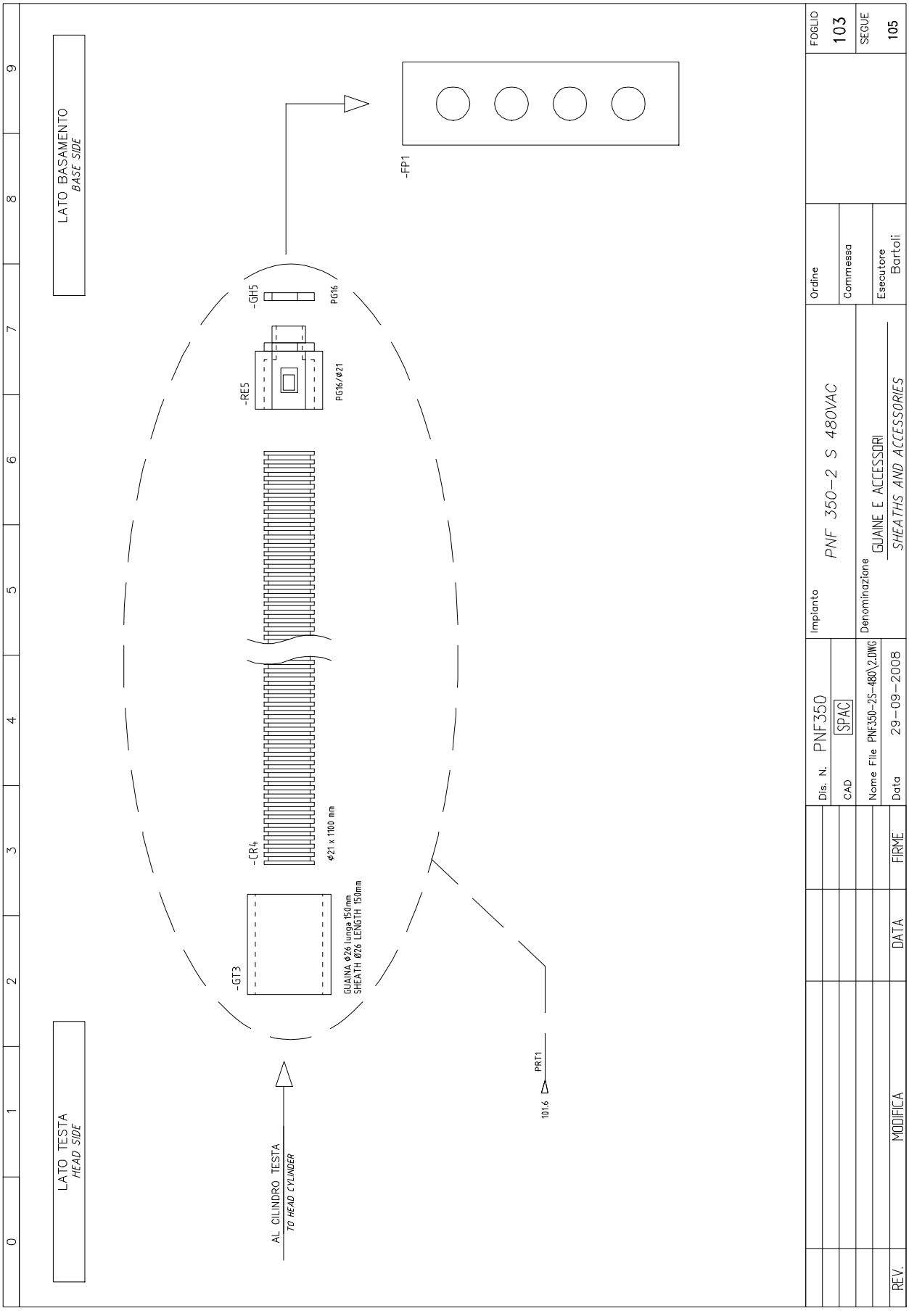
Tipo/Type	Formaz./Format.	Descrizione/Description	Lungh./Lenght
022.0141	4SHAWG20	Cavo schermato per tensionatore e potenziometro	8.00
022.0154	7GAWG16	Cavo 7xAWG16	5.00
022.0158	5GAWG16	Cavo 5xAWG16	5.50
022.0160	2xAWG20	Cavo 2xAWG20	7.00
022.0161	12xAWG20	Cavo 12xAWG16	4.50
022.0162	4GAWG18	Cavo 4xAWG18	4.00

				Dis. N. PNF350	Impianto PNF 350-2 S 480VAC	Ordine		FOGLIO 28
				CAD SPAC		Commessa		
				Nome File PNF350-2S-480\1.DWG	Denominazione DISTINTA MATERIALI			SEGUE
1.0	Sostit. MEP30 con MEP30BR, inserita scheda a 8 rele	18-09-2008	Bartoli	Data 29-09-2008	MATERIAL LIST	Esecutore Bartoli		105
REV.	MODIFICA	DATA	FIRME					


ALIMENT. PER GRUPPO VALVOLE
FEEDING FOR GROUP VALVES
Tubo/Pipe ø8 x 500
51
101.0
ALIMENT. PER VALVOLA MORSA
FEEDING FOR VALVE VICE
Tubo/Pipe ø8 x 500
52
101.0
-SP3
-RP1
-GTA
-VR1
-IR1
Tubo/Pipe ø8 x 500
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\2.DWG
Data 29-09-2008
Impianto
PNF 350-2 S 480VAC
Denominazione
ALIMENTAZIONE PNEUMATICA
PNEUMATIC POWER SUPPLY
Ordine
Commessa
Esecutore Bartoli
FOGLIO 100
SEGUE 105
REV.
MODIFICA
DATA
FIRME


CILINDRO DISCESA TESTA
Ø=63 C.=230 S.=35mm
CYLINDER DOWN HEAD
Ø=63 C.=230 S.=35mm
CILINDRO APERTURA MORSA TAGLIO
Ø=50 C.=8 S.=25mm
CYLINDER OPENING VICE
CUT Ø=50 C.=8 S.=25mm
LUBR. MINIMALE (OPTIONAL)
MICRO-LUBRIFICATION (OPTIONAL)
-K29
-CDT
-CAMT
-CAMT1
-GT4
-K30
-K32
Tubo FLEX R7 3/16
Tubo/Pipe ø8 x 2500
Tubo/Pipe ø8 x 1900
Guaina/Sheath ø26 x 600
Tubo ø6
PRT1
103.1
100.8
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\2.DWG
Data 29-09-2008
Impianto
PNF 350-2 S 480VAC
Denominazione
COMPOSIZIONE ELETTROVALVOLE
SOLENID VALVE COMPOSITION
Ordine
Commessa
Esecutore Bartoli
FOGLIO 101
SEGUE 105
REV.
MODIFICA
DATA
FIRME


-PN1
-SP3
-VR1
-RG1
-IR1
-RG11
-RG12
-RD5
-RD6
-K30
-SL3
-SL4
-RD2
-RG8
-RG9
-RG10
-RT3
-RT4
-K32
-SL1
-SL2
-RG7
-RG6
-RD1
-MN2
-RG4
-RT1
-RG3
-NY2
-RP1
-RG5
-NY1
-GTA
-RG2
-MN1
-T1
-T2
-T3
-T5
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\2.DWG
Data 29-09-2008
Impianto
PNF 350-2 S 480VAC
Denominazione
ESPLOSO PANNELLO VALVOLE
EXPLODED PANEL VIEW
Ordine
Commessa
Esecutore Bartoli
FOGLIO 102
SEGUE 105
REV.
MODIFICA
DATA
FIRME


LATO BASAMENTO
BASE SIDE
LATO TESTA
HEAD SIDE
AL CILINDRO TESTA
TO HEAD CYLINDER
-FP1
-GH5
PG16
-RE5
PG16/Ø21
-CR4
Ø21 x 1100 mm
-GT3
GUAINA Ø26 lunga 150mm
SHEATH Ø26 LENGTH 150mm
PRT1
101.6
FOGLIO 103
SEGUE 105
Ordine
Commessa
Esecutore Bartoli
Impianto PNF 350-2 S 480VAC
Denominazione GUAINE E ACCESSORI
SHEATHS AND ACCESSORIES
Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\2.DWG
Data 29-09-2008
REV.
MODIFICA
DATA
FIRME

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-R7	'043.0210	Giunto a gomito Ø8mm CL 6550	'=BmLmMep	101	1
'-R7	'043.0215	Giunto a "T" Ø8mm	'=BmLmMep	101	1
'-R7	'043.0226	Riduzione M/F da tubo Ø8/Ø6mm	'=BmLmMep	101	1
'-T5	'043.0303	Tubo rilsan 6X4 NERO	'=BmLmMep	102	6,00
'-GT3	'022.0180	Guaina termoretraibile 26mm	'=BmMep	103	0.15
'-GT4	'022.0180	Guaina termoretraibile 26mm	'=BmMep	101	0.60
'-RE5	'022.0212	Raccordo rapido dritto SEM PG16/Ø21	'=BmMep	103	1
'-GH5	'022.0239	Dado nero PG16	'=BmMep	103	1
'-CR4	'022.2603	Guaina POLIFLEX NW 17-1200178 (corrugato diam. 21)	'=BmMep	103	1
'-R1	'043.0202	Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-R2		Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-R3		Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-R4		Raccordo diritto da 1/8"G a Ø8mm	'=BmMep	101	1
'-RG1	'043.0204	Raccordo a gomito da 1/4"G a Ø8mm	'=BmMep	102	1
'-R5		Raccordo a gomito da 1/4"G a Ø8mm	'=BmMep	101	1
'-R6		Raccordo a gomito da 1/4"G a Ø8mm	'=BmMep	101	1
'-RT3	'043.0215	Giunto a "T" Ø8mm	'=BmMep	102	1
'-RT4		Giunto a "T" Ø8mm	'=BmMep	102	1
'-IR1	'043.0294	Innesto rapido ghiotto 1/4"G PB12	'=BmMep	100	1
'-T3	'043.0301	Tubo rilsan 8X6 NERO COD.17257181	'=BmMep	102	17,00
'-VR1	'043.0601	Valvola VMS 114-1/4 08	'=BmMep	100	1
'-PN1	'016.1190	Pannello pneumatico TI-CB-SX-NC con barra omega	'=PpCv	102	1
'-SP3	'043.0143	Pressostato pneumatico montag. barra PS1P1091 Parker	'=PpCv	100	1
'-RG3	'043.0198	Raccordo a gomito da 1/4"G a Ø4mm	'=PpCv	102	1
'-RG2	'043.0204	Raccordo a gomito da 1/4"G a Ø8mm	'=PpCv	102	1
'-RG4		Raccordo a gomito da 1/4"G a Ø8mm	'=PpCv	102	1
'-RG5		Raccordo a gomito da 1/4"G a Ø8mm	'=PpCv	102	1
'-RG7	'043.0208	Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG8		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG9		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG10		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG11		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RG12		Raccordo a gomito da 1/8"G a Ø8mm	'=PpCv	102	1
'-RT1	'043.0222	Raccordo a croce CL2033 da 1/4"G	'=PpCv	102	1
'-RD1	'043.0231	Riduzione diritta M/F da 1/8"G	'=PpCv	102	1

REV.	MODIFICA	DATA	FIRME

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\2.DWG
Data 29-09-2008

Impianto: *PNF 350-2 S 480VAC*
Denominazione: DISTINTA MATERIALE PNEUMATICO / *PNEUMATIC MATERIAL LIST*

Ordine
Commessa
Esecutore: Bartoli

FOGLIO 104
SEGUE 105

0	1	2	3	4	5	6	7	8	9

NOME/ITEM	TIPO/TYPE	DESCRIZIONE/DESCRIPTION	QUADRO/BOARD	FG/SH	Q.TA/Q.TY
'-RD2		Riduzione diritta M/F da 1/8"G	'=PpCv	102	1
'-RD5		Riduzione diritta M/F da 1/8"G	'=PpCv	102	1
'-RD6		Riduzione diritta M/F da 1/8"G	'=PpCv	102	1
'-RG6	'043.0251	Riduzione gomito M/F da 1/8"G	'=PpCv	102	1
'-NY1	'043.0275	Nipplo da 1/4"G	'=PpCv	102	1
'-NY2		Nipplo da 1/4"G	'=PpCv	102	1
'-T1	'043.0301	Tubo rilsan 8X6 NERO COD.17257181	'=PpCv	102	1,50
'-T2	'043.0302	Tubo rilsan 4X2.7 NERO C.17257162	'=PpCv	102	0,50
'-SL1	'043.0473	Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-SL2		Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-SL3		Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-SL4		Silenziatore da 1/8"G in ottone sinterizzato	'=PpCv	102	1
'-MN1	'043.0552	Manometro Ø40 con attacco assiale da 1/8"G	'=PpCv	102	1
'-MN2		Manometro Ø40 con attacco assiale da 1/8"G	'=PpCv	102	1
'-GTA	'043.0564	Regolatore di pressione da 1/4"G FR042	'=PpCv	100	1
'-RP1	'043.0580	Regolatore di pressione da 1/4"G MR038	'=PpCv	100	1
'-K32	043.0608 + 022.586	Elettrovalvola pneumatica montaggio singolo 5/2 da 1/8 PVLB111618 PARKER + bobina 24VAC	'=PpCv	101	1
'-K30		Elettrovalvola pneumatica montaggio singolo 5/2 da 1/8 PVLB111618 PARKER + bobina 24VAC	'=PpCv	101	1

REV.	MODIFICA	DATA	FIRME

Dis. N. PNF350
CAD SPAC
Nome File PNF350-2S-480\2.DWG
Data 29-09-2008

Impianto
PNF 350-2 S 480VAC

Denominazione
DISTINTA MATERIALE PNEUMATICO
PNEUMATIC MATERIAL LIST

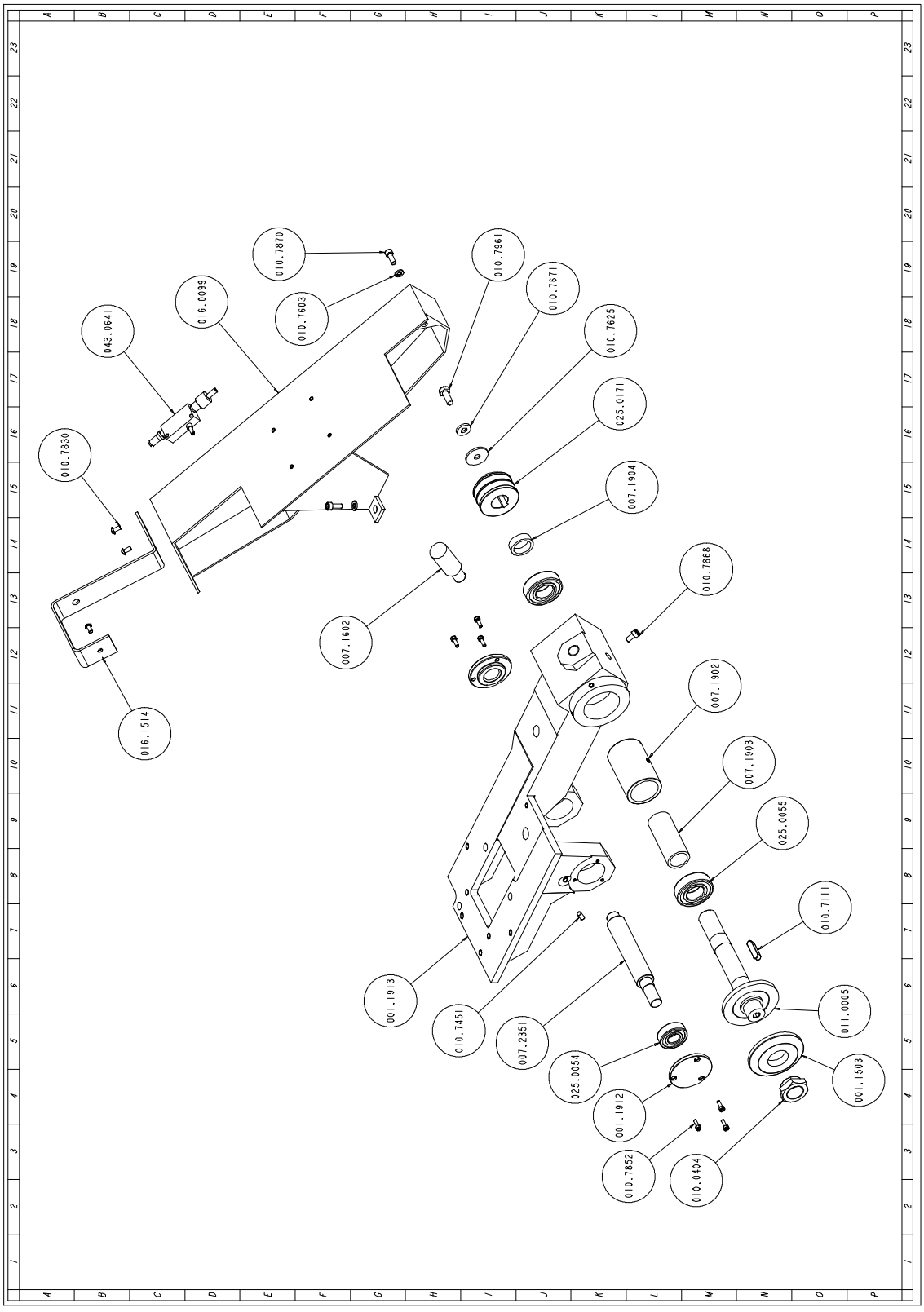
Ordine
Commessa
Esecutore
Bartoli

FOGLIO
105
SEGUE
105

Exploded views

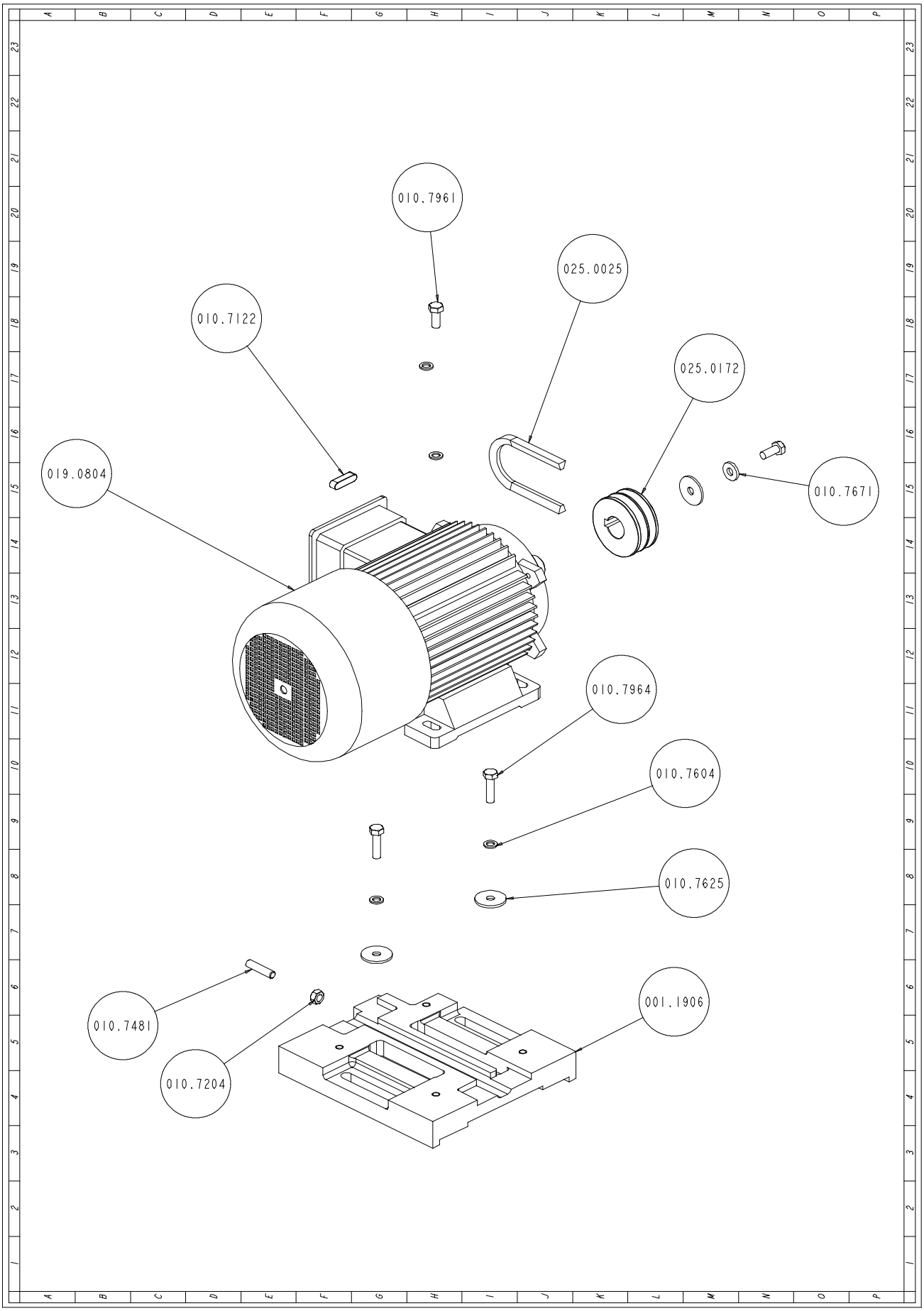
This part of the manual contains detailed exploded views of the machine which can help to gain a deeper knowledge of how it is made.

Head unit



Code	Description	Description	Q.ty
001.1503	FLANGIA ESTERNA MOD. 253	OUTER FLANGE MOD. 253	1,000
001.1912	COPERCHIO SNODO TESTA CB 350 M. 311	COVER CB 350 MOD.311	2,000
001.1913	BILANCIERE MOD. 312	PLATFORM MOD.312	1,000
007.1602	ASTA COMANDO MAN.	MANUAL CONTROL ROD	1,000
007.1902	DISTANZIALE CUSCINETTO ESTERNO	EXT.BEARING SPACER	1,000
007.1903	DISTANZIALE CUSCINETTO INTERNO	INT. BEARING SPACER	1,000
007.1904	DISTANZIALE PULEGGIA CB 300/349/350	WHEEL SPACER CB 300/349/350	1,000
007.2351	PERNO SUPPORTO SNODO TESTA CB 350	HEAD PIVOT SUPPORT PIN CB 350	1,000
010.0404	DADO ESAGONALE MM.25 P. 2 RA- CB 350	M M.25 P.HEX NUT 2 RA- CB 350	1,000
010.7111	CHIAVETTA 8 X 7 X 32 (010.7111)	8 X 7 X 32 KEY	1,000
010.7451	GRANO VCE PUNTA CONICA 6 X 12	6 X 12 CONICAL POINT VCE GRUB SC-REW	1,000
010.7603	RONDELLA 0 6 (010.7603)	0 6 WASHER (010.7603)	2,000
010.7625	RONDELLA 0 8 X 32	0 8 X 32 WASHER	1,000
010.7671	RONDELLA SPESSORE DIAM. 8 X 3	THICKNESS WASHER DIAM. 8 X 3	1,000
010.7830	VITE BUTON 5 X 10 (010.7830)	5 X 10 BUTON SCREW (010.7830)	3,000
010.7852	VITE TCEI 4 X 12 (010.7852)	TCEI 4 X 12 SCREW (010.7852)	6,000
010.7868	VITE TCEI 6 X 12 (010.7868)	TCEI 6 X 12 SCREW	1,000
010.7870	VITE TCEI 6 X 16 (010.7870)	TCEI 6 X 16 SCREW (010.7870)	2,000
010.7961	VITE TE 8 X 20 (010.7961)	TE 8 X 20 SCREW (010.7961)	1,000
011.0005	ALBERO PORTADISCO CB349/350/352 D.108/A	BLADE SHAFT CB 349/350/352	1,000
016.0099	CARTER CINGHIA CB 350	BELT COVER CB 350	1,000
016.1514	STAFFA FIX CONVOGLIATORE TRUC.	SWARF CONVEYOR FIX BRACKET	1,000
025.0054	CUSCINETTO 62.03 2Z	BEARING 62.03 2Z	1,000
025.0055	CUSCINETTO 62.05 2Z C3	BEARING 62.05 2Z C3	2,000
025.0171	PULEGGIA 50X2 SPZ FORO 24	WHEEL 50X2 SPZ HOLE 24	1,000
043.0641	NEBULIZZATORE A DEPRESSIONE T.7240201	T.7240201 COOLANT SPRAYER	1,000

Motor unit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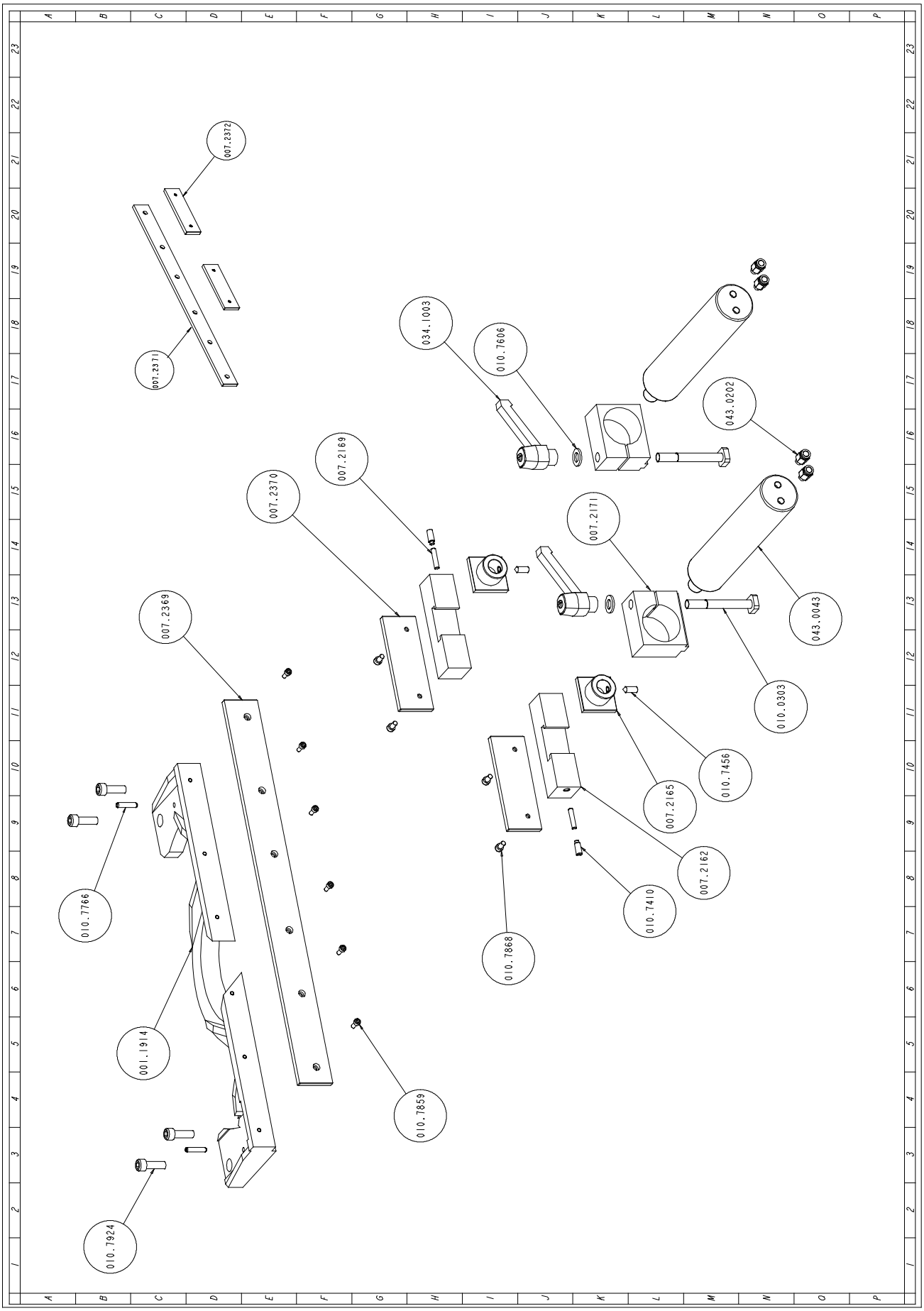
025.0025
010.7122
025.0172
019.0804
010.7671
010.7964
010.7604
010.7625
010.7481
001.1906
010.7204

Code	Description	Description	Q.ty
001.1906	PIANA MOTORE MOD. 306	MOTOR PLANE MOD.306	1,000
010.7122	CHIAVETTA 8 X 8 X 32	8 X 8 X 32 KEY	1,000
010.7204	DADO M8	M8 SCREW NUT	1,000
010.7481	GRANO VCE PUNTA PIANA 8 X 35	8X35 FLAT POINT VCE GRUB SCREW	1,000
010.7604	RONDELLA 0 8	0 8 WASHER	6,000
010.7625	RONDELLA 0 8 X 32	0 8 X 32 WASHER	3,000
010.7671	RONDELLA SPESSORE DIAM. 8 X 3	THICKNESS WASHER DIAM. 8 X 3	1,000
010.7961	VITE TE 8 X 20	TE 8 X 20 SCREW	5,000
010.7964	VITE TE 8 X 30	TE 8 X 30 SCREW	2,000
019.0804	HP 2/3 2/4P B3 2V.V.380 C90L	HP 2/3 2/4P 2S.V.380 C90L	1,000
025.0025	CINGHIA SPZ 900 S.TX	BELT SPZ 900 S.TX	1,000
025.0172	PULEGGIA 60X2 SPZ FORO 24	WHEEL 60X2 SPZ HOLE 24	1,000

Vice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043.0043
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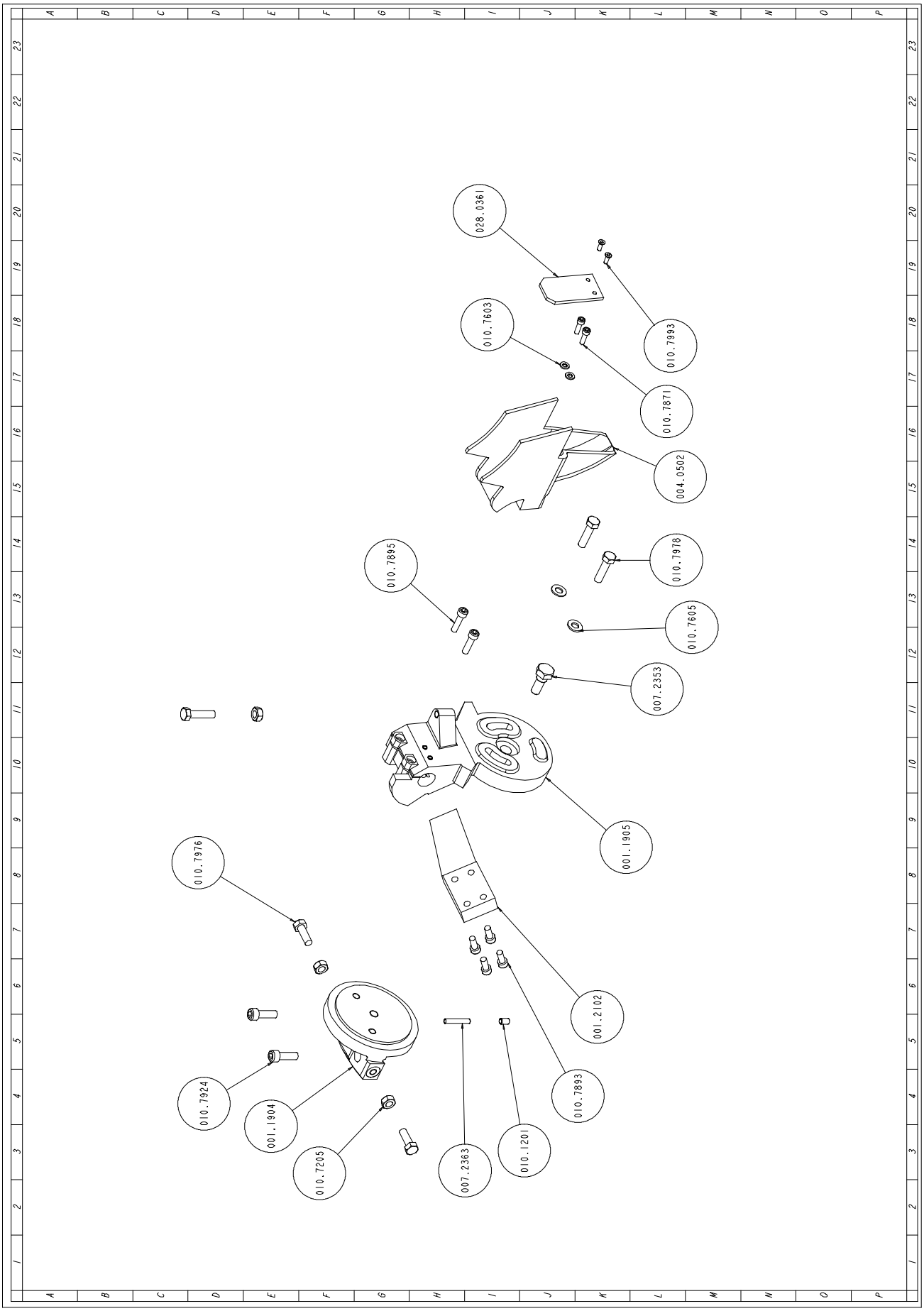
010.0303
010.7456
007.2165
007.2162
010.7410
010.7868
010.7766
001.1914
010.7859
010.7924

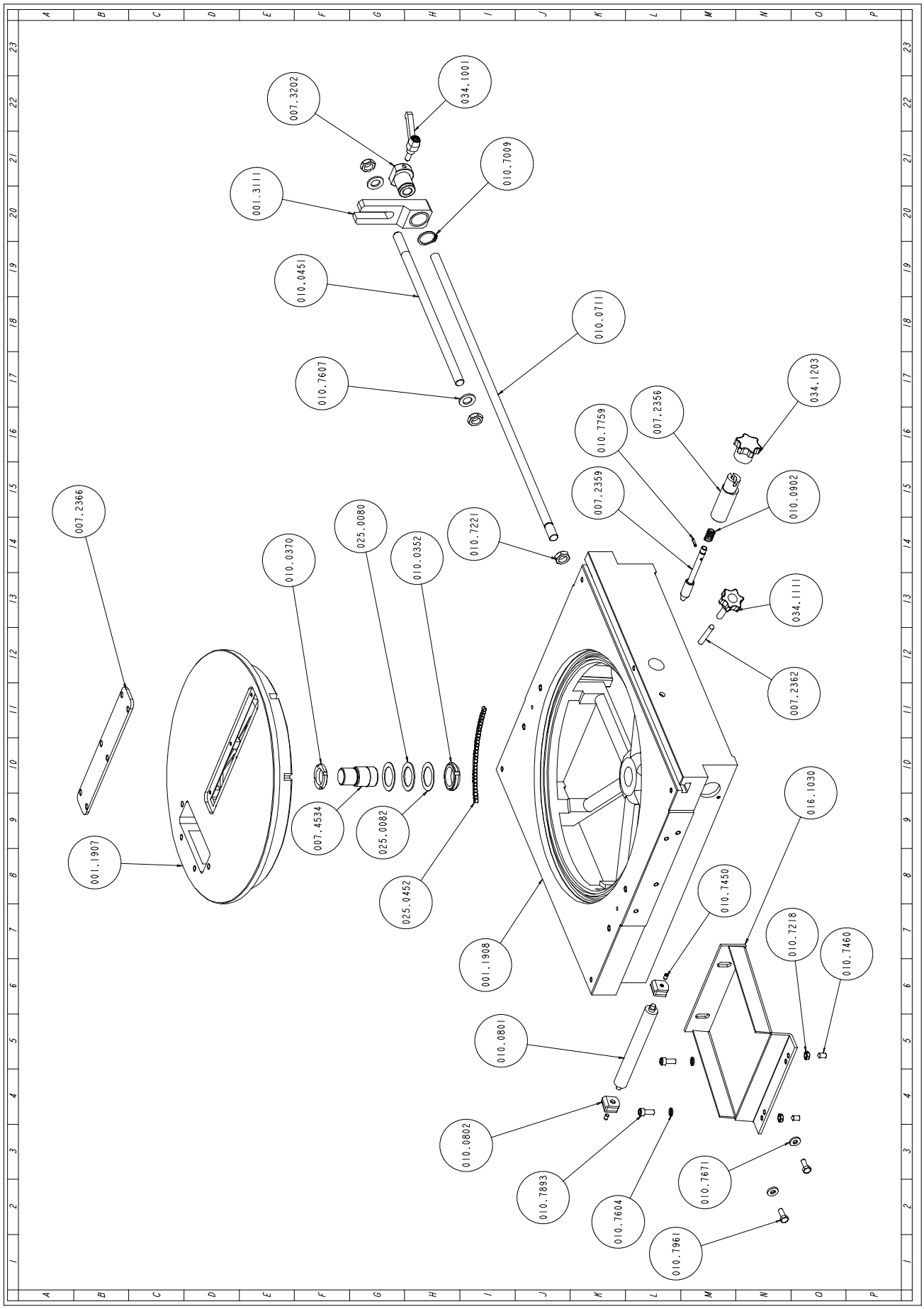
Code	Description	Description	Q.ty
001.1914	SQUADRO MORSA CB 350 MOD. 313	VICE BACK STOP CB 350 MOD.313	1,000
007.2162	SUPPORTO GANASCIA MORSA CB 349- 350	VICE JAW CB 349/350	2,000
007.2165	STAFFA SUPP. GANASCIA MORSA CB 349- 350	VICE JAW SUPPORT CB 349/350	2,000
007.2166	SUPPORTO SX CANNOTTO MORSA	VICE SUPPORT COBRA DIA 50 LEFT	1,000
007.2171	SUPPORTO DX CANNOTTO MORSA	VICE SUPPORT COBRA DIA 50 RIGHT	1,000
007.2169	PERNO BLOCCAGGIO GANASCIA CB 34/350	JAW LOCKING PIN CB 349/350	2,000
007.2371	GANASCIA FISSA SUPPLEMENTARE 50X8 CB350	50X8 ADDITIONAL FIXED JAW CB 350	1,000
007.2372	GANASCIA MOBILE SUPPLEMENTARE 50X8	50X8 ADDITIONAL MOBILE JAW	2,000
010.0303	VITE TESTA QUADRA 22X22 M 12X95	SCREW 22X22 M12X95	2,000
010.7410	GRANO VCE PUNTA CILINDRICA 8X16	8 X 16 CYLIND.POINT VCE GRUB SC-REW	2,000
010.7456	GRANO VCE PUNTA CONICA 8 X 16	8 X 16 CONICAL POINT VCE GRUB SC-REW	2,000
010.7606	RONDELLA 0 12 (010.7606)	0 12 WASHER (010.7606)	2,000
010.7766	SPINA ELASTICA DIAM. 6 X 30 (010.7766)	ELASTIC PIN DIAM. 6 X 30 (010.7766)	2,000
010.7859	VITE TCEI 5 X 12 (010.7859)	TCEI 5 X 12 SCREW (010.7859)	6,000
010.7868	VITE TCEI 6 X 12 (010.7868)	TCEI 6 X 12 SCREW	4,000
010.7924	VITE TCEI 10 X 30 (010.7924)	TCEI 10 X 30 SCREW (010.7924)	4,000
034.1003	LEVA A SCATTO 12 MA	LEVER 12 MA	2,000
043.0043	CILINDRO MORSE 0 50 C8	VICE CYLINDER 0 50	2,000
043.0202	ATTACCO A ESAGONO 8X1/8 - CL 6511	8X1/8 - CL 6511 HEXAGONAL COU-PLING	4,000
007.2369	GANASCIA FISSA 38X8 CB 350	38X8 ADDITIONAL FIXED JAW CB 350	1,000
007.2370	GANASCIA MOBILE 38X8 CB350	38X8 ADDITIONAL MOBILE JAW CB 350	2,000

Head pivot support



Code	Description	Description	Q.ty
001.1904	SUPPORTO PIANO GIREVOLE CB 350M.304	SUPPORT CB 350 MOD.304	1,000
001.1905	SUPPORTO SNODO TESTA CB 350 MOD.305	SUPPORT CB 350 MOD.305	1,000
001.2102	STAFFA ATTACCO FORCELLA MOD. 321	FORK BRACKET	1,000
004.0502	PROTEZIONE FISSA MOD 331	FIXED PROTECTION	1,000
007.2353	VITE ESAGONO SNODO TESTA CB 350	HEX. SCREW CB 350	1,000
007.2363	PERNO ANTIROTAZIONE TESTA E BLOCCAG-GIOPIANO GIREVOLE	PIN CB 350	1,000
010.1201	VITERIA E BULLONERIA	SCREWS AND BOLTS	1,000
010.7205	DADO M10 (010.7205)	M10 SCREW NUT (010.7205)	3,000
010.7603	RONDELLA 0 6 (010.7603)	0 6 WASHER (010.7603)	2,000
010.7605	RONDELLA 0 10 (010.7605)	0 10 WASHER (010.7605)	2,000
010.7871	VITE TCEI 6 X 20 (010.7871)	TCEI 6 X 20 SCREW (010.7871)	2,000
010.7893	VITE TCEI 8 X 20 (010.7893)	TCEI 8 X 20 SCREW (010.7893)	4,000
010.7895	VITE TCEI 8 X 30	TCEI 8 X 30 SCREW	2,000
010.7924	VITE TCEI 10 X 30 (010.7924)	TCEI 10 X 30 SCREW (010.7924)	2,000
010.7976	VITE TE 10 X 30 (010.7976)	TE 10 X 30 SCREW (010.7976)	2,000
010.7978	VITE TE 10 X 40 (010.7978)	TE 10 X 40 SCREW (010.7978)	3,000
010.7993	VITE TSPEI 5 X 12 (010.7993)	TSPEI 5 X 12 SCREW (010.7993)	2,000
028.0361	RACCORDO IN GOMMA CARTER CB 350	BLADE COVER RUBBER JOINT CB 350	1,000

Tourntable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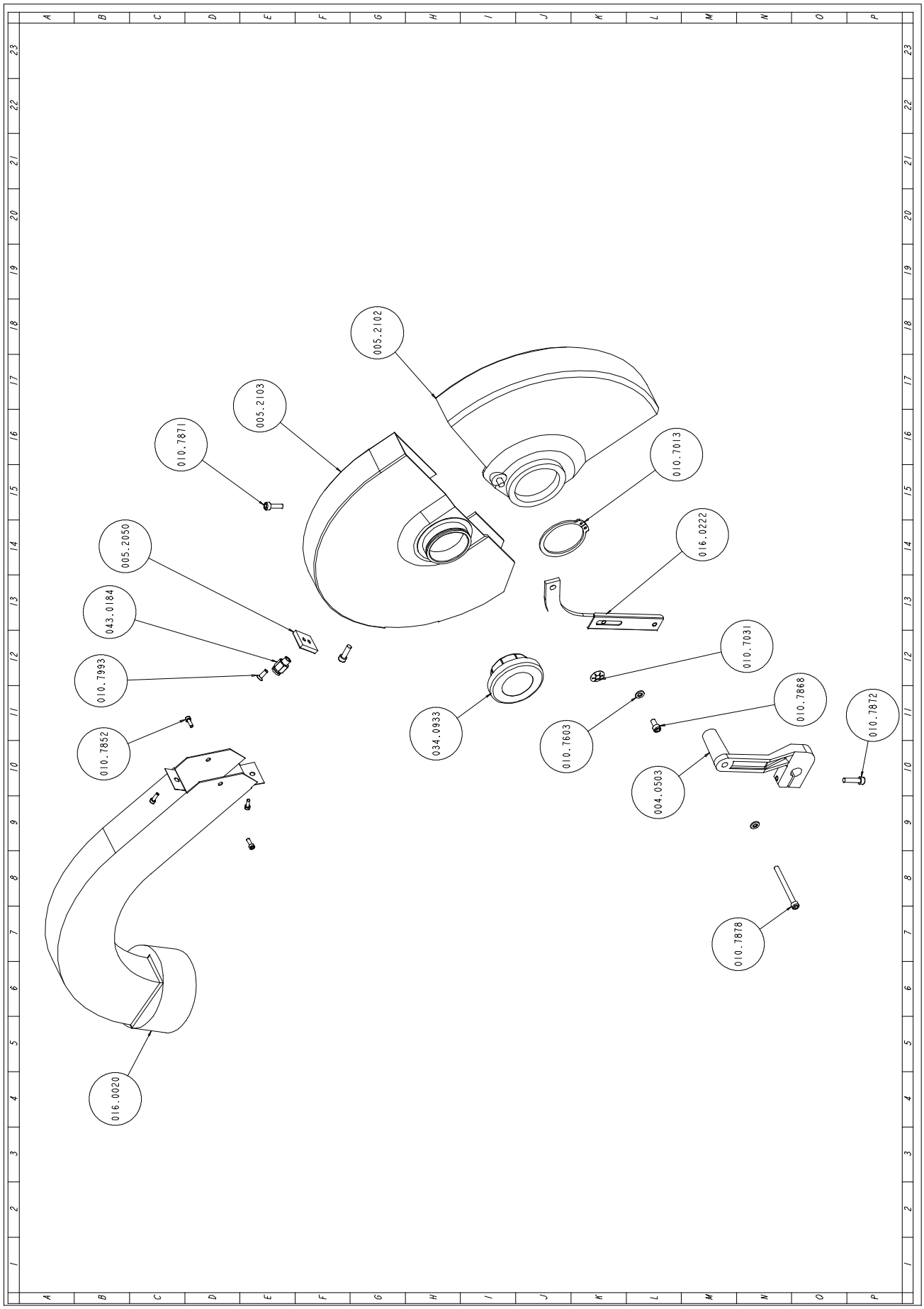
010.0802
010.7893
010.7604
010.7671
010.7961

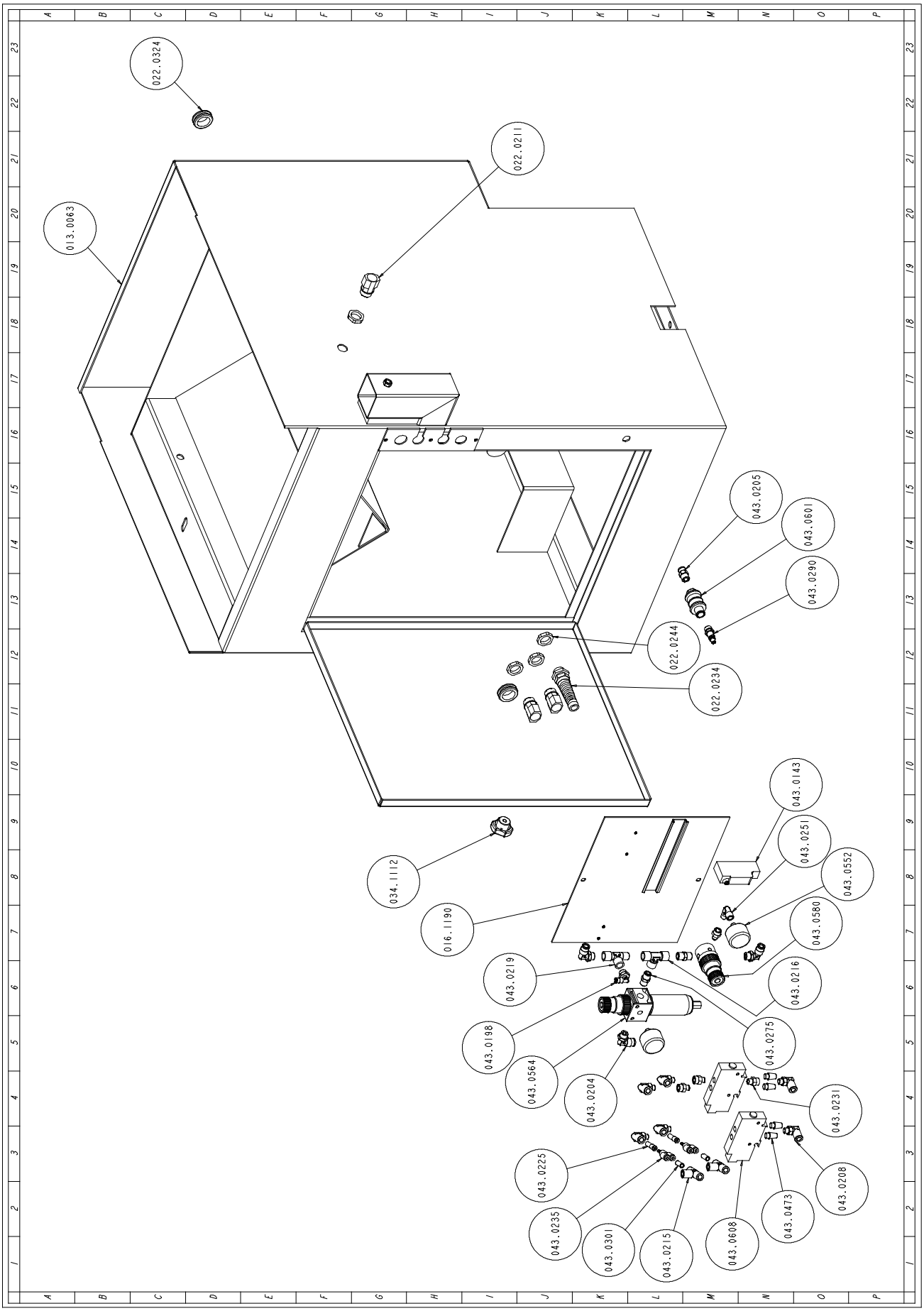
Code	Description	Description	Q.ty
001.1907	PIANO GIREVOLE MOD.333	ROTATING TABLE . MOD.333	1,000
001.1908	BASAMENTO CB 350 N.T. MOD. 332	BASE CB 350 N.S. MOD.332	1,000
001.3111	DISTANZIALE BATTUTA TI- CN 350- SH MOD. 7	STOP SPACER TI- CN 350- SH	1,000
007.2356	ECCENTRICO PUNTO FISSO CB 350 N.T.	ECCENTRIC CB 350 N.S.	1,000
007.2359	PERNO PUNTO FISSO CB 350 N.T.	PIN CB 350 N.S.	1,000
007.2362	PERNO BLOCCAGGIO PIANO GIREVOLE CB 350	LOCKING PIN CB 350	1,000
007.2366	PIASTRA PIANO GIREVOLE CB 350	ROTATING TABLE PLATE CB 350	1,000
007.3202	BOCCOLA X BATTUTA TI- CN	BUSHING FOR STOP TI- CN	1,000
007.4534	PERNO DI CENTRO SH 200- CB 350- TI 370	CENTRE PIN SH 200 - CB 350- TI 370	1,000
010.0352	GHIERA AUTOBLOCCANTE 35X1,5	SELF- LOCKING RING NUT 35X1,5	1,000
010.0370	GHIERA 5S 30X1,5	RING NUT 5S 30X1,5	1,000
010.0451	TIRANTE BATTUTA TAGLI A MISURA	CUT TO MEASURE STOP TIE ROD	1,000
010.0709	ASTA IN POLLICI CROMATA MM.600 0 20 M16X	INCH SCALE 0 20 M16	1,000
010.0711	ASTA MILLIMETRATA CROMATA MM 600	MM SCALE 6000	1,000
010.0802	SUPPORTO PER RULLO CB- TI- FC	ROLLER SUPPORT CB- TI- FC	2,000
010.0902	MOLLA PUNTO FISSO TESTA MOD. 95	HEAD FIXED POINT SPRING	1,000
010.7218	DADO M8 BASSO (010.7218)	M8 LOW SCREW NUT (010.7218)	2,000
010.7221	DADO M16 BASSO (010.7221)	M16 LOW SCREW NUT (010.7221)	1,000
010.7450	GRANO VCE PUNTA CONICA 6 X 6 (010.7450)	6 X 6 CYLINDRICAL POINT VCE GRUB	2,000
010.7460	GRANO VCE PUNTA CONICA 8 X 12	8X12 CONICAL POINT VCE GRUB SC-REW	2,000
010.7604	RONDELLA 0 8 (010.7604)	0 8 WASHER (010.7604)	2,000
010.7607	RONDELLA 0 16 (010.7607)	0 16 WASHER (010.7607)	2,000
010.7671	RONDELLA SPESSORE DIAM. 8 X 3	THICKNESS WASHER DIAM. 8 X 3	2,000
010.7759	SPINA ELASTICA DIAM. 3 X 16 (010.7759)	ELASTIC PIN DIAM. 3 X 16 (010.7759)	1,000
010.7893	VITE TCEI 8 X 20 (010.7893)	TCEI 8 X 20 SCREW (010.7893)	2,000
010.7961	VITE TE 8 X 20 (010.7961)	TE 8 X 20 SCREW (010.7961)	2,000
016.1030	BRACCETTO APPOGGIA BARRA	BAR SUPPORT ARM	1,000
025.0080	GABBIA ASSIALE A RULLINI AXK 3552	AXIAL CAGE WITH ROLLERS AXK 3552	1,000
025.0082	RALLA AS 3552	CENTER PLATE AS 3552	2,000
025.0452	RULLI 6X6 AISI 420	ROLLERS 6X6 AISI 420	30,000
010.0801	RULLO TIPO 304011 0 24 CB- TI- FC L.190	ROLLER 304011 0 24 CB- TI- FC	1,000
034.1001	LEVA A SCATTO 8 MA PK55	LEVER 8 MA PK55	1,000
034.1111	VOLANTINO O 30 M10 X 40	O 30 M10 X 40 HANDWHEEL	1,000
034.1203	IMPUGNATURA NS. DISEGNO M10	MEP MADE HANDWHEEL M10	1,000

Blade guard unit



Code	Description	Description	Q.ty
004.0503	SUPPORTO ASTA PROTEZIONE	PROTECTION ROD SUPPORT	1,000
005.2050	COPERCHIETTO FORO RUBINETTI	TAP COVER	1,000
005.2102	PROTEZIONE MOBILE DIAM. 350 MOD. 329	BLADE PROTECTION 0 350	1,000
005.2103	CARTER DISCO CB 350	BLADE COVER CB 350	1,000
010.7013	ANELLO SEEGER 0 62 (010.7013)	0 62 SEEGER RING (010.7013)	1,000
010.7031	ANELLO SEEGER SK 0 8 (010.7031)	SK 0 8 SEEGER RING (010.7031)	1,000
010.7603	RONDELLA 0 6 (010.7603)	0 6 WASHER (010.7603)	2,000
010.7852	VITE TCEI 4 X 12 (010.7852)	TCEI 4 X 12 SCREW (010.7852)	4,000
010.7868	VITE TCEI 6 X 12 (010.7868)	TCEI 6 X 12 SCREW	1,000
010.7871	VITE TCEI 6 X 20 (010.7871)	TCEI 6 X 20 SCREW (010.7871)	2,000
010.7872	VITE TCEI 6 X 25 (010.7872)	TCEI 6 X 25 SCREW (010.7872)	1,000
010.7878	VITE TCEI 6 X 70 (010.7878)	TCEI 6 X 70 SCREW (010.7878)	1,000
010.7993	VITE TSPEI 5 X 12 (010.7993)	TSPEI 5 X 12 SCREW (010.7993)	1,000
016.0020	CONVOGLIATORE TRUCIOLI CB 350	SWARF CONVEYOR CB 350	1,000
016.0222	ASTA COMANDO PROTEZIONE CB 350 N.T.	GUARD BRACKET CB 350 N.S.	1,000
034.0933	TAPPO CARTER DISCO	BLADE COVER TAP	1,000
043.0184	ATTACCO A ESAGONO 6X1/8 CL 6511	HEX COUPLING 6X1/8 CL 6511	1,000

Base vice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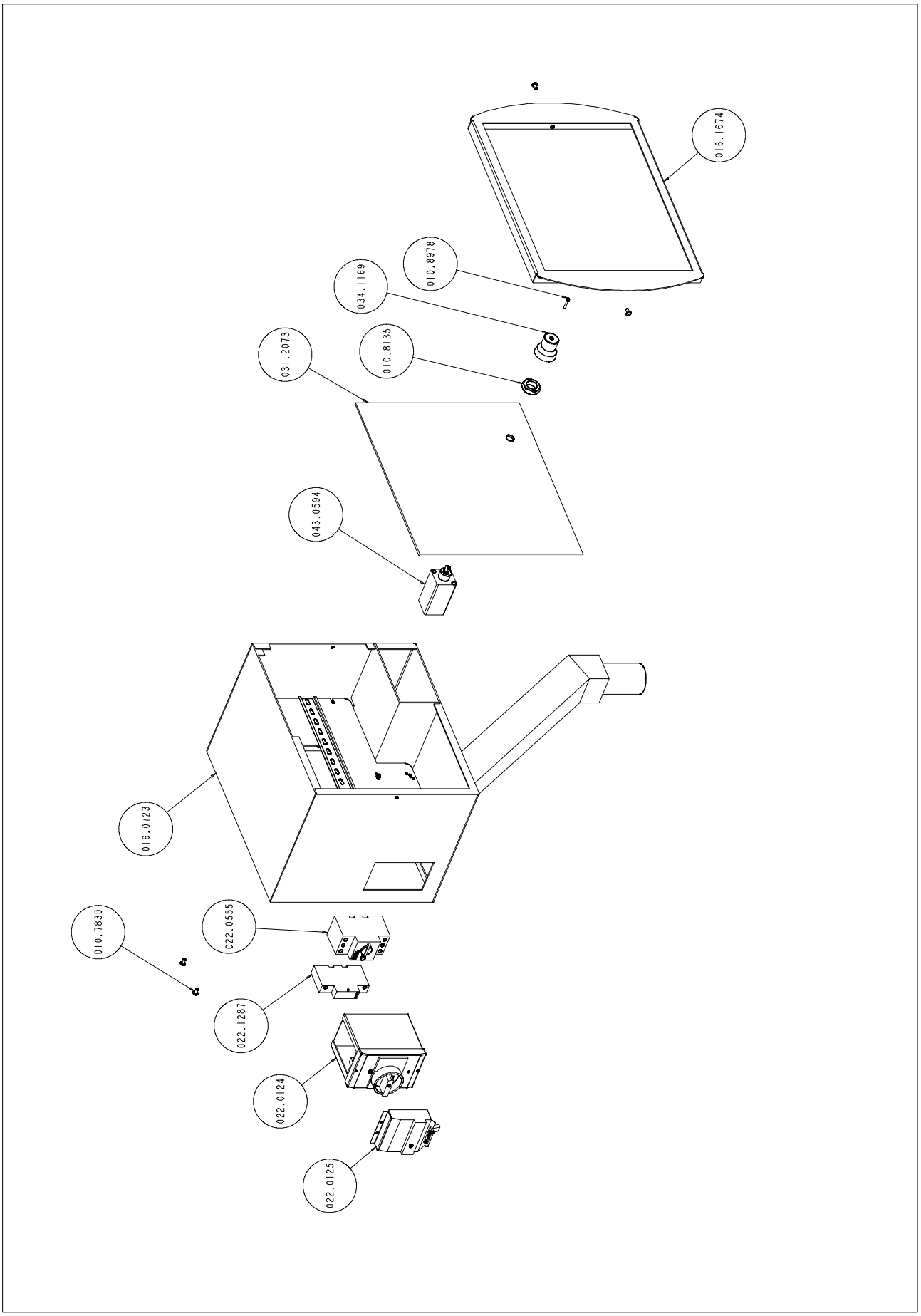
043.0301
043.0608
043.0215

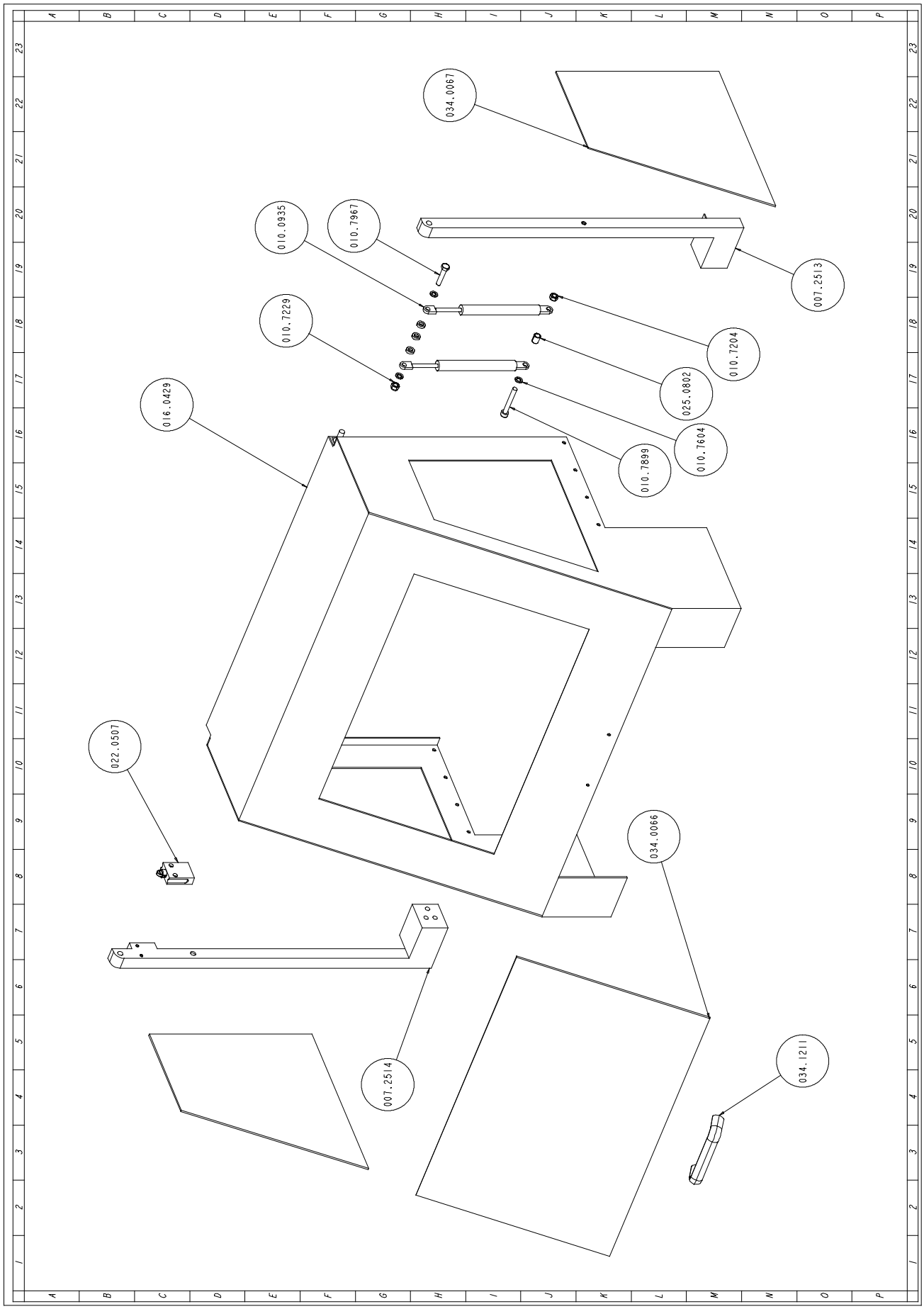
Code	Description	Description	Q.ty
010.7204	DADO M8	M8 SCREW NUT	1,000
013.0063	PIEDISTALLO	STEEL BACE	1,000
016.1190	PANNELLO CABLAGGIO APPARECCHIATURA-PNEUMATICA	PNEUM.EQUIPMENT WIRING PANEL	1,000
022.0211	RACCORDO RAPIDO SEM PG 13,5	RAPID JOINT SEM PG 13,5	1,000
022.0234	PRESSACORDONE 3246 NERO PG 13,5	CORD PRESSER	4,000
022.0244	CONTRODADO 3217B GRIGIO PG 13,5	LOCK NUT 3217B GREY PG 13,5	1,000
022.0324	PASSACAVI 24 INC.MM.2.5	FAIRLEADS 24 INC.M M.2.5	1,000
022.0900	GUIDA OMEGA 3	OMEGA 3 GUIDE	1,000
034.1112	VOLANTINO O 40M8 X PIEDISTALLO	O 40 M8 HANDWHEEL X STEEL BASE	1,000
043.0143	PRESSOSTATO PNEUMATICO PS1P1091	PS1P1091 PNEUMATIC PRESSURE SWITCH	1,000
043.0198	ATTACCO A GOMITO GIREVOLE 4X1/4 CL 6521	4X1/4 TURNING ELBOW JOINT	1,000
043.0204	ATTACCO A GOMITO 8X1/4 GIREVOLECL 6521	8X1/4 - CL 6521 ELBOW COUPLING	5,000
043.0205	ATTACCO A ESAGONO 8X1/4 - CL 6510	8X1/4 - CL 6510 HEXAGONAL COU-PLING	1,000
043.0208	ATTACCO A GOMITO 8X1/8 - CL 6521	8X1/8 - CL 6521 ELBOW COUPLING	2,000
043.0215	T.E. INTERMEDIO 0 8 - CL 6540	T.E. 0 8 - CL 6540 INTERMEDIATE	2,000
043.0216	RACCORDO A - T- FFF 1/4 CL 2003	FFF 1/4 CL 2003 T JOINT	2,000
043.0219	RACCORDO A - T- MFF 1/4' CL- 2070 310I	MFF 1/4" CL- 2070 310I T JOINT	1,000
043.0225	RIDUZIONE DA 4X8 - CL 6800	DA 4X8 - CL 6800 REDUCTION	2,000
043.0231	RIDUZIONE 1/8- 1/8 MF CL 2520	1/8- 1/8 MF CL 2520 REDUCTION	4,000
043.0235	BIFORCAZ. A Y TUBO 4MM. 24275320	Y BRANCHING 4 MM	2,000
043.0251	GOMITO M.F. 1/8 - CL 2020	M.F. ELBOW RLA 8 - 1/8 - CL 2020	1,000
043.0275	NIPPLO CONICO A2- 1/4 - CL 2500	A2- 1/4 - CL 2500 CONICAL NIPPLE	1,000
043.0290	INNESTO RAPIDO 1/4 GHIOTTO 13/A	1/4 QUICK COUPLING	1,000
043.0301	TUBO RILSAN 8X6 NERO COD.17257181	8X6 BLACK RILSAN HOSE	2,000
043.0473	SILENZIATORE IN OTTONE 1/8' CL 2921	"1/8"" CL 2921 BRASS SILENCER"	4,000
043.0552	MANOMETRO O 40	MANOMETER 0 40	1,000
043.0564	FR 1/4 20- 08	FR 1/4 20- 08	1,000
043.0580	REGOLATORE MR 1/4 O- 8	MR 1/4 O- 8 REGULATOR	1,000
043.0601	VALVOLA VMS 114- 1/4 08	VMS 114- 1/4 08 VALVE	1,000
043.0608	VALVOLA SINGOLA PVLB111618- 5 VIE 1/8	5 WAY 1/8 PVLB111618 VALVE	2,000

Control panel unit



Code	Description	Description	Q.ty
010.7830	VITE BUTON 5 X 10	5 X 10 BUTON SCREW	4,000
010.8135	DADO M20 BASSO	M20 LOW NUT	1,000
010.8978	VITE TCEI 3 X 20	3X20 TCEI SCREW	1,000
016.0723	QUADRO COMANDI	CONTROL PANEL FRAME	1,000
022.0124	CUSTODIA ISOLANTE E- PKZO- GR CON MANOPOLAROSSA COD. 72908	HOUSING W.RED HANDLE	1,000
022.0125	BLOCCO LUCCHETTABILE SBV- PKZ0- ECOD.35127	LOCKABLE BLOCK	1,000
022.0555	SGANCIATORE U- PKZ0 V.400.50 COD.73138	RELEASER U- PKZ0 V.400.50	1,000
022.1287	INTERRUTTORE PKZM0- 10(TERMICA)COD.72739	SWITCH PKZM0- 10 (THERMAL)	1,000
034.1169	MANOPOLA REGOLAZIONE MONOGIRO	FEED RATE KNOB (W/ SEMICIRCLE HOLE)	1,000
043.0594	REGOLATORE IDRAULICO MONOGIROUNIDIRE- ZIONALE (BAFFO A)	HYDRAULIC REGULATOR	1,000
031.2073	CONSOLLE DI PROGRAMMAZIONE	PROGRAMMING CONSOLLE	1,000
016.1674	CORNICE QUADRO COMANDI	CONTROL PANEL FRAME FOR	1,000

Guard group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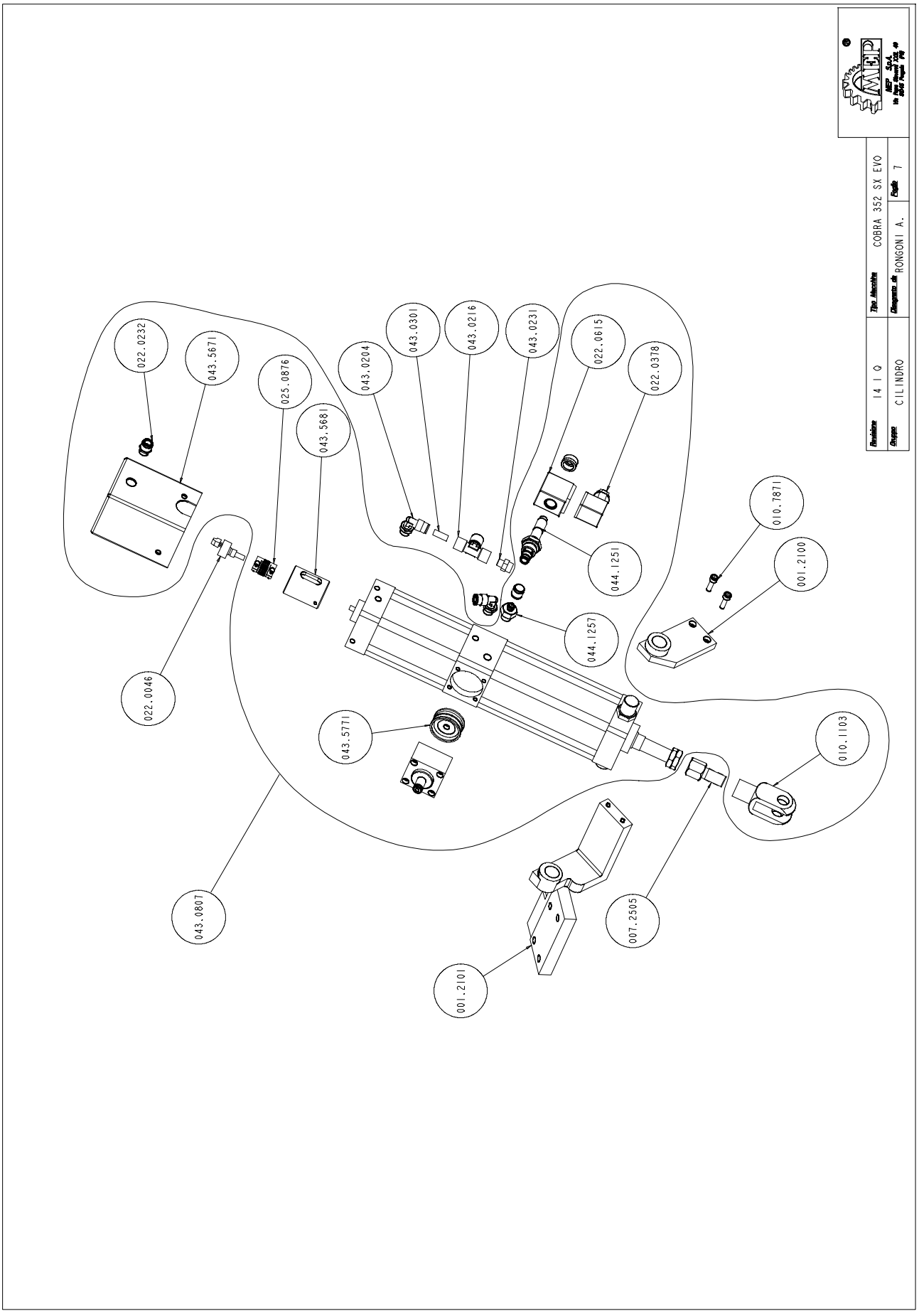
034.1211

Code	Description	Description	Q.ty
007.2513	SUPPORTO PROTEZIONE DX	RIGHT PROTECTION SUPPORT	1,000
007.2514	SUPPORTO PROTEZIONE SX	LEFT PROTECTION SUPPORT	1,000
010.0935	MOLLA A GAS 125 MM.400N	GAS SPRING 125 M M.400N	2,000
010.7204	DADO M8	M8 SCREW NUT	1,000
010.7229	DADO AUTOBLOCCANTE M8	M8 SELF- LOCKING SCREW NUT	1,000
010.7604	RONDELLA 0 8	0 8 WASHER	3,000
010.7893	VITE TCEI 8 X 20	TCEI 8 X 20 SCREW	1,000
010.7899	VITE TCEI 8 X 60	TCEI 8 X 60 SCREW	1,000
010.7967	VITE TE 8 X 40	TE 8 X 40 SCREW	1,000
016.0429	PROTEZIONE CB 350 SX	GUARD CB 350 SX	1,000
022.0507	FINECORSA D4C- 1902 2M ALIM.	LIMIT SWITCH F.FEEDER	1,000
025.0802	BOCCOLA GRAFITATA L. 15 DIAM. 10	GRAPHITIZED BUSHING L. 15 DIA M. 10	1,000
034.0066	PROTEZIONE ALIMENTATORE STAMPATA	FEEDER PRINTED GUARD	1,000
034.0067	PROTEZIONE LATERALE	SIDE GUARD	2,000
034.1211	MANIGLIA GN- 565- 20- 128.SW	GN- 565- 20- 128.SW HANDLE	1,000

Cylinders


022.0232
043.5671
025.0876
043.5681
043.0204
043.0301
043.0216
043.0231
022.0615
022.0378
044.1251
044.1257
010.7871
001.2100
022.0046
043.5771
010.1103
043.0807
007.2505
001.2101
Revisione 1 4 1 0
Gruppo CILINDRO
Tipo Macchina COBRA 352 SX EVO
Disegnato da RONGONI A.
Foglio 7

Code	Description	Description	Q.ty
001.2100	SUPPORTO ESTERNO CILINDRO MOD. 320A	OUTE SUPPORT	1.000
001.2101	STAFFA SOSTEGNO GRUPPOPNEUMATICO	BRACKET	1.000
007.2505	PROLUNGA FORCELLA	FORK EXTENSION	1.000
010.1103	FORCELLA 16 X 1,5	16 X 1,5 FORK	1.000
022.0046	POTENZIOMETRO 6639S- 001- 202	6639S- 001- 202 POTENTIOMETER	1.000
043.0807	UNITA' IDROPNEUMATICA 0 63 C.70	HYDROPNEUM.UNIT 0 63 C.70	1.000
010.7871	VITE TCEI 6 X 20 (010.7871)	TCEI 6 X 20 SCREW (010.7871)	1.000
022.0232	PRESSACAVO IN OTTONE 1/4 BM 2450	BRASS CABLE PRESSER 1/4 BM 2450	1.000
022.0378	CONNETTORE V.1406 X BOBINA RAC VALVOLA-RIGENERATRICE	CONNECTOR F.REGENERATOR VALVE COIL	1.000
022.0615	BOBINA V24 RAC X VALVOLA RIGENERATRICE-CILINDRO	COIL FOR CYLINDER VALVE SH 310 SX	1.000
025.0876	GIUNTO WA 6- 6.35 MM.28 X CILINDRO	JOINT WA 6- 6.35 M M.28 FOR CYLIN-DER	1.000
043.0204	ATTACCO A GOMITO 8X1/4 GIREVOLECL 6521	8X1/4 - CL 6521 ELBOW COUPLING	1.000
043.0216	RACCORDO A - T- FFF 1/4 CL 2003	FFF 1/4 CL 2003 T JOINT	1.000
043.0231	RIDUZIONE 1/8- 1/8 MF CL 2520	1/8- 1/8 MF CL 2520 REDUCTION	1.000
043.0301	TUBO RILSAN 8X6 NERO COD.17257181	8X6 BLACK RILSAN HOSE	1.000
043.5671	PROTEZIONE POTENZIOMETRO CILINDRO	GUARD F.CYLINDER POTENTIOMETER	1.000
043.5681	SUPPORTO POTENZIOMETRO CILINDRO	CYLINDER POTENTIOMETER SUP-PORT	1.000
043.5771	KIT COMPENSATORE UL 63- 80	UL 63- 80 COMPENSATOR KIT	1.000
044.1251	VALVOLA RIGENERATRICE CILINDRO 310 SX- AX V.24 DC	CYLINDER REGENERATING VALVE 310SX- AX	1.000
044.1257	VALVOLA CARICO CILINDRO TI- CB CNC	CYLINDER LOADING VALVE TI- CB CNC	1.000

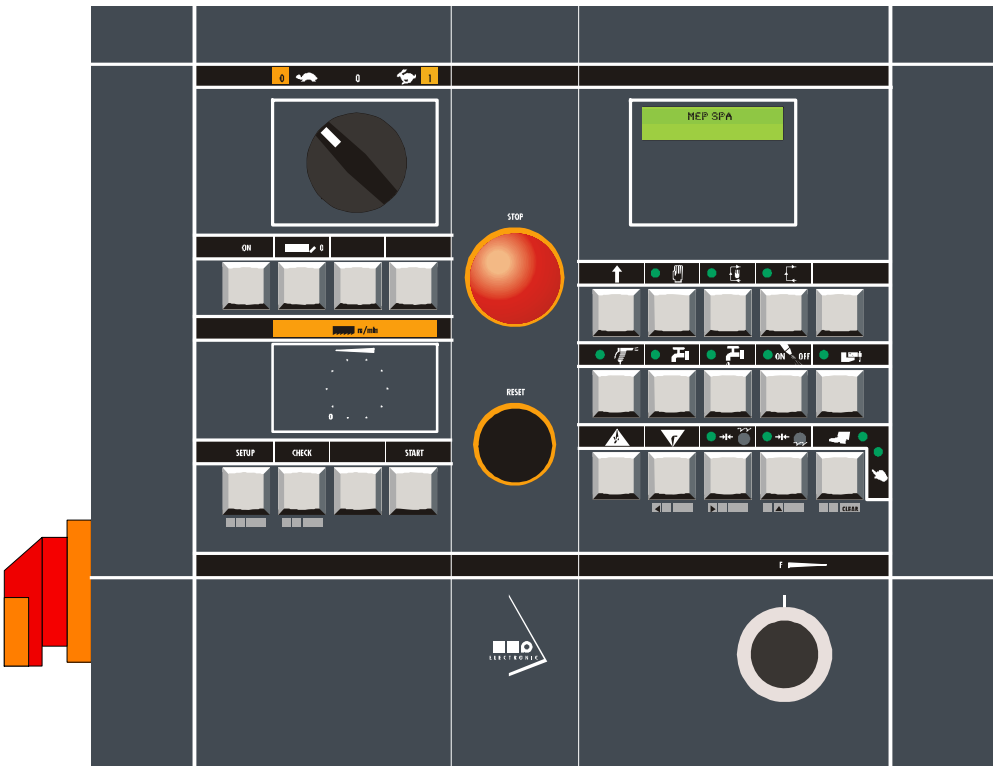
Adjustments

The steps for setting the electronic, mechanical, and pneumatic systems on SX models, are illustrated in this chapter. By following these instructions you can “customise” your machine to carry out the type of cut to be made, thus optimising the time taken for this operation.

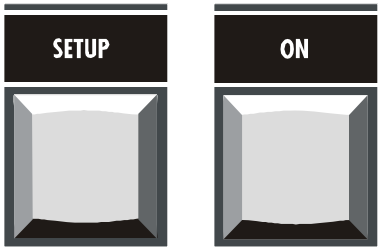
Displaying and editing the set- up parameters

The machine set- up parameters may be programmed directly from the control console.

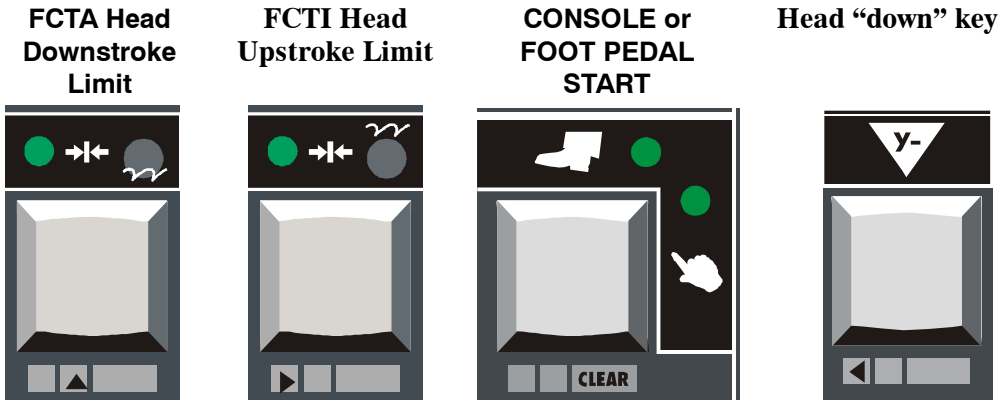
▶ Power up the machine at the main switch located on the left hand side.



▶ Press simultaneously and in sequence the keys SET- UP and ON;



▶ Once inside the SET- UP menu, use the following keys to navigate through the different menu screens:



▶ The FCTA key (▲) allows you to change parameter settings in increments of one unit.

▶ The FCTI key (▶) instead has two functions: it is used to save parameter settings and navigate inside the SET- UP menu.

▶ The console or foot pedal START selection key allows you to zero the current parameter setting.

▶ The key ”Y- ” enables the cursor to return to the previous positions.

▶ To quit the SETUP parameters, press in sequence and simultaneously the SETUP and ON keys.

Set language parameter

▶ Press ▲ to change the display messages presentation language.

Set parameter for machine type

▶ Press ▶ to display the parameter for the machine type. Press the ▲ key to change machine type; each press of the key corresponds to a different machine configuration.

Semiautomatic- Dynamic and Manual operation setting

This function is not included for this machine model. Thus, do not consider this video page and go to the next one by the key ▶.

Pedal control setting (optional)

▶ Press ▶ to display the pedal control parameter, then press ▲ to set the presence (YES) or the absence (NO) of this optional.

Inverter presence settings

This function is not included for this machine model. Thus, do not consider this video page and go to the next one by the key ▶.

Blade speed proximity settings

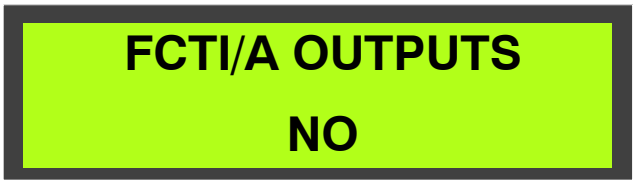
This function is not included for this machine model. Thus, do not consider this video page and go to the next one by the key ▶.

Minimal lubrication system settings

▶ Press ▶ to display the min. lubrication system parameter, then press ▲ to set the presence or the absence of this optional, choosing YES or NO.

FCTI / FCTA digital output enabling setting

▶ Press the ▶ key to display the parameter enabling or disabling the outputs of the positions FCTI (backward head limit switch) and FCTA (forward head limit switch). Press the ▲ key to set YES or NO.



Disc stop setting

▶ Press the ▶ key to display the disc stop parameter, then press ▲ to set the value of this parameter.
If the value is set as 2, the disc never stops;
if it is set as 1, the disc stops in the RHLS (rear head limit switch) point;
if the value is set as 0, the disc stops in the FHLS (forward head limit switch) point.

Cutting vice opening setting

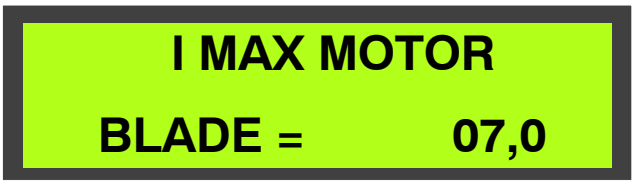
▶ Press the ▶ key to display the parameter indicating if the shearing vice must open when the head is in the FCTI (backward head limit switch) point or in the FCTA (forward head limit switch) point; press ▲ to set the value as 0 (vice opening in FCTA), or as 1 (vice opening in FCTI).

Cutting vice opening/closing time setting

▶ Press the ▶ key to display the parameter indicating the time between the vice closing and the cut start and between the cut end and the vice re- opening. Press ▲ to change this value, ranging between 0.0 and 9.9 seconds.

Machine maximum power input setting

▶ Press the ▶ key to display the parameter and then increase or reduce the value with the ▲ key.



N.B. The factory set values are relative to the motor installed on the machine.

Measurement unit setting

▶ Press the ▶ key to display the parameter, then press ▲ to set the value as 0 or 1, to choose the measurement unit expressed respectively in pounds or

kilograms.

Setting minimum blade tensioning

This function is not included for this machine model. Thus, do not consider this video page and go to the next one by the key ▶.

Display backlighting time setting

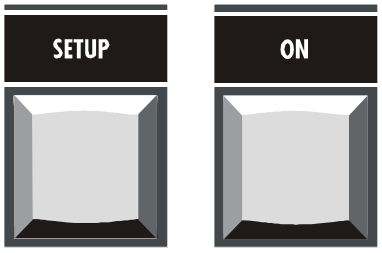
▶ Press the ▶ key to display the LCD backlighting time parameter, then press the ▲ and ▶ keys to set the time expressed in minutes.

Cutting head stroke

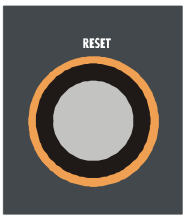
The cutting head crosses the space between the forward and backward position definable in the SET- UP with the CUTTING HEAD POSITION parameter. A value between 000 and 300 must be set.
Check that the bow, really and not virtually, crosses the amplitude of the cut between the structural limits of cutting head backward end run and cutting head forward end run. The scope of adjustment is to set the value of the real cutting head position both at FCTI (backward limit 275÷300) and at FCTA (forward limit 008÷012).
Two adjustments are performed to obtain this result: one on the cutting head cylinder and the other on the IUD/IUV layout of the M30 controller.
Operation sequences:

▶ Power the machine rotating the main switch on the left side of the console;

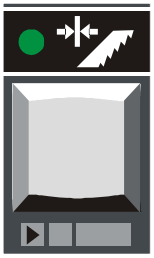
▶ Press simultaneously and in sequence the keys SET- UP and ON;



▶ Press the RESET.



▶ scroll the machine parameters with the key indicated in the figure till reaching the following video page:

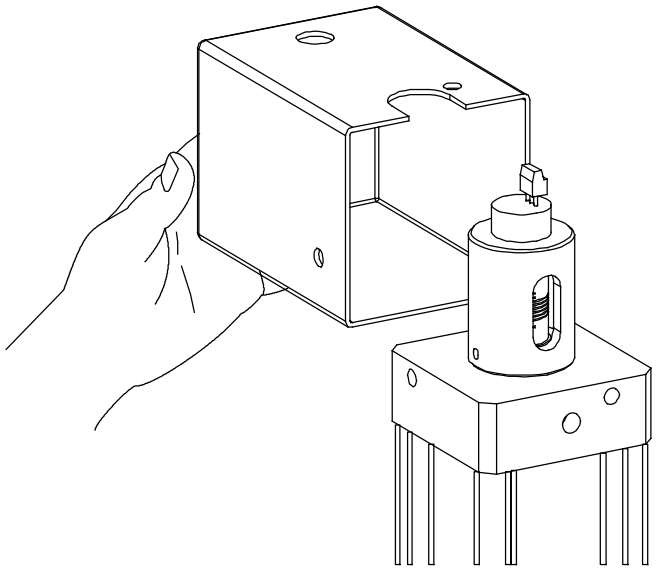


▶ Press in sequence and simultaneously the â key and the key for the head lowering (Y-), position the bow completely downwards;

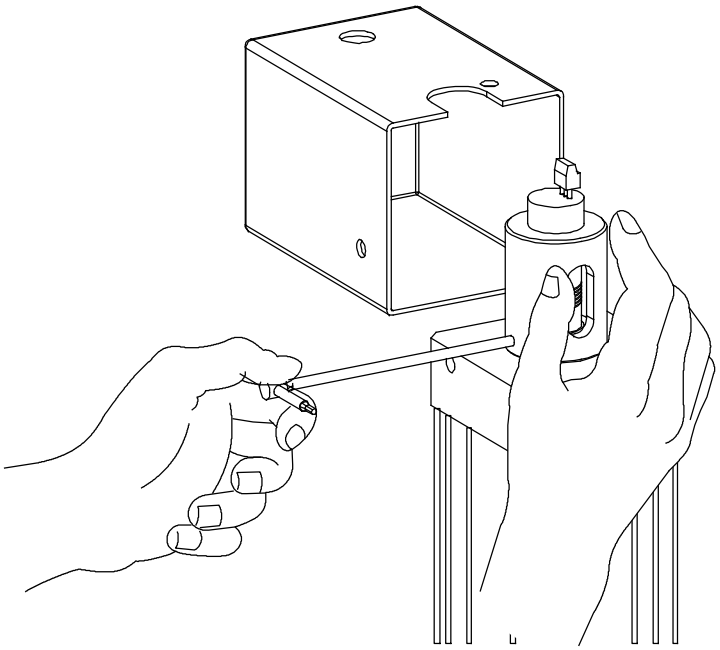
The down position must have a value ranging between 008 and 012, otherwise operate as follows:

▶ Remove the fixing screws from the black box on the cylinder using a hex wrench.

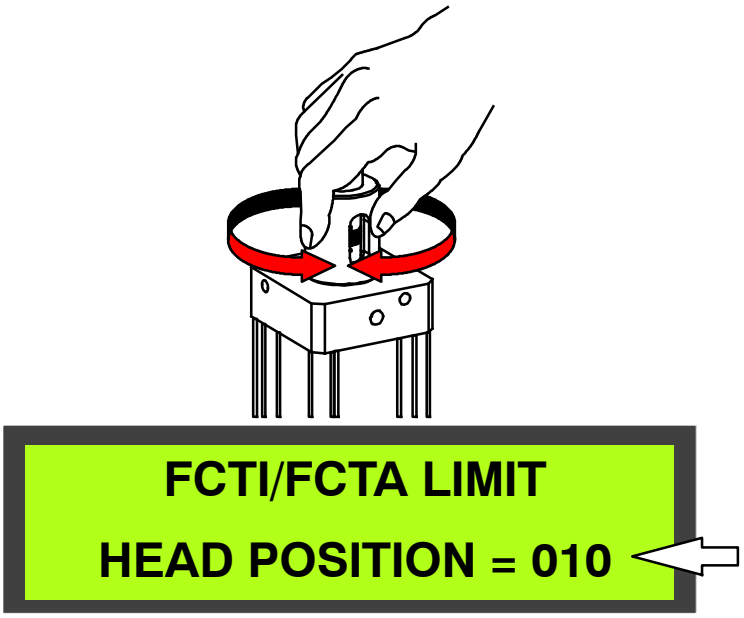
▶ Remove the box protecting the potentiometer, taking care not to tug at the connection cables.



- Using an Allen key, slacken the grub screws fixing the rod and free the potentiometer body.

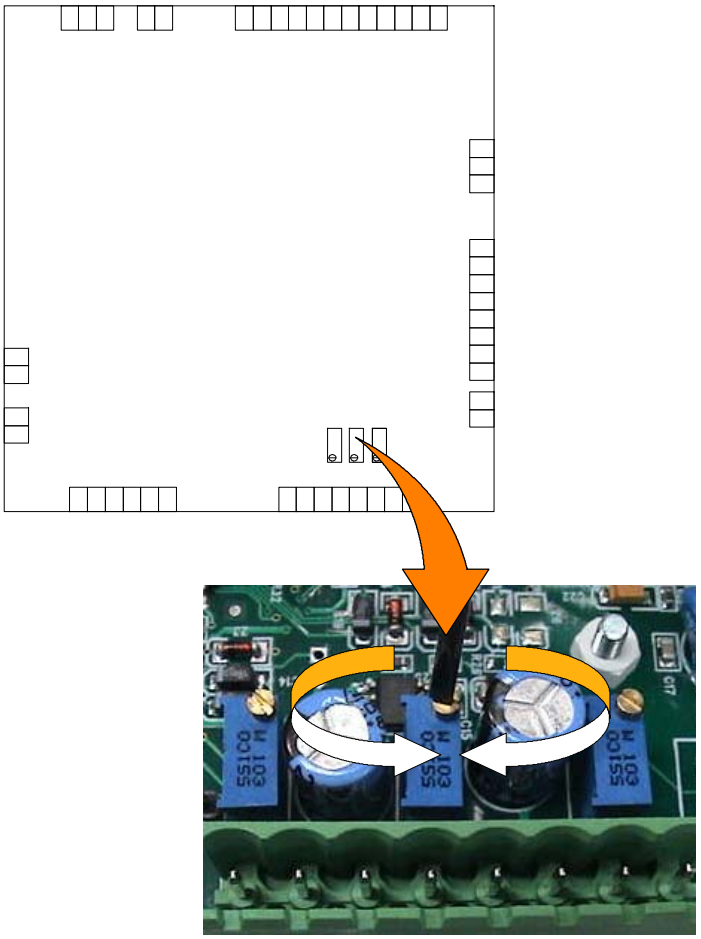


- Manually rotate the potentiometer body until the display readout is between 008÷012.

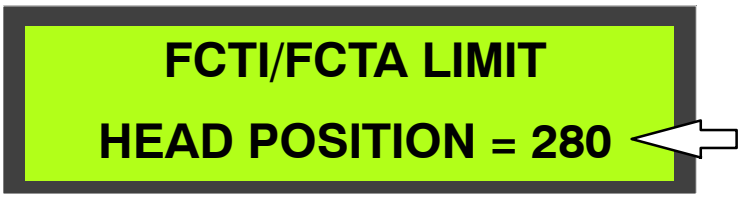


- Lock the potentiometer support in place using the grub screw. Close the cylinder box and tighten down the screws.
- Press the ⇑ and FCTA keys in sequence and simultaneously.
- Set the FCTI point, taking the head completely backwards pressing in sequence and simultaneously the ⇑ key and the key for the head lifting (Y+).
- Open the control board removing the frame and pull the keyboard out of the console;

▶ Identify the board IUD/IUV of the controller M30 to adjust the potentiometer indicated by the arrow in the following image:



▶ Three potentiometers are mounted on the IUD/IUV card. Adjust the adjustment screw of the potentiometer indicated by the arrow by a screw- driver at a value of 275÷300; the obtained variation is displayed on the machine.

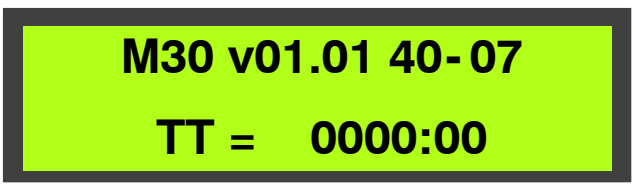


▶ Press simultaneously and in sequence the keys SET- UP and ON to quit the SETUP parameters:

▶ Test to make sure it is functioning correctly.

Software version and total use time of the machine

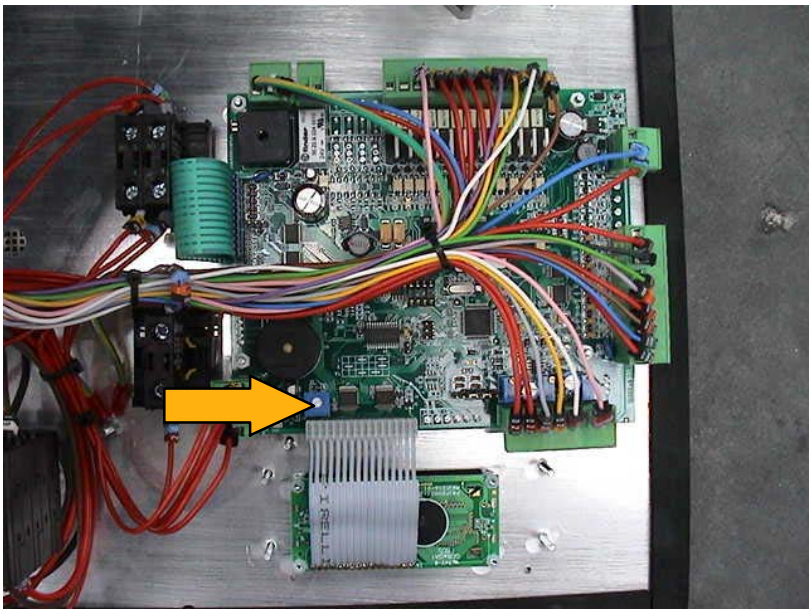
▶ This parameter indicates the installed software version and the total working time of the machine.



Adjusting the display brightness

If external factors like changing ambient lighting conditions in the machine installation site, affect visibility, adjust the brightness of the control and programming console display. This is very important since the operator must be able to clearly read the display messages at all times.

▶ To adjust the brightness, first remove the screws fixing the front console panel. The photo below illustrates the M30 controller card on which the brightness potentiometer is marked by an arrow.

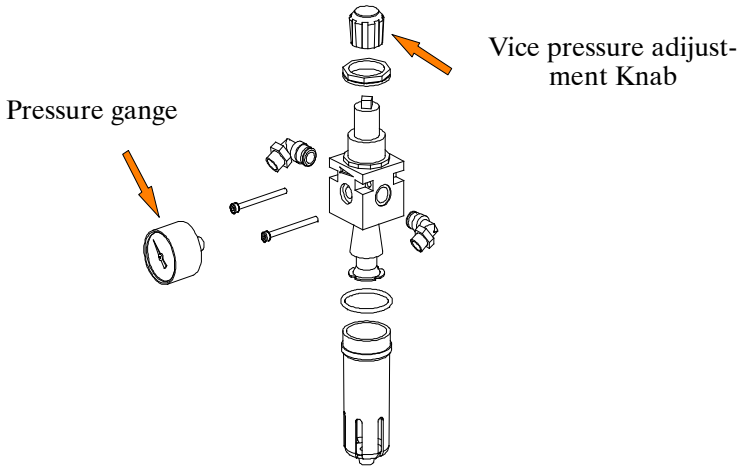


▶ Using a screwdriver, rotate the potentiometer until the required display brightness is obtained.

Air treatment unit

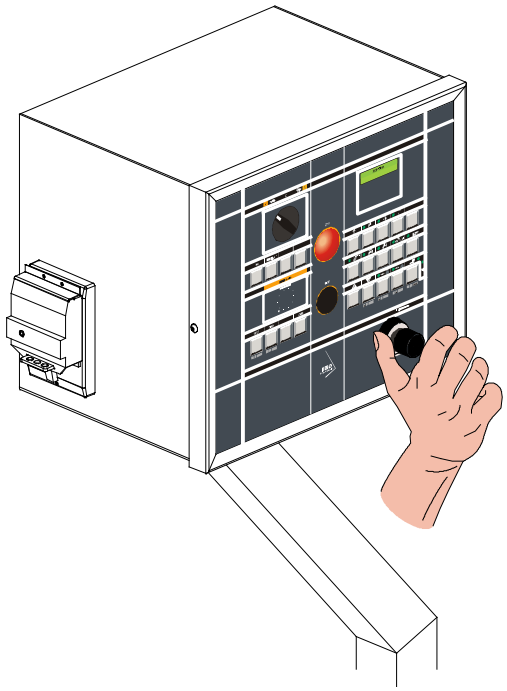
The pneumatic circuit on the machine activates the shearing vice by means of the volampress cylinder, and the machine's cutting head by means of the oil pneumatic cylinder.
The compressed air is conditioned and purified as it enters by a treatment unit that, when regulated, stabilises the pressure at around 6 Bar, depending on the pressure in use in the factory.
In any case, the pressure can be set where material may be deformed or may prove to be unstable during cutting, and the vice is positioned at 2÷3 mm from the workpiece before it is closed.
One requirement is for the the user of this machine to provide a plant in his factory with the characteristics shown in Chapter 4.
The figure below shows an exploded view of the air treatment unit. The operating

pressure of the vice shown on the pressure gauge is set by rotating the handle indicated by the arrow.



Cutting head operating pressure

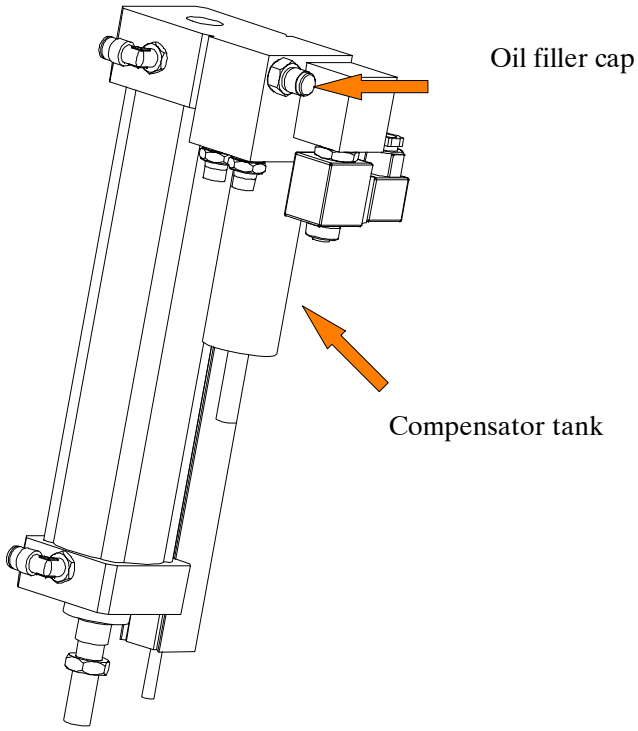
The cutting head cuts the material pushed by a hydro pneumatic cylinder, with a downstroke speed set by the oil flow regulator on the control panel. The regulator has a scale of 0 to 9 and is indicated on the panel by the symbol  : when this is rotated clockwise, the downstroke speed is reduced, when it is turned counter-clockwise the speed is increased.



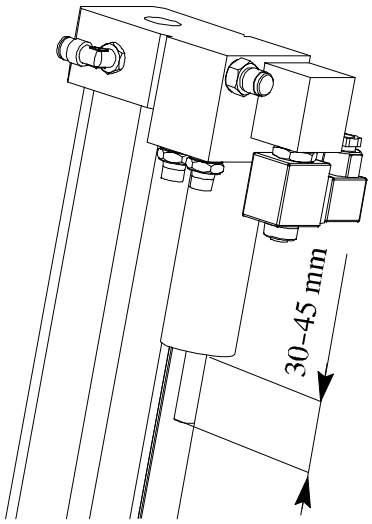
Cutting head actuator cylinder (CPT)

Replenishing the head cylinder

When the oil level in the compensator tank falls it must be topped up. The figure below illustrates the various components of the cutting head cylinder.



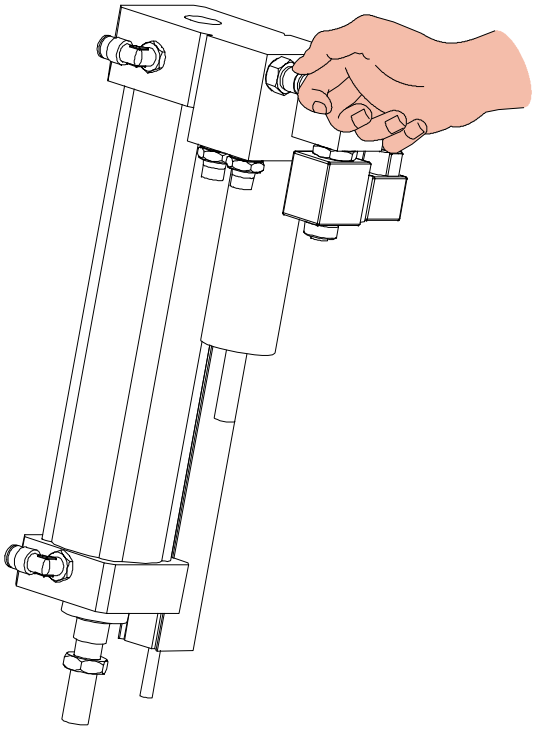
The level decrease is evaluated by measuring the distance between the seat of the split pin on the stem and the tank that, in standard conditions, must be about 30 mm when the cutting head is in the FCTA position (forward head limit switch) and about 45 mm when the head is in FCTI (backward head limit switch).



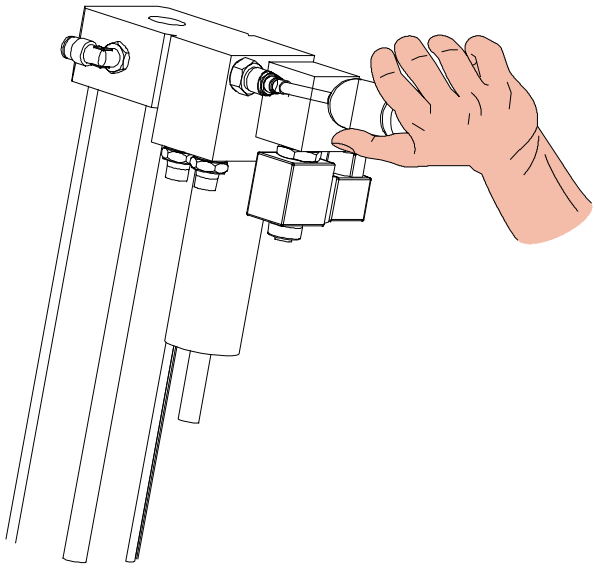
If this is not the case, top up the oil level as follows:

▶ keep the head in the FCTI position (fully up);

▶ unscrew and remove the filler cap on the side of the cylinder;



▶ then, using an electric or manual pump like the one shown in the figure, fill the cylinder with AGIP ATF DEXRON hydraulic oil or one with similar characteristics;



▶ when the rod protrudes by 30÷45 mm, the correct oil level has been restored;

▶ run a few dummy cutting strokes in semi- automatic mode to expel any air from inside the circuit. If cutting head movement is not linear and constant, and the rod retracts by several millimetres, top up the oil level again.

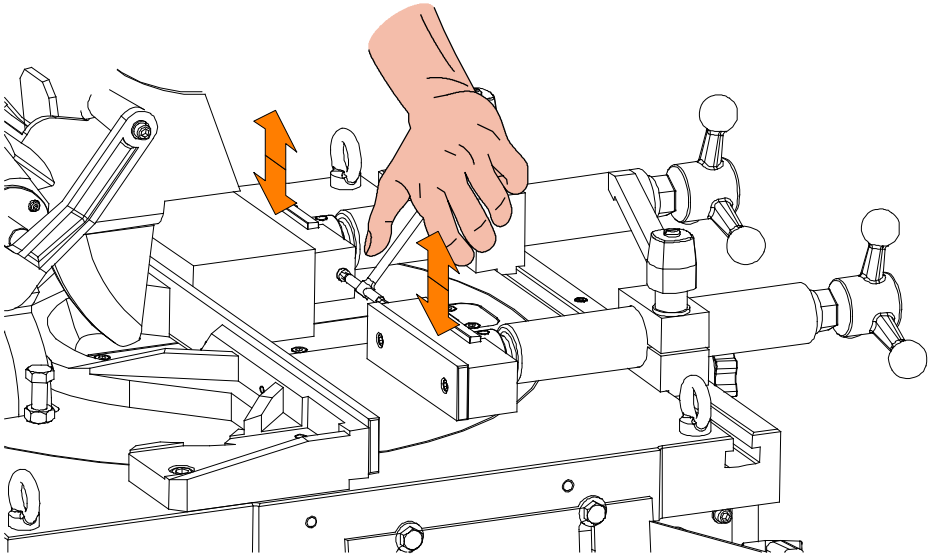
Shearing vices

The machine can be equipped with mechanical or pneumatic vices. Both in the manual and MA versions the vices can move in longitudinal and cross direction, as they are installed on movable supports sliding on the prismatic guide of the fixed platform.

Jaws replacement and height adjustment

When cutting material with section equal to the machine max. capacity, it is necessary:

- ▶ to remove the standard jaws from the piece- supporting shoulder;
- ▶ install the jaws supplied with the accessory pack (see inside instructions);



- ▶ loosen the lock dowel of the movable jaws positioned outside the jaws supporting block;
- ▶ lift the block till getting the clearance necessary for tightening the material, then lock the obtained position tightening the two dowels.

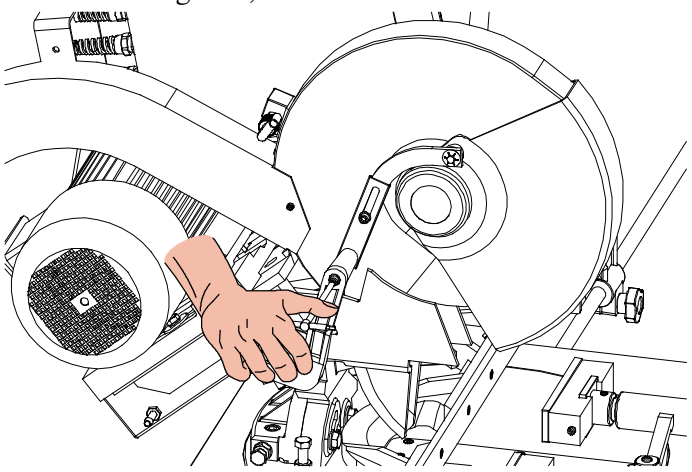
Disc

Circular saws with hard metal teeth for cutting non- ferrous metals offer all the advantages provided by metal carbides used as cutting tools. Their enormous wear resistance allows for high cutting speeds and a long lifetime. This leads to a big increase in the quantity of swarf removed per unit time and a consequent increase in efficiency. This is of great economic importance if you need to cut large quantities of material or highly resistant materials which would be difficult to cut in any other way.

Changing the blade

To change the blade proceed as follows:

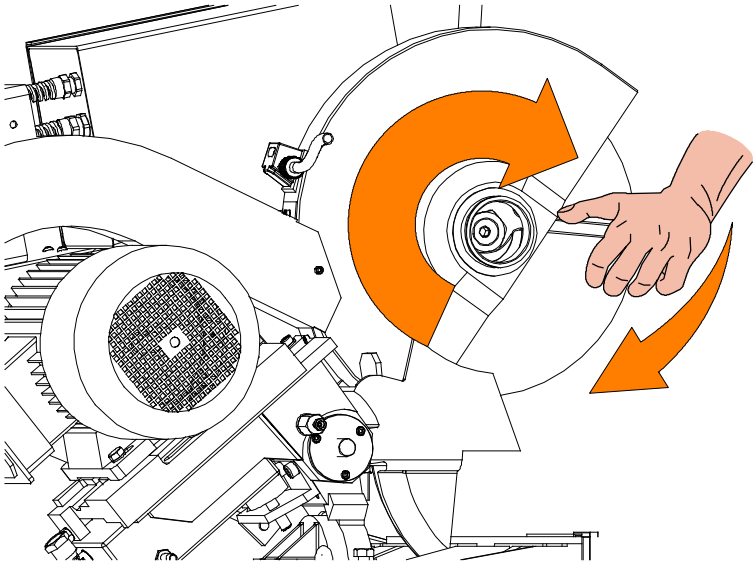
- ▶ switch off the machine;
- ▶ release the mobile disc guard;



- move the mobile guard upwards;
- take off the cap located at the central part of the guard and slacken the nut that locks the blade using a 36 mm wrench while holding the internal hexagonal screw steady;

N.B. The lock nut is always loosened in the same direction as the disk rotating one.

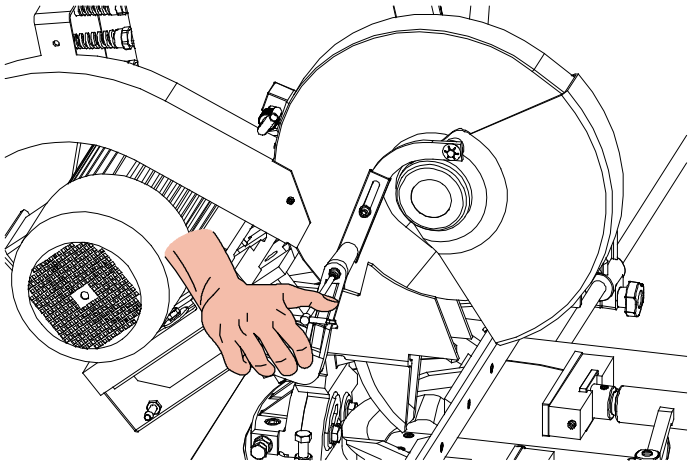
- now remove the broken or worn blade and replace it with a new one.



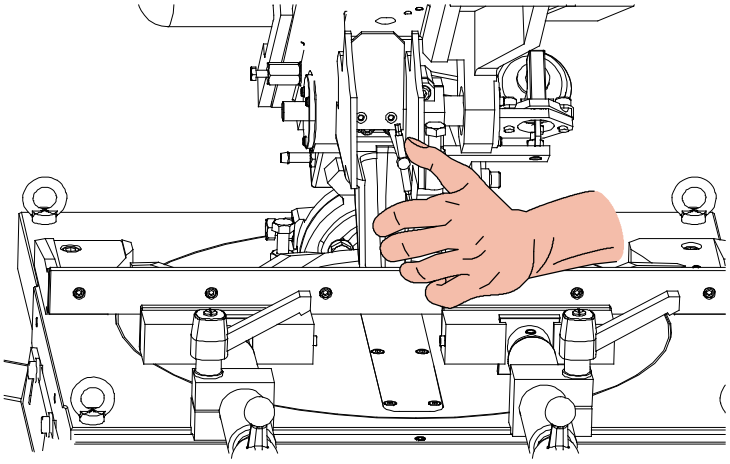
Adjustment of the squareness to the piece- supporting shoulder

The procedures for correcting and adjusting the blade at 0° and 45° to make cuts at right angles to the fixed vice jaw are described below. To carry out the right angle adjustment at 0°, use a workshop goniometer or a simple 90° square.

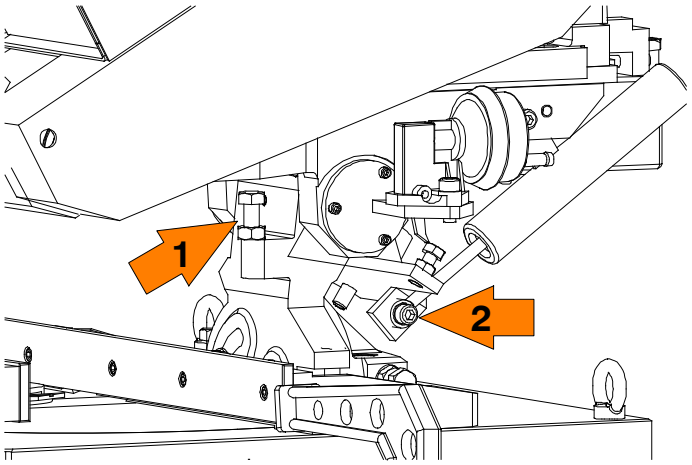
- release the mobile cover control rod and remove the two screws that lock the blade guard and the swarf conveyor;



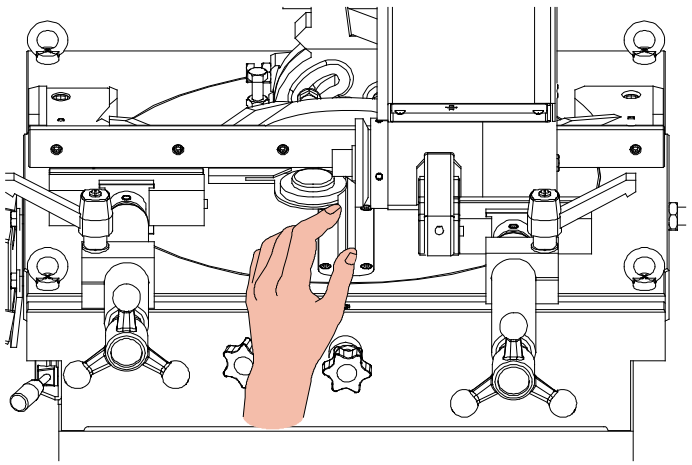
- remove the cutting disc and the lower fixed guard: note that it is fixed by two screws located underneath the rubber fabric;



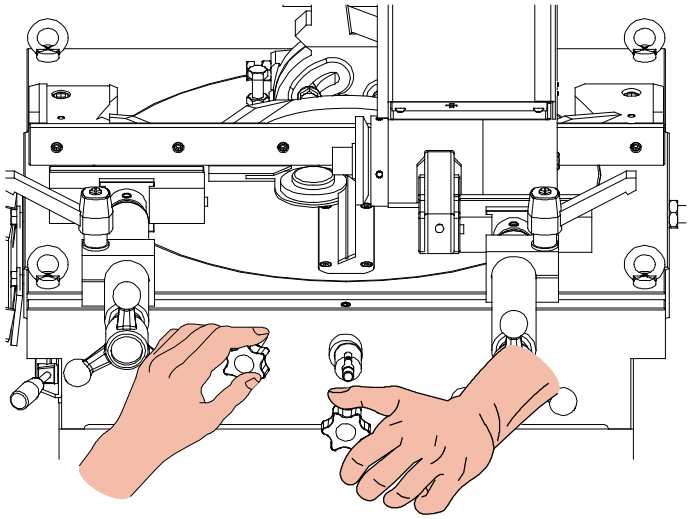
- take out the screw that functions as a pin for the head return cylinder (arrow no. 3) and the adjustable head lowering stop (arrow no. 1), so that it is possible to lower the head completely and rest the disc shaft flange on the working table;



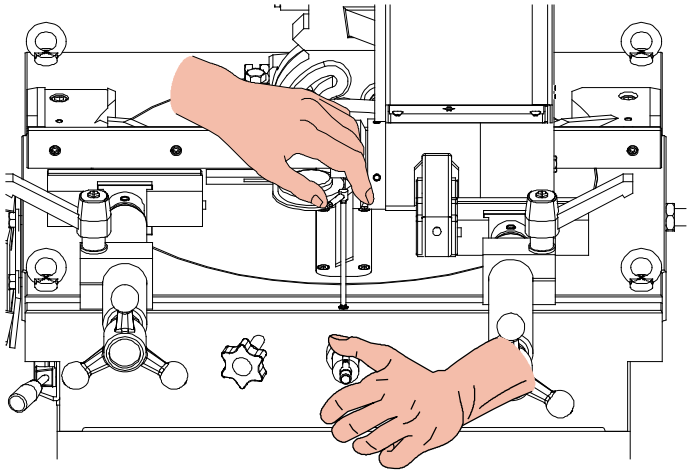
- position the goniometer or the square against the fixed vice jaw adjacent to the disc shaft flange;



- loosen the turntable locking handwheel M10;
- remove the eccentric locking pin knob;

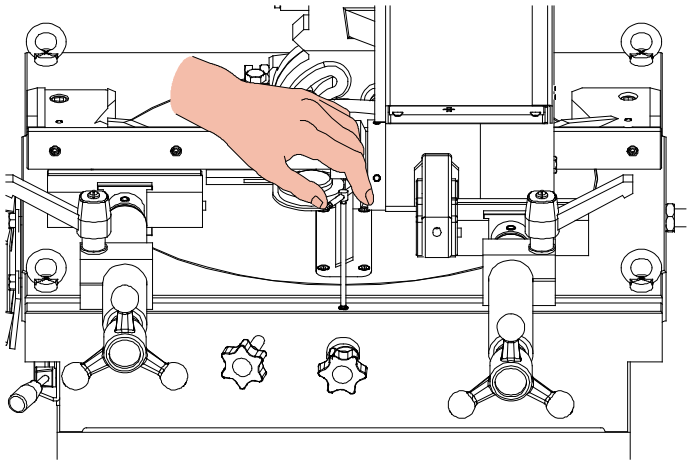


- slacken the grub screw.



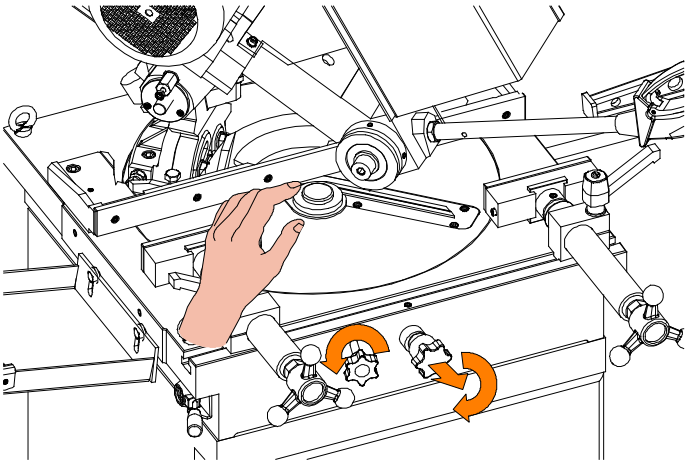
If the right angle error is now small (about 1 degree), turn the eccentric pin until the error is corrected. If instead the error is greater than 1 degree proceed as follows:

- remove the eccentric pin;
- turn the head until the error is corrected;
- re- insert the eccentric pin;
- lock the grub screw and remount the knob.

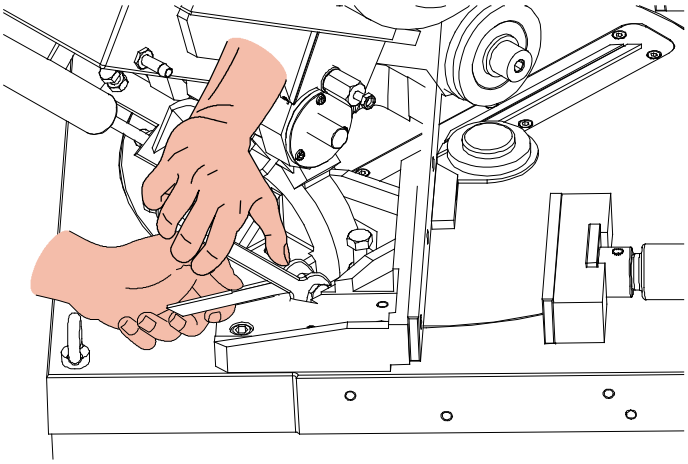


To adjust the 45° fixed point you will need a workshop goniometer or an instrument that can measure the exact angle of the disc shaft flange.

- loosen the handwheel M10 that locks the turntable;
- position the head at 45° (pull out the knob and turn it by half a turn to release the turntable);
- position the goniometer (or the graduated square) against the fixed vice jaw, adjacent to the disc shaft flange;



- slacken the nut, while holding the screw steady with an open- end wrench;
- in this position you can adjust the depth of the screw that acts as a stop for the turntable until the angle error is corrected;
- tighten the nut, while keeping the stop screw steady.

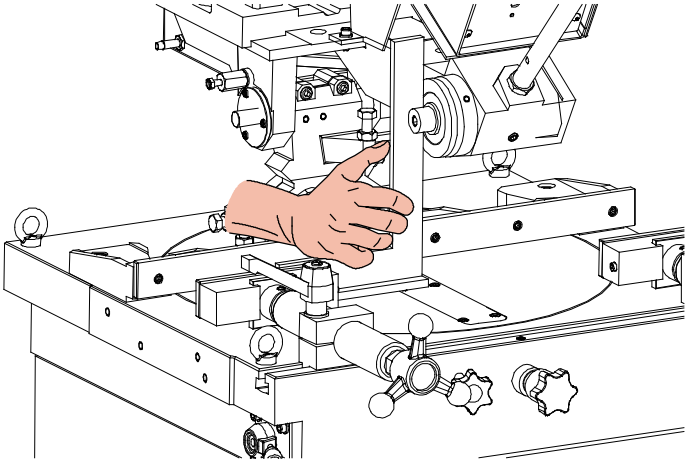


Repeat the operations for both the 45° right and the 45° left positions. Now check the values given on the graduated scale engraved on the turntable at the positions 0° and 45° right and left.

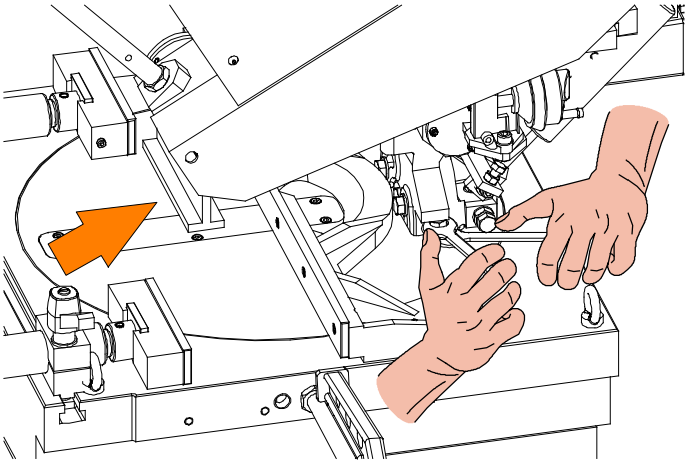
Adjustment of the perpendicularity to the cutting plane

The perpendicularity of the blade to the work surface is of fundamental importance in obtaining straight cuts. This adjustment is carried out with the help of a workshop square, which should be placed adjacent to the fixed disc stop resting on the work surface.

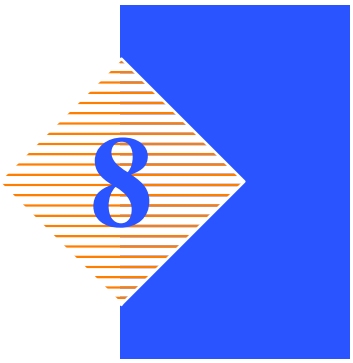
- remove the blade so that the square can be rested against the disc shaft flange, position the square on the working table (which should be thoroughly cleaned beforehand) and rest it against the side of the disc next to the fixed vice jaw;



- by slackening the lock nuts on the adjustable stops located at the base of the head joint, you can tighten or loosen the stop nuts so as to adjust the perpendicularity of the disc with respect to the work table;
- as soon as the blade is perpendicular to the work table, tighten the two lock nuts; lastly check that the fixed disc- pressing flange is perpendicular to the square.



Maintenance and choice of consumables



PNF 350- 2 S is built to be sturdy and long- lasting It has no need of any special maintenance, though, like all other tools, it needs adjusting from time to time, especially if not regularly looked over or used without due care.

This chapter, therefore, is intended as a guide for those who want to look after the machine and get the most out of it for as long as possible.

The role of the operator

The person operating and maintaining the machine must follow these instructions for his own safety, as well as for the safety of other personnel, and in the interests of machine productivity:

- check that his own work and that of the other operators of the machine always complies with the relevant safety standards. Therefore, check that the safety devices are in position and work perfectly and that personal safety requirements are complied with.
- ensure that the working cycle is efficient and guarantees maximum productivity, checking:
  - the functions of the main components of the machine;
  - the sharpness of the blade and coolant flow;
  - the optimum working parameters for the type of material.
- check that the quality of the cut is that required and that the final product does not have any machining defects.

Maintenance requirements

- All ordinary and extraordinary maintenance must be carried out with the power switched off and the machine in emergency condition.
- To guarantee perfect operation, all spare parts must be originals.
- On completion of maintenance works, ensure that the replaced parts or any tools used have been removed from the machine before starting it up.
- Any behaviour not in accordance with the instructions for using the machine may create risks for the operator.
- Therefore, read and follow all the instructions for use and maintenance of the machine and those on the product itself.

General maintenance

Daily

The daily maintenance operations to carry out on the machine are as follows:

- ▶ remove all swarf from the machine (Do not use compressed air or fluffy rags);
- ▶ top up the lubricant/coolant fluid level;
- ▶ check the wear of the blade and change if necessary.

Weekly

The weekly maintenance operations are as follows:

- ▶ remove all swarf from the machine, including chips that have fallen into the area underneath the turntable;
- ▶ clean the vice and lubricate all the joints and sliding surfaces using a good quality oil.

Monthly

This section lists the operations to be carried out for the monthly maintenance of the machine.

- ▶ check that the blade is perpendicular to the work surface; if necessary, adjust as described in cap. 7;
- ▶ check that the blade is at right angles to the workpiece rest shoulder; if necessary, adjust as described in cap. 7;
- ▶ check that the 0° notch on the fixed work table is in line with the graduation on the turntable. If not, adjust using the eccentric pin, then re- check that the blade is perpendicular to the work surface and at right angles to the shoulder.
- ▶ check the precision of the 45° right and 45° left stops. If they are adjusted incorrectly, follow the procedure described in cap. 7;
- ▶ check the tension and wear of the transmission belts.

Maintenance of working parts

During maintenance work on the **PNF 350- 2 S**, special attention should be paid to operating units such as the transmission belts.

Transmission belts

Tightening the belts:

- after the first 100 working hours, remove the transmission belt protective cover and check the tension and wear of the belts. Repeat the operation after every 500 working hours of the machine.
- To tighten the transmission belts: first remove the transmission belt protective cover, slacken the nut shown in the diagram and the one opposite to it which is not in view;
- then loosen the nut located below the motor and adjust the grub screw to tighten the belts; finally tighten up the locking nut and the two previously slackened bolts located at the side of the motor.

Consumable materials

It is essential to use specific oils for the pneumatic and lubricant/coolant circuits. The oils suitable for each of these circuits are listed below.

Oils for pneumatic and hydraulic circuit

The machine is supplied with AGIP ATF DEXRON oil, ISO and UNI grade FD 22. The oils are used with the air treatment unit and the hydro- pneumatic cylinder. However the following oils can be regarded as compatible or having equivalent specifications:

API Cis 22 - ARAL Dural SR 22 - CASTROL Hyspin AWS 22 ESSO Spinesso 22 - IP Hydrus oil 22 - TOTAL Azolla ZS 22 VALVOLINE ETC 22 - MOBIL Velocite oil D - Mobil DTE 22 MOBIL ATF 220 - OLIO FIAT HTF 22 - Q8 Haydn 22 - SHELL Tellus oil 22 - BP AUTRAN GM- MP

Oils for lubrication/coolant liquid

The oil used for the lubrication/coolant fluid in the machine is CASTROL Syntolin TFX. Though there are no specific standards for these types of oils, the company considers that CASTROL Syntolin
TFX is the best product available with regard to quality:price ratio. Nevertheless, the following oils of similar characteristics can be said to be compatible:

AGIP NB 200 - SHELL Lutem TT - IP Utens Fluid- F

Finally, one particular blade manufacturer (LENOX) recommends and supplies a coolant under the name of LENOX BAND- ADE SAWING FLUID.

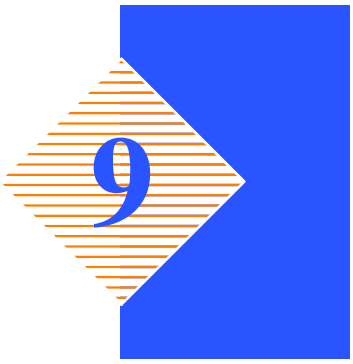
Oils for spray mist system (optional)

The used oil type for the optional spray mist system is BLASER Vascomill 22. The following oils can also be said to have similar characteristics and are therefore compatible:

UNIST Coolube 2210 - FUCHS Plantocut Micro Plus 27

- tank capacity Lt. 1

Cutting speed and choice of tools



The cut speed is determined by the speed the cutter disc rotates at, and by the feed speed. The latter is set manually by the movement of the tool head, whereas the cutter disc rotation speed is selected on the control panel with the speed setting switch. This chapter describes the various cutting speeds of which the standard and special machine configurations are capable.

Cutting speed

PNF 350-2 S three-phase with two speeds

The basic version with 2/4- pole motor, enables these cutting speeds:

- 1st speed = 1700 rpm
- 2nd speed = 3400 rpm

Choice of blade

The different types of cutter disks that the **PNF 350- 2 S** can mount must, however, have the following main characteristics.

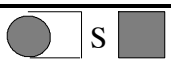
- Fine tooth pitch: for thin wall materials such as sheet steel, tubes and profiles;
- Coarse tooth pitch: for large cross-sections; for soft materials (aluminium alloys and soft alloys in general).

Tooth pitch

The choice of the most suitable tooth pitch depends on various factors:

- the size of the section;
- the hardness of the material;
- wall thickness.

Solid sections call for discs with a coarse tooth pitch, while small cross- sections require blades with finer teeth. This is because when cutting walls of small cross- section (1÷7 mm) profiles, it is important that the number of teeth actually making the cut should not be too small, otherwise the effect obtained will be one of tearing rather than of swarf removal, leading to a large increase in shearing stress. On the other hand, when cutting thick materials or solid sections using an excessively fine tooth pitch, the swarf collects as a spiral inside the gullet, and since fine tooth pitches have small gullets, the accumulated swarf will exceed the gullet capacity and press against the walls of the workpieces, resulting in poor cutting (same situation with soft materials), greater shearing stress and hence breakage of the blade.

Choice of tooth pitch T as a function of cross- section to be cut for light alloy solid pieces and profiles			
			
S in mm.	Pitch T	S and sp in mm.	Pitch T
10	4	10 sp = 0,5	3
30	6	30 sp = 1,5	4 - 5
50	8	50 sp = 2,5	5 - 6
70	10	70 sp = 3,5	6- 7
90	12	90 sp = 4,5	7 - 8
130	16	130 sp = 6,5	8

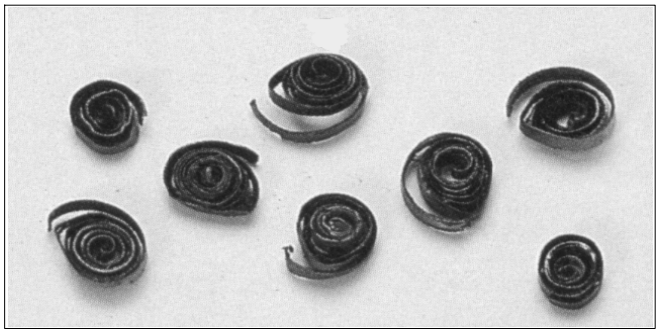
KEY:
S = diameter or width of the solid piece to be cut in mm;
sp = thickness of the wall to be cut in mm;
T = tooth pitch in mm.

A larger pitch should be chosen when, as a result of the shape of the piece to be cut, the cross- section at any given point exceeds the average cross- section given above.

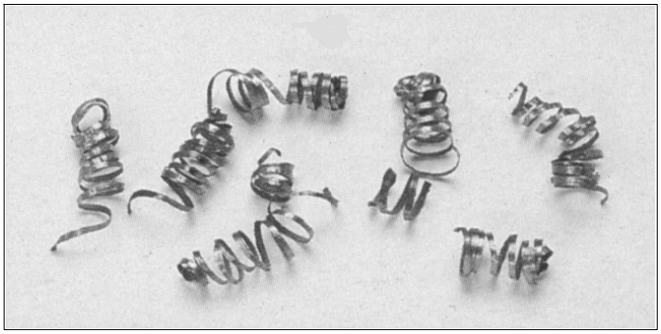
Types of swarf:

- Very fine or fragmented swarf indicates that the downstroke speed and/or cutting pressure is too low.

- Thick and/or blue swarf indicates that the blade is overloaded.



- Long coils of swarf indicate ideal cutting conditions.



Cutting and feeding speed

The cutting speed, in m/min, and the head feeding speed, in cm^2/min, are limited by the amount of heat generated near to the points of the teeth. If the head feeding speed is too high, the cut will not be straight in either the vertical or the horizontal plane. As we have already said, the cutting speed depends on the strength (kg/mm^2) and hardness (HRC) of the material and the dimensions of the thickest section. The feeding speed depends on the cross- section of the material. Solid or thick- walled materials (thickness > 5 mm), can therefore be cut at high speed providing there is sufficient swarf removal by the blade, while thin- walled materials such as tubes or thin profiles must be cut with a low feeding speed. A new blade requires a wearing- in period, during which time a feeding speed of about half normal speed should be used.

Lubricant/coolant

The lubricating/cooling fluid must ensure that the blade teeth and material in the area of the cut do not overheat. Furthermore, the quantity and pressure must be sufficient to remove the swarf from the cutting zone. The fluid must be an excellent lubricant, such that prevents abrasion of the teeth and welding of the swarf to the teeth themselves (seizing).

Blade structure

The circular blades most frequently used for cutting- off machines are HSS-DMo5/M2 consisting of a single piece and characterised by a high level of toughness and a good cutting resistance. With non- ferrous materials it is normal to use circular blades with brazed hard metal (HM) cutting edges, which offer excellent resistance to wear but low resistance to impact, which in any case is not generally a problem with non- ferrous materials.

Key									
Mo	Molyb-denum	Ni	Nickel	Si	Silicon	V	Vanadium	W	Tungsten
Al	Aluminium	C	Carbon	Co	Cobalt	Cr	Chromium	Mn	Manganese

BLADE BODY	*C*	*Cr*	*W*	*Mo*	*V*	*Co*	*HRC*
71 Cr1	0,71 - 0,78	0,20 - 0,30	0,40 - 0,70				43+/- 1

N.B. The numbers in the columns indicate the % content of the element in the steel.

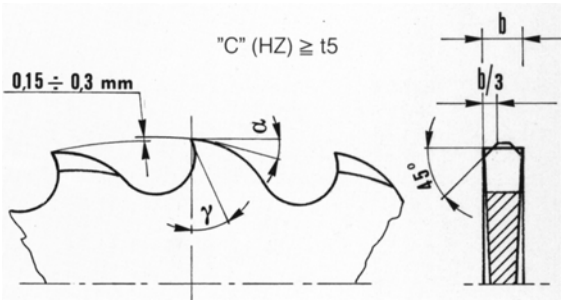
Types of blades

The blades fitted to the **PNF 350- 2 S** have dimensions 350 x 32 x 3.4 mm and are of HM hard steel type since the machine is to be used for cutting non- ferrous materials. In addition to the size and pitch of the teeth, however, the blades also have different geometric characteristics in accordance with their particular use:

- tooth cutting angle, which may be negative or positive;
- tooth sharpening, which in this case may be BW with an alternate raked tooth or C with a roughing tooth raked on both sides and a non-raked finishing tooth;
- tooth pitch, the distance between the crest of one tooth and the crest of the next tooth (tooth pitch = T).

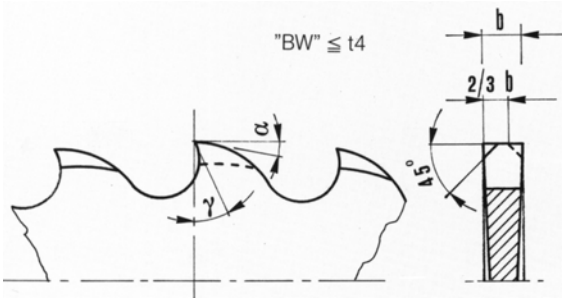
Tooth shape

”C” TYPE SHARPENING (HZ)
Coarse toothing with roughing tooth raked on both sides and non- raked finishing tooth. The roughing tooth is about 0.3 mm higher.



Coarse toothing with roughing tooth and finishing tooth. Used in saws with pitch greater than or equal to 5 mm for cutting ferrous and non- ferrous materials with solid or solid- profiled sections.

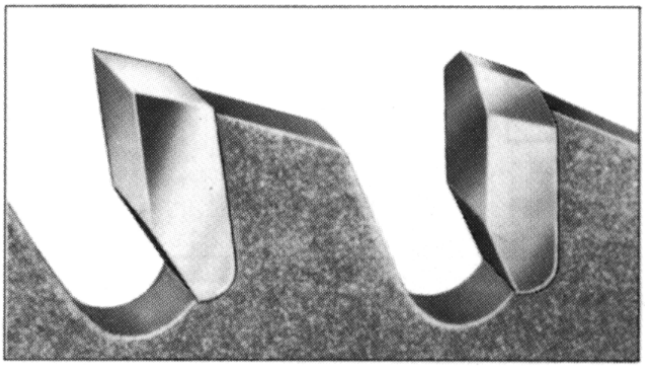
”BW” TYPE SHARPENING DIN 1838- UNI 4014
Coarse toothing with teeth alternately raked to the right and left.



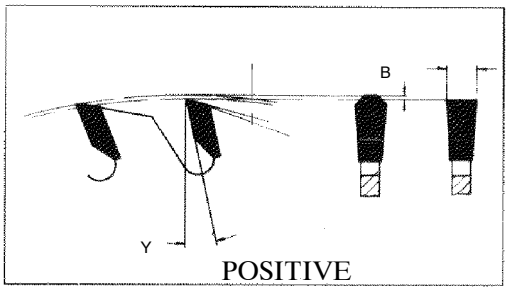
Toothing generally used on cutting- off machines for cutting ferrous and alloy materials with tubular and profiled sections.

POSITIVE AND NEGATIVE CUTTING ANGLES

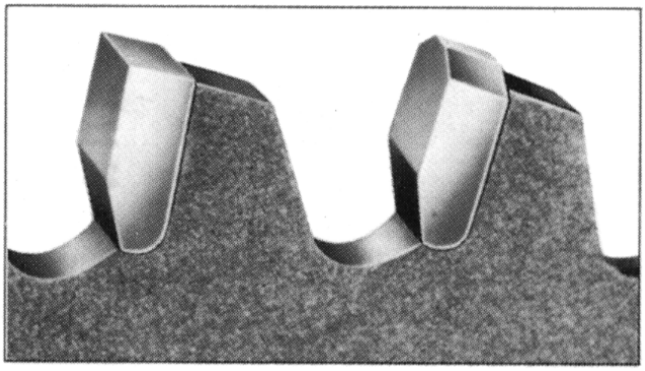
The cutting angle ϒ may vary from positive to negative depending on the cutting speed, the profile and the type of material to be cut.



A positive angle γ determines better penetration of the tool and hence lower shear stress and greater ease of sliding for the swarf over the cutting edge. On the other hand, the cutting edge has lower mechanical resistance, so as the breaking load of the material to be cut increases, the cutting angle decreases from positive until it becomes negative so as to offer a cutting edge with a larger resistant section.

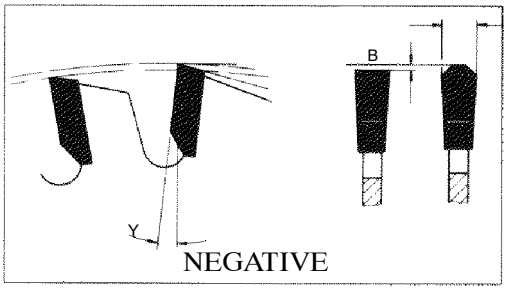


Short swarf material such as brass, bronze, aluminium and hard cast iron require smaller cutting angles because the swarf becomes crushed immediately and the rake angle has little effect during the cutting stage.



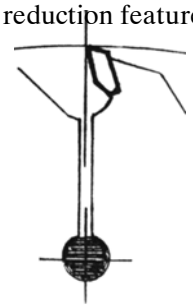
The **PNF 350- 2 S** uses discs with positive cutting angles for cutting solid materials and with negative cutting angles for cutting hollow profiles. This is because, as a result of the high cutting speeds (3400 rpm), even with non- ferrous

materials the tool ”strikes” against the wall of the profile to be cut several times, thus requiring a cutting edge with a larger resistant section.

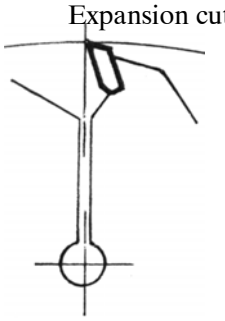


Circular saws can also be characterised by other parameters such as the whine reduction feature, which cuts down noise at high speeds, or expansion, which compensates for the pushing of swarf inside the cutting edge, thus reducing the thrust on the walls of the material to be cut.

Whine reduction feature



Expansion cut



This table can be used to facilitate the choice of toothing since it takes into account both the size of the material to be cut and the diameter of the disc to be used.

Solid section

S	D 450	D 400	D 350	D 300
10				72
20				72
30			84	72
40			84	72
50	96	96	84	84
60	96	96	84	84
70	96	96	96	84
80	96	96	96	84
90	96	96	96	
100	96	96		
110	96	96		
120	96			
130	96			
140	96			

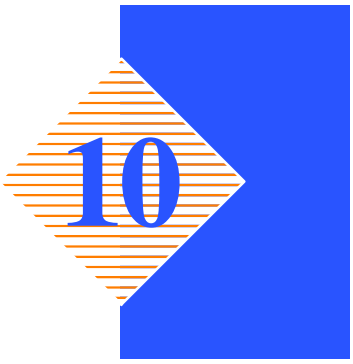
Hollow section

D	D 450	D 400	D 350	D 300
10				84
20				84
30			96	84
40			96	84
50	112	120	96	96
60	112	120	96	96
70	112	120	96	96
80	112	120	112	96
90	112	120	112	96
100	112	120	112	
110	112	120	112	
120	112	120	112	
130	112	120		
140	112			

Blade selection table with respect to cutting speed and downstroke speed

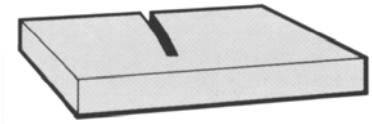
RECOMMENDED CUTTING PARAMETERS			Aluminium and alloys R = 200- 400 N/mmq	Aluminium and alloys R = 300- 500 N/mmq	Copper R = 200- 350 N/mmq	Hard bronze R = 600- 900 N/mmq	Phosphor bronze R = 400- 600 N/mmq	Brass R = 200- 400 N/mmq	Alloyed brass R = 400- 700 N/mmq
CUTTING ANGLE		α	22	20	20	15	12	16	12
		γ	10	8	10	8	8	16	16
Cutting section (in mm)	10- 20	T mm	6	5	6	5	4	5	5
		Vt m/1'	1100	200	400	400	120	600	500
		Av mm/1'	1800	400	600	800	160	1100	700
	20- 40	T mm	8	7	8	7	8	6	7
		Vt m/1'	1000	180	350	400	110	600	400
		Av mm/1'	1700	400	600	700	150	1100	600
	40- 60	T mm	12	10	11	10	8	10	10
		Vt m/1'	900	160	300	350	100	550	350
		Av mm/1'	1600	350	550	700	140	1000	600
	60- 90	T mm	16	12	14	12	10	12	12
		Vt m/1'	800	160	250	300	90	550	350
		Av mm/1'	1400	300	550	600	130	900	500
	90- 110	T mm	18	14	17	14	12	16	16
		Vt m/1'	700	140	200	250	70	500	300
		Av mm/1'	1300	300	500	600	110	900	500
	110- 130	T mm	20	16	18	16	14	18	18
		Vt m/1'	600	130	150	200	60	500	300
		Av mm/1'	1100	250	500	500	100	800	400
	130- 150	T mm	20	16	20	18	16	18	18
		Vt m/1'	500	130	120	150	50	450	200
		Av mm/1'	900	250	400	400	90	800	400
Recommended lubricants			Emulsion - cut-					Cutting oil	

Troubleshooting



This chapter describes the inspection and troubleshooting procedures for the **PNF 350- 2 S**. Regular inspections and efficient maintenance are essential to ensure your machine gives you a long, trouble- free service life. The chapter is divided into two sections: the first being dedicated specifically to TROUBLESHOOTING BLADE AND CUTTING PROBLEMS, while the second TROUBLESHOOTING section concerns troubleshooting general machine operating faults. Taken together they form a comprehensive troubleshooting guide which will enable you to follow a methodical procedure for solving any problem.

Troubleshooting blade and cutting problems

PROBLEM	PROBABLE CAUSE	SOLUTION
Cuts not at 90 degrees or angled 	◗ Head speed too high	☞Reduce head speed
	◗ Disc with worn teeth	☞Replace disc
	◗ Orthogonality of disc to workpiece rest shoulder	☞Adjust the position of the blade so that it is at right angles to the workpiece rest shoulder using the 0° adjuster pin; then set the stops at 45° right and left using the appropriate screws.
	◗ Perpendicularity of disc to work surface	☞Contact our Assistance Office
	◗ Cutting speed too low	☞Increase cutting speed.
	◗ Broken teeth	☞Check the hardness of the material being cut.
Teeth breaking 	◗ Incorrect lubricant/coolant fluid	☞Check the water and oil emulsion; check that the holes and hoses are not blocked; direct the nozzles correctly.

PROBLEM	PROBABLE CAUSE	SOLUTION
Teeth breaking 	◗ Material too hard	☞Check the cutting speed, feed speed and disc pressure parameters and the type of disc you are using.
	◗ Disc not worn- in correctly	☞With a new disc it is necessary to start cutting at half feeding speed. After the wearing- in period (a cutting surface of about 300 cm2 for hard materials and about 1000 cm^2 for soft materials) the cutting and feed speeds can be brought up to normal values.
	◗ Disc with excessively fine tooth pitch	☞The swarf wedges into the bottom of the teeth causing excessive pressure on the teeth themselves.
	◗ New blade inserted in a partially completed cut.	☞The surface of the cut may have undergone local thermal alteration, making it harder: when starting work again, use a lower cutting speed and head feed speed. A tooth from the old blade may be left in the cut: check and remove before starting work again.
	◗ Workpiece not clamped firmly in place	☞Any movement of the workpiece during cutting can cause broken teeth: check the vice, jaws and clamping pressure.
	◗ Vibration	☞Workpiece vibrates in the vice: check that the slide has been adjusted correctly; check the clamping pressure and if necessary increase.

Rapid tooth wear 	◗ Head speed too slow	☞The blade runs over the material without removing it: increase head speed.
	◗ Cutting pressure too high	☞Reduce cutting pressure.
	◗ Cutting speed too high	☞The teeth slide over the material without cutting it: reduce the cutting speed.
	◗ Insufficient coolant	☞Check the coolant level and clean piping and nozzles.
	◗ Incorrect fluid concentration	☞Check and use the correct concentration.

PROBLEM	PROBABLE CAUSE	SOLUTION
Rapid tooth wear 	◗ Material defective	☞The materials may present altered zones either on the surface, such as oxides or sand, or in section, such as under- cooled inclusions. These zones, which are much harder than the blade, cause the teeth to break: discard or clean these materials.

Broken blade 	◗ Head speed too high	☞Reduce head speed.
	◗ Teeth in contact with material before starting the cut	☞Always check the position of the blade before starting a new job.
	◗ Insufficient coolant	☞Check the coolant level and clean piping and nozzles.
	◗ Vibrations	☞Workpiece vibrates in the vice: check that the slide is regulated correctly; check the clamping pressure and if necessary increase.

Troubleshooting

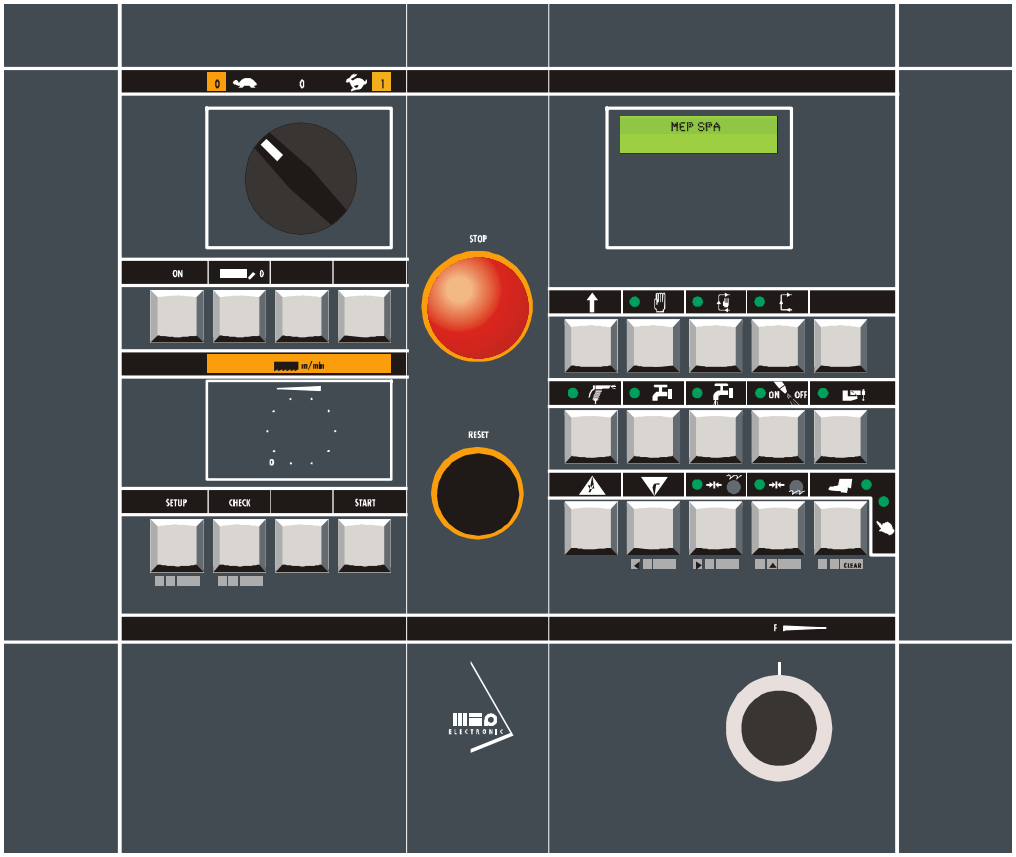
This section deals with the problems which may occur during machine operation. The M30 controller allows you to test all the machine's electric and electronic devices by checking the status of the input and output signals on the IUD/IUV card (see Chapter 6).

The board IUD/IUV is inside the electric board.

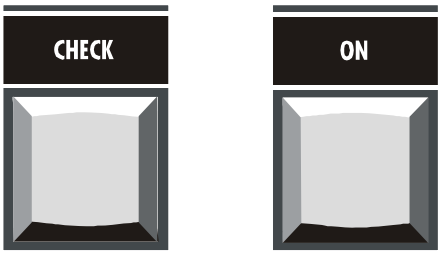
Displaying the diagnostics menu

▶ Power the machine rotating the main switch on the left side of the control

board;



▶ press simultaneously and in sequence the keys CHECK and ON;



Diagnostics system

Once you have opened the diagnostics menu, a set of characters, each corresponding to an OUTPUT signal on the M30 controller, is displayed. For further information about the machine's outputs, refer to the electrical and electronic diagrams illustrated in Chapter 6 of this manual.

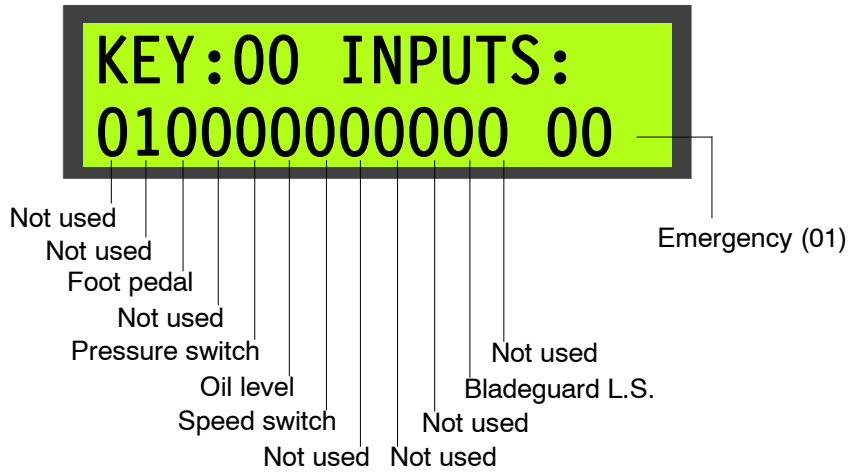
Testing the control console keyboard

Each console key has an identification number which is displayed on the diagnostics screen after the letter "K", when the key is pressed. For example, when pressing the key for the manual cycle (HAND key), the figure 12 is displayed next to the letter "K":

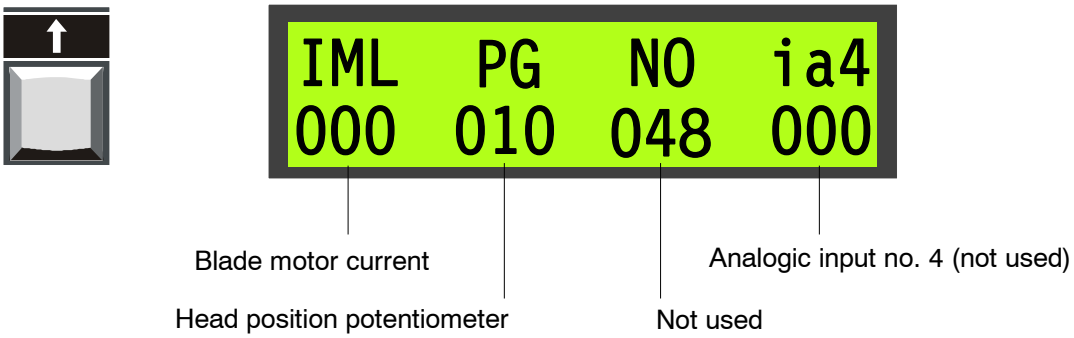
if the figure K does not change pressing the key HAND, the probable malfunctioning is due to the console key that does not deliver power when closed.

List of IUD-IUV card INPUTS

▶ the digits 0 and 1 shown in the display lower line indicate the status OFF (0) or ON (1) of each single input;

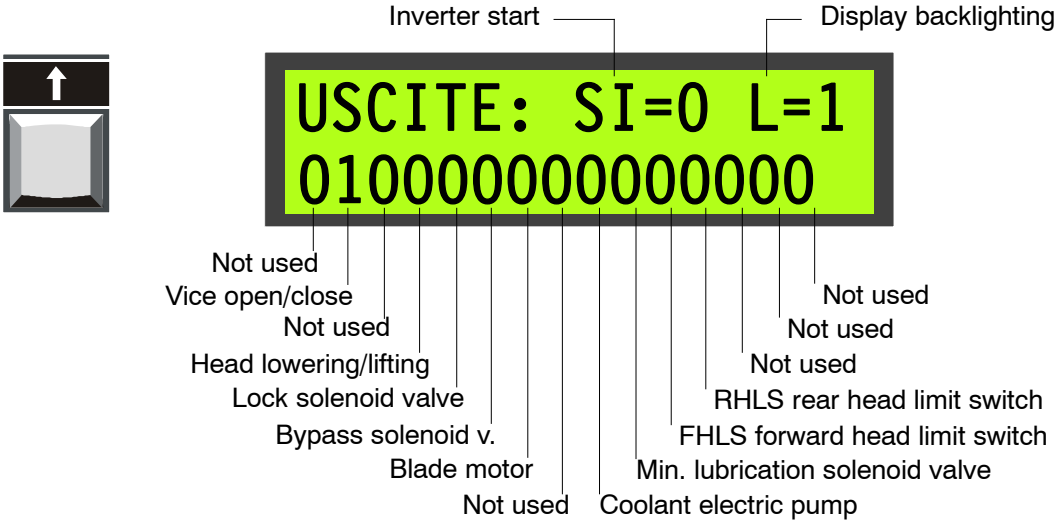


▶ Starting from the video page of the digital inputs, press the key “arrow up” once to display the list of the analogic inputs of the board IUD/IUV:

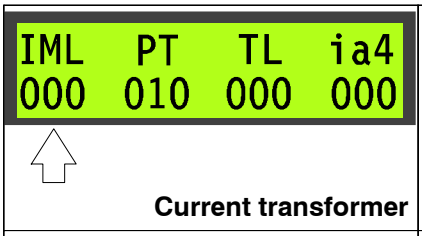
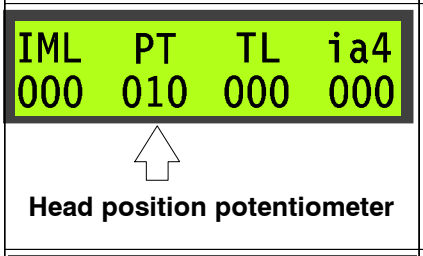
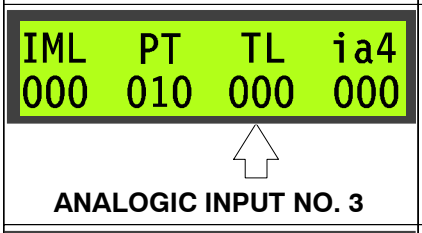
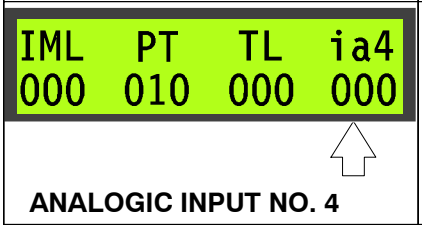


List of IUD-IUV card OUTPUTS

▶ Starting from the video page of the digital inputs, press the key “arrow up” once to display the list of the outputs of the board IUD/IUV:



▶ the digits 0 and 1 shown in the display lower line indicate the status OFF (0) or ON (1) of each single output. Pressing the ▶ or ◀ key it is possible to move the cursor till selecting the output to be checked. Pressing the ▲ key it is activated or deactivated.

	**AMMETER TRANSFORMER FOR CHECKING BLADE MOTOR ABSORPTION** If the display of blade motor absorption doesn't visualise the current values any longer, it's possible to check if the fault is relative to "AMMETER TRANSFORMER", to visualisation, to wiring, or to input of IUV board.
	**POTENTIOMETER OF HEAD CYLINDER TRANSDUCER (CUTTING HEAD POSITION)** If, by moving the head upwards or downwards, the value visualised doesn't change, you can check if the problem is due to the transducer potentiometer, to connections or to problems of the IUV. Move the head manually and check that the value changes on the display.
	ANALOGIC INPUT NO. 3 Available for connecting optional instruments.
	ANALOGIC INPUT NO. 4 Available for connecting optional instruments.

Machine alarms and emergencies

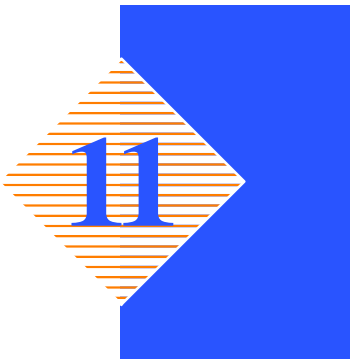
The machine's M30 controller notifies the operator of any alarm or emergency condition which may occur during production by way of acoustic and visual signals. This section lists the messages shown on the display.

	This message is displayed during the initialisation phase after pressing the ON key
	This message is displayed when the cutting start position is lower than the previous position saved for the cutting end position. ▶Save both the FCTI and FCTA positions again.

HEAD NOT AT FCTI PRESS RESET	This message is displayed if the head is not positioned at the FCTI position when the cycle is STARTED. ▶Return the head to the FCTI position before resuming the cycle
SELECT SPEED PRESS RESEt	This message is displayed if the cycle is STARTED without having first selected the cutting speed. ▶Return the head to the FCTI position before resuming the cycle
STOP BUTTON PRESSED PRESS RESET	This message is displayed if an operation is activated before releasing the MUSHROOM HEAD EMERGENCY STOP button. ▶Release the EMERGENCY STOP button and press RESET.
EMERGENCY BLADE GUARD OPEN	This message is displayed if the blade guard is opened, for example, to change the blade. ▶Make sure the blade guard is closed. ▶Check the safety limit switch. ▶Check the connections.
EMERGENCY INVERTER FAILURE	This message is displayed if the machine is equipped with an INVERTER (optional). Press RESET to test the manual commands. ▶Check the inverter contactor. ▶Check the power supply voltage. ▶Check the power phases and supply voltage of the blade motor. ▶Check the connections.
EMERGENCY BLADE STOPPED	Displayed when the blade is jammed while cutting: ▶Press RESET
EMERGENCY AIR PRESSURE	It is displayed when the air pressure from the network fails. ▶Press RESET
EMERGENCY BLADE MOT I OVERC.	It is displayed when there is an overcurrent at the blade motor ▶Press RESET
EMERGENCY BLADE TENSION	This message indicates a mechanical or electric/electronic fault affecting the blade tensioning unit. ▶Check the blade tension. ▶Check the operation of the tensioning slide. ▶Make sure the blade is correctly positioned on the flywheels. ▶Check the STRAIN GAUGE input on the IUV card. ▶Check the condition of the blade. ▶Check the connections.

EMERGENCY ERROR CODE: 01	RESETS OR INTERRUPTS NOT JUSTIFIABLE
EMERGENCY ERROR CODE: 02	EEPROM NOT AVAILABLE
EMERGENCY ERROR CODE: 03	RAM TEST FAILED
EMERGENCY ERROR CODE: 04	ROM TEST FAILED
EMERGENCY ERROR CODE: 05	STATUS OR TEMPLATE NON- EXISTENT
EMERGENCY ERROR CODE: 06	CUTTING CYCLE PHASE NON- EXISTENT
EMERGENCY ERROR CODE: 07	EMERGENCY NOT DEFINED
EMERGENCY ERROR CODE: 07	SERIAL 485 FAILURE
EMERGENCY ERROR CODE: 07	SERIAL 422 FAILURE
EMERGENCY ERROR CODE: 08	UNSTABLE DIGITAL INPUTS
EMERGENCY ERROR CODE: 09	UNSTABLE BLADE (ch0) MOT ABSORB ANAL. INPUT
EMERGENCY ERROR CODE: 10	UNSTABLE HEAD (ch1) POSIT. P. ANAL. INPUT
EMERGENCY ERROR CODE: 11	UNSTABLE BLADE (ch2) TENS. ANALOGIC INPUT
EMERGENCY ERROR CODE: 12	UNSTABLE SPARE (ch3) ANALOGIC INPUT
EMERGENCY ERROR CODE: 13	POWER FAILURE

Accessory Installation

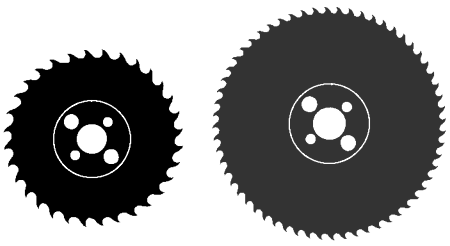


This chapter provides a list of the available accessories that can be fitted to this machine, along with assembly instructions.

Circular blade

The machine fits:

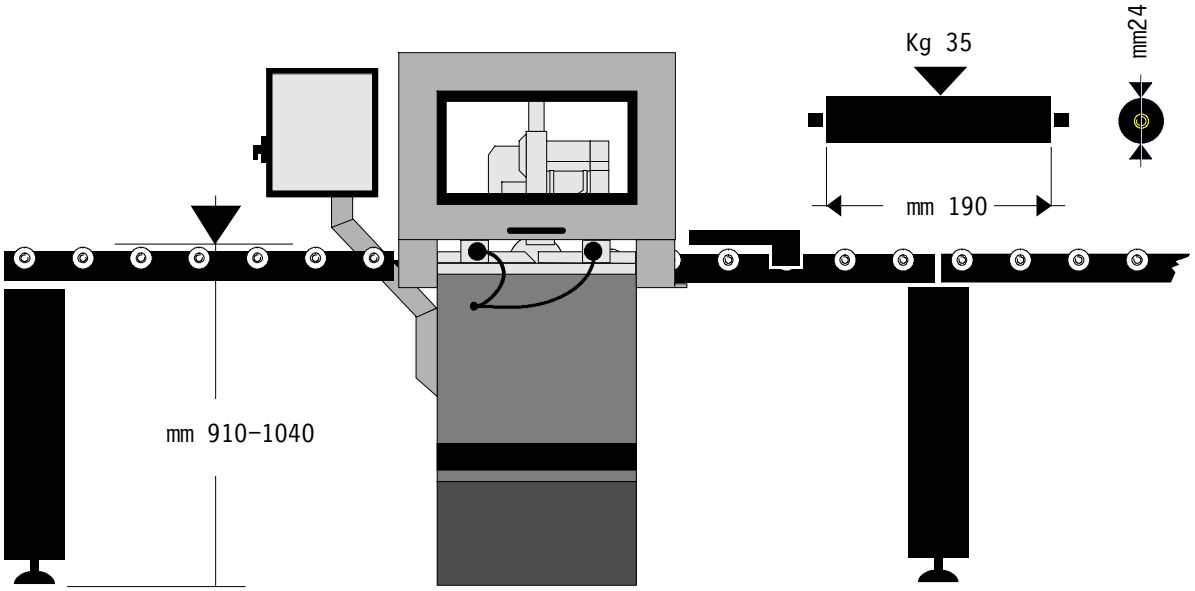
- circular blade HM Ø 350x32x3,4 for profiles.



See chapter 7 of this manual for cutter blade installation instructions.

Roller table

- K35 roller table module for feed side, 1500 mm;
- K35 roller table for discharge side, 1500 mm;

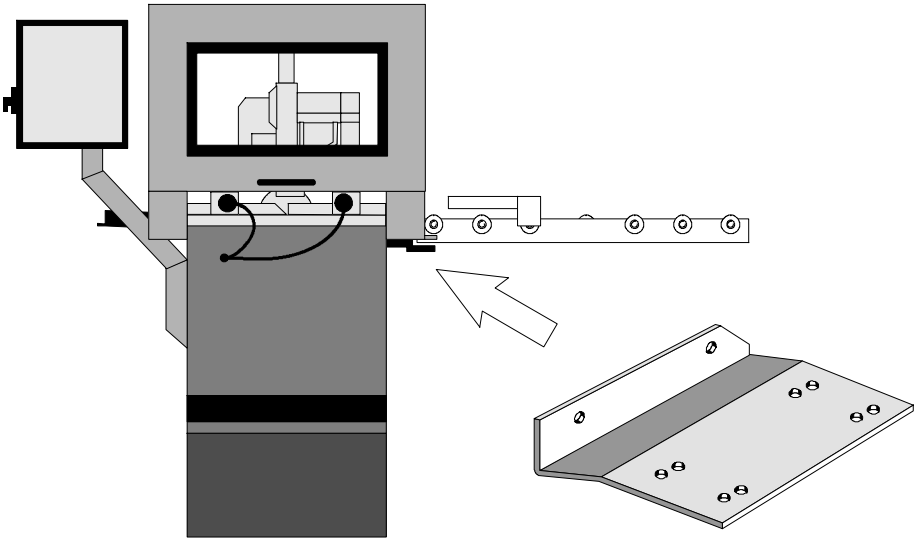


- K35 roller table for discharge side, 3000 mm;
- K35 roller table for discharge side, 4500 mm;
- K35 roller table for discharge side, 6000 mm.
- To fit the roller loading platform on the loading side, the machine has a bar-support arm that one end of the roller-way can be positioned on and then screwed in place.
- To install the roller loading platform on the discharge side an adapter must be used, with or without a support, as explained in the paragraphs that follow.

Adattatore pianale a rulli lato scarico

This device is used to attach the discharge roller table to the machine, and instructions are supplied below for how to assemble it:

- ▶ remove the two TE screws from the right side of the slideway;
- ▶ attach the adapter and secure it in place with the screws removed previously.

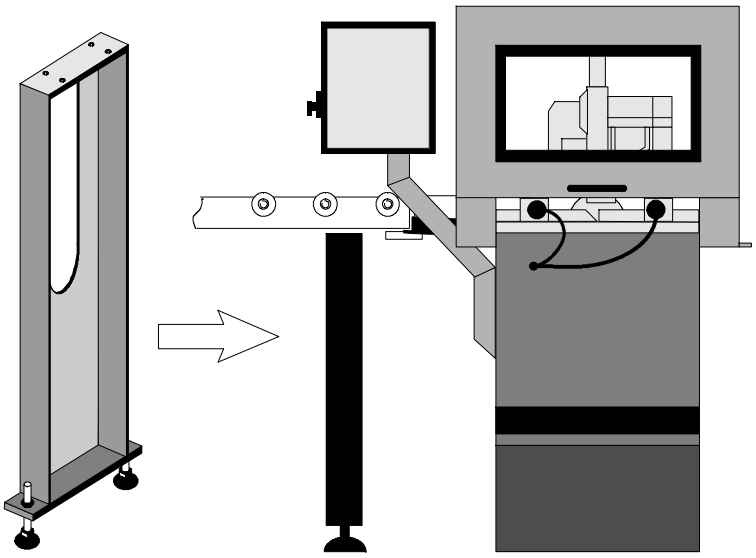


- ▶ Attach the outfeed rolling deck by fixing it with the screws supplied.

Feed side roller table support

This device is used to increase the load- bearing strength of the roller table, both during feeding and discharge. The steps which should be followed to assemble it are illustrated below:

- ▶ disconnect the table from the adapter (on the discharge side, for example);

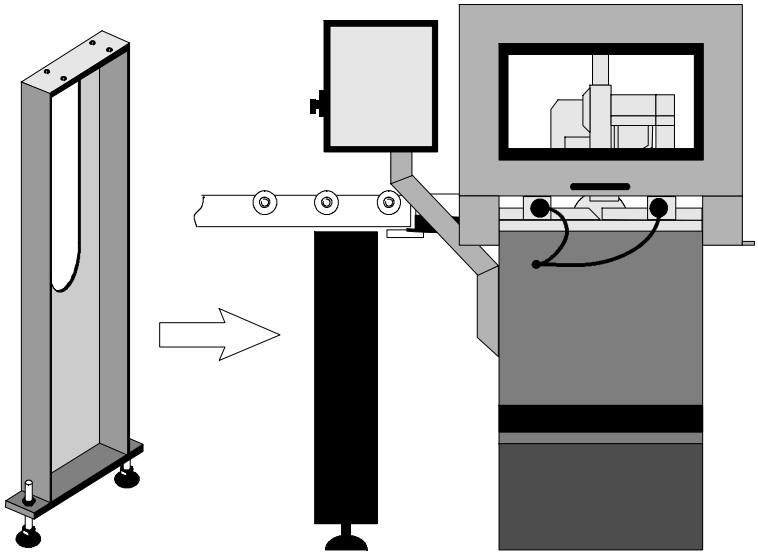


- ▶ position the support to correspond with the holes on the base of the trailer and reconnect to the adapter.

Chip aspirator

This device is used to aspirate and filter aluminum chips from the sawing machine. The operations needed for the assembly are the following:

- ▶ assemble the aspirator as described in the documentation enclosed to the aspirator;



- ▶ connect the aspirator hose to the chip conveyor projecting from the band cover fastening it with a metal strip;
- ▶ to use it while cutting, switch it on before starting the machining.

Warranty

Hydmech Group warrants each new sawing machine to be free from failure resulting from defective material and workmanship under proper use and service for a period of two years following the date of shipment to the user. Hydmech's sole obligation under this warranty is limited to the repair or replacement without charge, at Hydmech's factory, warehouse, or approved repair shop, of any part or parts which Hydmech's inspection shall disclose to be defective. Return freight must be prepaid by the user.

This warranty, in its entirety, does not cover maintenance items, including but not limited to lubricating grease and oils, filters, V- belts, saw blades, etc, nor any items herein which show sign of neglect, overloading, abuse, accident, inadequate maintenance or unauthorized altering.

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HYDMECH GROUP LIMITED
1079 Parkinson Road
P.O. BOX 1659
Woodstock, Ontario
N4S 0A9

Sales Toll Free: 1- 877- 276- SAWS (7297)
Phone: (519) 537- 2103
Fax: (519) 539- 5126
Website: www.hydmech.com
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HYD-MECH GROUP LIMITED
1079 Parkinson Road, P.O. BOX 1030
Woodstock, Ontario, Canada N4S 8A4
Sales toll free: 1-877-276-SAWS (7297)
Telephone: (519) 539-6341
Fax: (519) 539-5126

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