



INSTRUCTIONS FOR USE AND MAINTENANCE

AUTOMATIC BELLING MACHINE

BA 200/2F

Model **BA 200/2F**

Serial number **414173**

Year of manufacturing **2016**

Update N° **0**

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Kind of document:	Instructions for use and maintenance
Code of the document:	K:\manuali\BA\BA200\414173gb.docx
Machine:	AUTOMATIC BELLING MACHINE
Model:	BA 200/2F
Serial number:	414173
Year of manufacturing:	2016
Conformity:	EC MARK

! **CAUTION:**

Installer, operator, maintenance personnel and safety manager must have read and understood the Use and Maintenance Manual and the safety rules before starting to work.

Keep this manual and all enclosed documents in a place known to all the users.

The safety manager must fill in the form in the chapter SAFETY.

Directive 89/391 CEE, DL 626/94

How to Read the Manual

This manual gives information about installation, use and maintenance of the machine BA 200/2F

The machine must be used as specified in this manual: please read it carefully before installing and starting the machine.

Read everything and pay particular attention to boxed instructions (i.e. CAUTION, PRECAUTIONS, WARNINGS).

For proper and safe use please follow the rules and directions in this manual.

Use and Maintenance Manual is an important part of the machine

It must be kept in a safe place for the whole machine lifetime and be passed to an eventual successive user.

Liability

The manufacturer is not liable for the non-observance of the instructions .

For any specification not included or not clear in the manual please contact the manufacturer directly.

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1. INTRODUCTION

This manual is addressed to the operators and to the skilled workers, so that the customer can use the machine in the proper way. Inside the manual the operator will find the instructions and indications for:

- a correct installation of the machine;
- a functional description of the machine in every single part;
- the machine adjustments during the setting up and starting phase;
- a correct programmed maintenance;
- the observance of the safety and accident-prevention rules.

In this way, the operator will know the problems referring to the machine and to the manufactured product.

1.1. TERMINOLOGY

It is useful to know the meaning of the following terms for a good understanding of the manual:

▪ **Dangerous Area:**

Area which is inside or near the machine; this area could become a risk for the safety and health of an exposed person.

▪ **Exposed Person:**

Any person who is completely or partially in a dangerous area.

▪ **Operator:**

person who is assigned to installation, to working, adjustments and to carry out the ordinary maintenance and cleaning of the machine.

▪ **Skilled technician:**

Skilled person, who has been trained and qualified to carry out the special maintenance interventions or the repairs which require a particular knowledge of the machine and of its working (including the safeties and their intervention modes).

1.2. SYMBOLOGY

! ATTENTION:	<i>Safety standards for accident-prevention</i>
 DIRECTIONS:	<i>Damage might be caused to the machine and/or to its parts</i>
 PRECAUTION:	<i>Further information referring to the current operation</i>
 NOTE:	<i>Provides useful information</i>

	
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1.3. TECHNICAL CUSTOMER SERVICE

If the customer needs skilled technicians, he may contact the Technical Customer Service directly. The intervention request must be forwarded to the seller, IPM company, by fax or telephone (the numbers are indicated on the first page of this manual).

1.4. SPARE PARTS LIST

The customer has to buy the original spare parts. The disassembly and assembly operations must be done following the instructions of the manufacturer.

The list of spare parts and the application form are at the end of this manual.

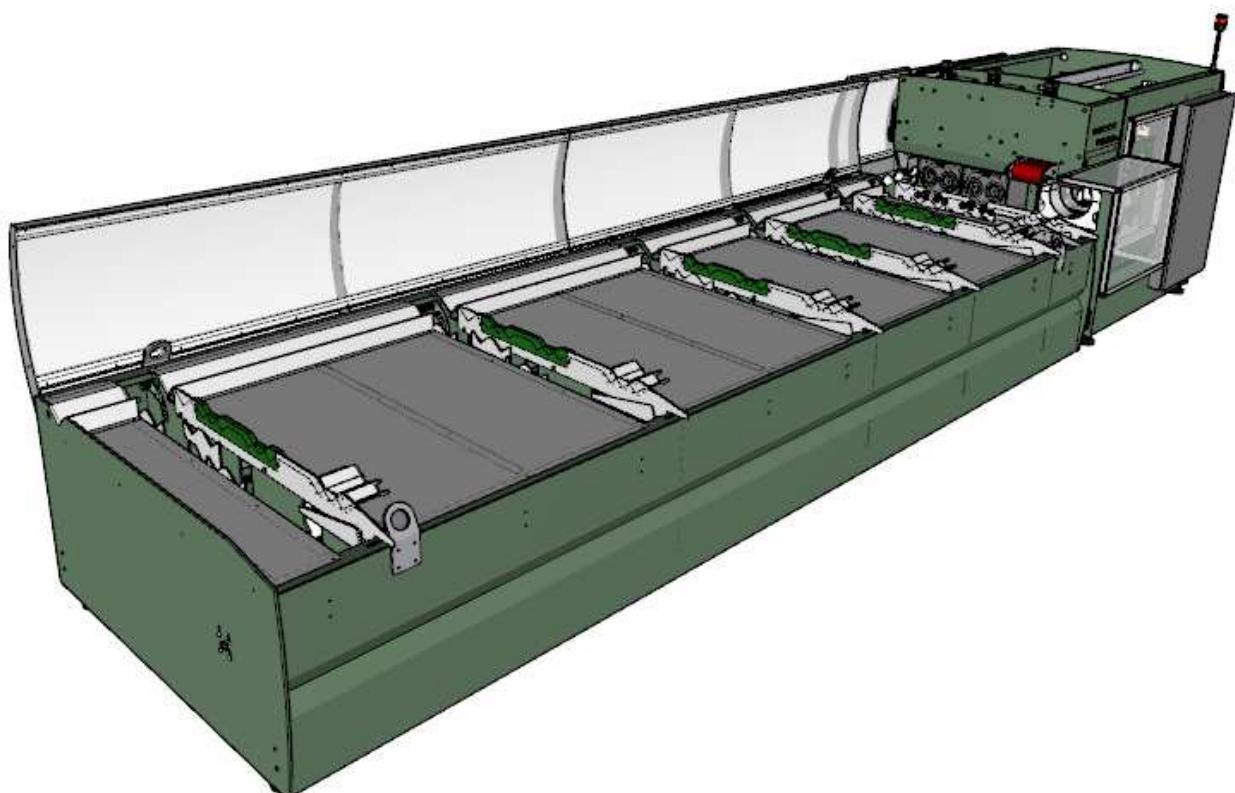
2. DESCRIPTION OF THE MACHINE

2.1. GENERAL DESCRIPTION

The belling machine is used for the diameter expansion at the end of a pipe so that this pipe can be connected with another pipe; in technical jargon, this kind of manufacturing is called SOCKETING.

The automatic belling machine usually works in extrusion line, or it can be controlled manually, too; the machine consists of a pulling unit which moves the pipe and a forming unit: inside this unit, the pipe end is heated then shaped so to obtain the socket. At the end of this phase the pipe is discharged laterally to the pulling unit.

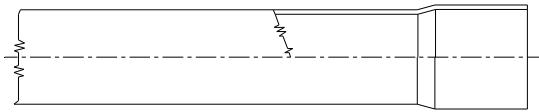
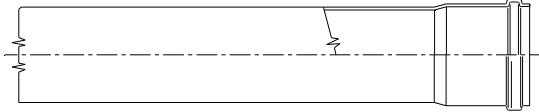
This machine can socket one or two pipes per cycle, contemporaneously.



OVERALL DIMENSIONS OF THE MACHINE

Length A	<i>mm</i>	8410
Width B	<i>mm</i>	2460
Height C	<i>mm</i>	1770
Height of extrusion axis	<i>mm</i>	1100
Weight	<i>Kg</i>	4290

Technical features		
Min. Diameter	mm	32
Max. Diameter	mm	200
Min. length of the pipe	mm	1000
Max. length of the pipe	mm	6000
Number of heating unit		2
Total thermic power	kW	23,40

Feasible socketing types		
	Smooth socket	BA
	Shaped Socket (by blowing mandrel)	BA

Pneumatic system		
Feeding pressure	bar	6/7
Air consumption	Nl/Cycle	173

Electric system		
Type		Threephase + N + PE
Voltage	V	400 V
Frequency of the voltage	Hz	50 Hz
Aux. tension	V	24 Vdc
Installed power	kW	29,00
Noise	dB (A)	77,00
Vibrations	m/s ²	/

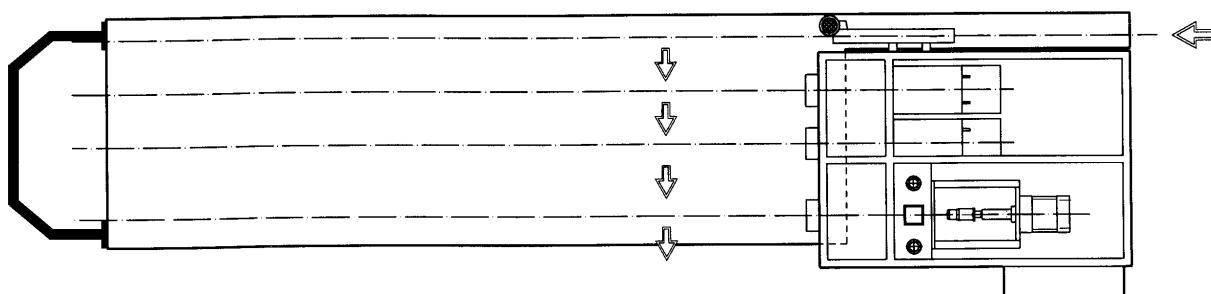
2.2. WORKING PRINCIPLES

The production cycle of the belling machine is based on thermoplastic deformation of the PVC pipe. The pipe is heated by infrared irradiators both inside and outside the pipe. The heating occurs at low temperatures in order to ensure a perfect plasticization of the part to bell.

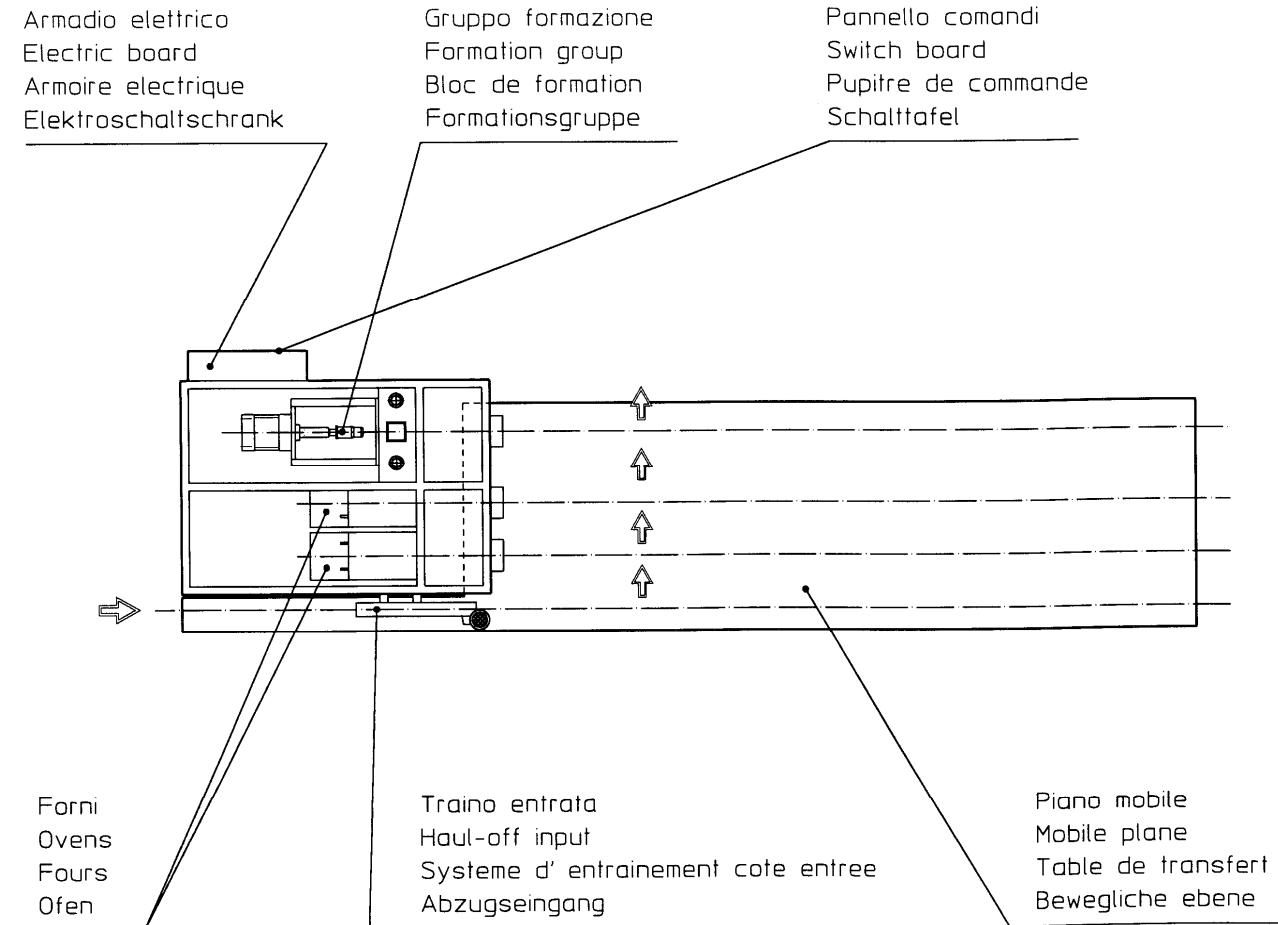
The second phase consists in the socket formation: first the pipe is blocked by a special vice and then a steel mandrel is inserted in the pipe plastically deforms it.

The third phase is the cooling which occurs in two different ways (depending on the model), either by spraying of coolant or by cool air flow. The cooling allows to obtain a definitive stiffening of the material.

The last phase is the expulsion of the pipe on the side of the machine.

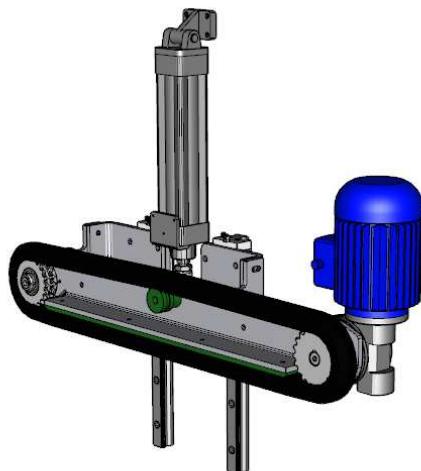


2.3. MAIN UNITS OF THE MACHINE



Entry Haul-off

The entry haul-off provides for the machine feeding; by means of a chain with rubber plugs, the pipe is hauled from the entry to the end of the mobile plane, where it is placed in a fixed position.

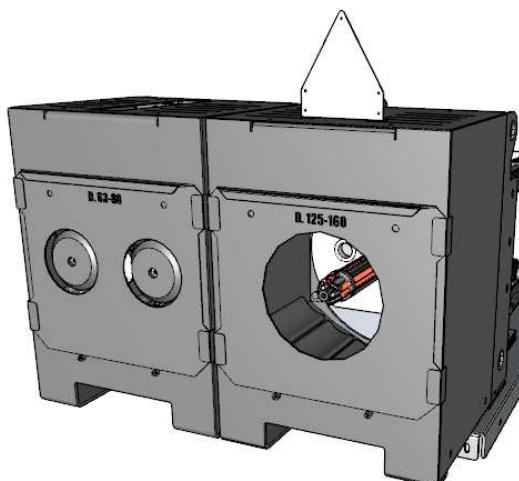


Mobile plane

The mobile plane provides to the pipes movements and to the lateral pipe discharge at the end of the cycle; the pipe is lifted and translated by means of particular supports.

Oven Unit

Depending on the different models the oven unit can consist of one or two ovens. Each oven consists of a chamber with a round hole through which the pipe enters. Inside the chamber a ring of irradiators radially heat the pipe's external surface. Inside the pipe a shaft of resistances heats the inner surface. This will not be used when working with small diameter pipes.

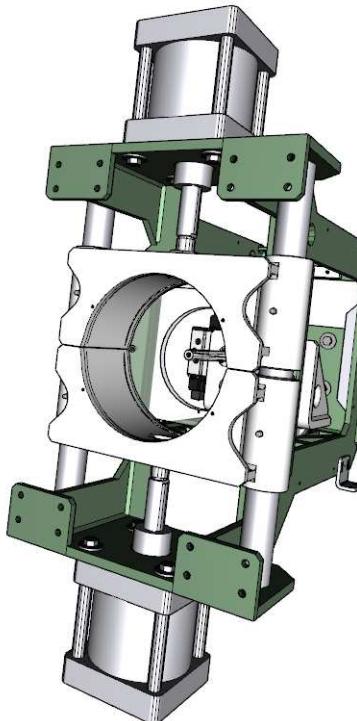


Socketing unit

The socketing unit's function is to bell the previously heated pipe end.

It consists of:

- a couple of vices (to hold the pipe)
- a belling tool which must be changed depending on pipe diameter, thickness and type of socket needed



Cooling Unit

(*) Cooling with compressed air:

It is possible to produce a **smooth socket** with the special pneumatic selector; the socket is cooled by a jet of compressed air from the vices.

N.B.: this mode is available for the production of SMOOTH SOCKET only:

The belling machine is further provided with a water cooling system for the main units of the machine: (*)hydraulic plant, mould, mandrel, etc.

Pneumatic system

The pneumatic system of the machine controls the different movements. It consists of cylinders according to ISO - CETOP rules, and of solenoid valves according to ISO rules. This system has to be fed by an external source (pressure at 6/7 bar). Inside the machine there is a surge tank for the pneumatic movements and another big tank for the inflation of the compression chamber (just BA/ME and BA/RS). At the machine entry there is a filter/regulator unit and an air on-off valve for emergencies (this regulator has to be adjusted at 6 bar).

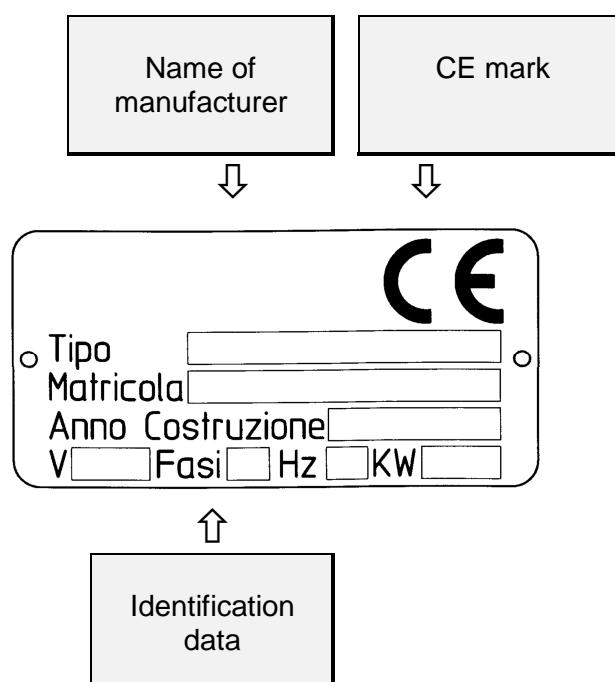
Electric box, control panel and electric system

Electric box closed - protection degree IP 55. There is a quadripole main switch with mechanical lock which allows the opening of the doors after current breaking only (the wings can only be opened by key).

The electric system consists of the box with electric and electronic components (PLC), the system is completely wired and does not need any user intervention. The user only has to connect the 2 blocks (head and mobile plane) by means of 2 special multipolar plugs and connect the machine to the main net by means of a special sectioning device.

The control panel is placed on a movable arm; it consists of a videoterminal (VT) from which it is possible to control all the functions of the machine and of some buttons for the carrying out of the common use functions.

2.4. IDENTIFICATION MARKING



WARNINGS

All the data of the label must be kept perfectly legible. Quote the identification data when contacting the manufacturer, e.g. for: spare parts request, information, assistance. If the label becomes illegible, even in only one of its data, we suggest to ask for a new one referring to the data contained in this manual or to the original label.

3. SAFETY

3.1. GENERAL INFORMATION - USES - ZONES

GENERAL INFORMATION

The customer has to inform his personnel about the accident risks, about the safety devices, about the noise risks and about the general accident prevention rules of the international directives and of the particular directives of the machine destination country.

The maintenance and control personnel must in any case observe the accident prevention rules of the machine destination country.

! CAUTION

Before starting the working cycle, the operator must perfectly know the position and working of all the controls and protections of the machine.

Furthermore he must have read this manual completely.

! DIRECTIONS

The machine has to be used by operators who have followed the training by the IPM technicians. The operators must observe the instructions, the directions and the accident prevention rules of this manual.

! CAUTION

The non-authorized movements or the replacement of one or more parts of the machine, the use of spare parts which are not recommended by the manufacturer might cause accidents and the manufacturer has no tort or criminal liability about that.

! CAUTION

The clothing of the operators must be in compliance with the safety rules of his country (CEE n. 89656 and 89/868 Directive for the individual protections rules).

It is also necessary to pay attention to the bracelets, watches, rings or necklaces: they must not dangle or anyway hamper the movements of the operator; it is therefore better not to wear these accessories.

3.2. PROPER AND IMPROPER USE

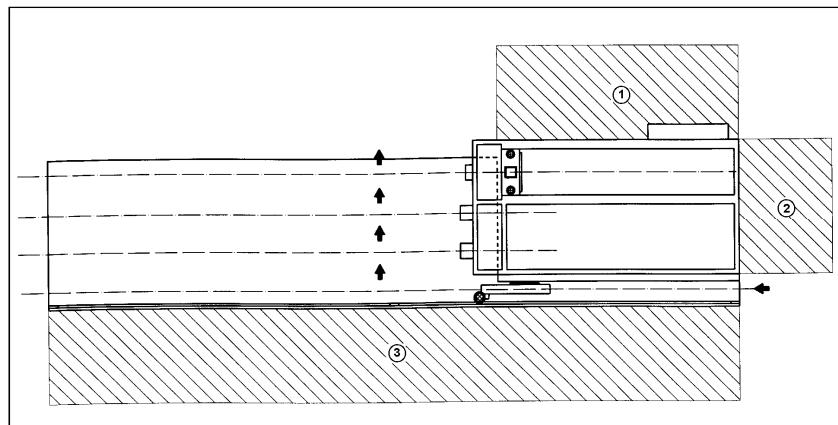
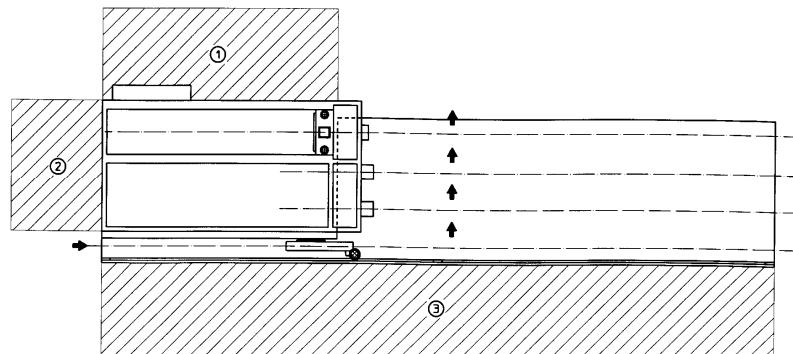
DIRECTIONS

The machine has been designed for the socketing of pipes (diameter and length of pipes: see paragraph TECHNICAL FEATURES) .

The different use of the machine has to be considered "IMPROPER USE", consequently the manufacturer declines any liability.

WORKING, CONTROL AND DANGEROUS ZONES

In the enclosed drawing we have pointed out the areas where the operator is supposed to stay for driving and controlling the machine.



Zone 1 Operator side with access to the control panel.

Zone 2 Access to the adjustments of the ovens exit.

Zone 3 Access to the adjustments of entry haul-off and good working inspection.

The hot zones are inside the machine.

CAUTION

The operator must not enter any other zone of the machine.

The maintenance operator may only work around and inside the machine, after having connected all the active and passive safety devices of the machine.

! **CAUTION**

The working area must be clear, leaving sufficient space for the operator to move. In case of emergency the immediate access to the machine must be granted to the responsible personnel.

Persons not directly concerned with the operation must not be allowed in the above-mentioned area in order to avoid problems due to inattentiveness or carelessness during working operations.

PRECAUTIONS

The personnel responsible for the maintenance of this machine must keep it clear from any tool and must forbid the access to non-authorized personnel in order to achieve safe conditions at the machine.

3.3. RISKS, PROTECTIONS, DIRECTIONS AND CAUTIONS

General safety

To grant the safety of the exposed persons, the machine is supplied with the following safety devices:

PASSIVE SAFETIES	ACTIVE SAFETIES
<ul style="list-style-type: none"> Fixed and mobile safety guards on the mobile mechanical parts and on the heating zones, low tension controls, etc. 	<ul style="list-style-type: none"> Limit switches on the mobile safety guards If a safety guard is opened, the limit switch stops the machine run and the new start occurs only after the closing of the safety guard and after an action of the operator on the control panel. Sectioning device of the pneumatic energy, in case of emergency.

RESIDUAL RISKS OF THE MACHINE

The belling machine's areas with residual risks are:

Ovens zone; high temperature, about 200 °C: this zone is protected during the normal machine run, the risk arises when the mobile protections are opened: the machine will be stopped, but the ovens are still hot.

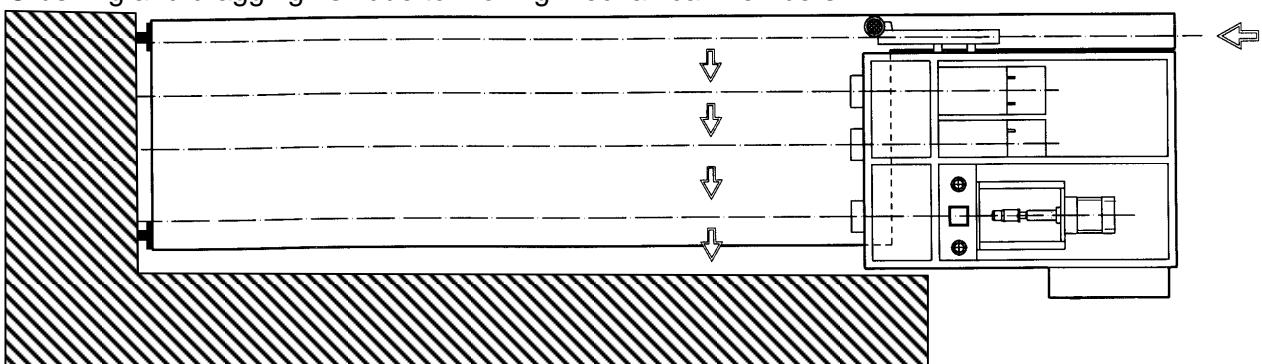


CAUTION

For any maintenance operation in these zones, **wear suitable heat protection gloves** (in compliance with **UNI-EN 388 UNI-EN 407** standards) or equivalents according to the accident-prevention rules in force in the machine destination country.

Pipe discharge zone; risk caused by the objects fall (the pipes fall down on the side of the belling machine after socketing, so the operator must be careful, shield the area and put the necessary indications).

Crushing and dragging risk due to moving mechanical members.



Formation area:

danger due to the possible operator's contact with the moving parts (clamps): this area is characterised by the crushing and cutting risk due to the closing/opening motion of the pipe blocking clamps.

RISKS LIST

Risks of the belling machine:

1) *Mechanical risks*

- A. Crushing and dragging caused by the transmission chain between the haul-off and the pipe in the entry haul-off area.
- B. Dragging and crushing risk in the transport area on the mobile plane.
- C. Crushing risk in the area of pipe discharge.
- D. Dragging and crushing risk in the area of press-pipe ovens, press-pipe entry head line.

2) *Electric risks*

- A. Fulguration risk caused by the ovens resistances or the electric system of the machine.

3) *Thermic risks*

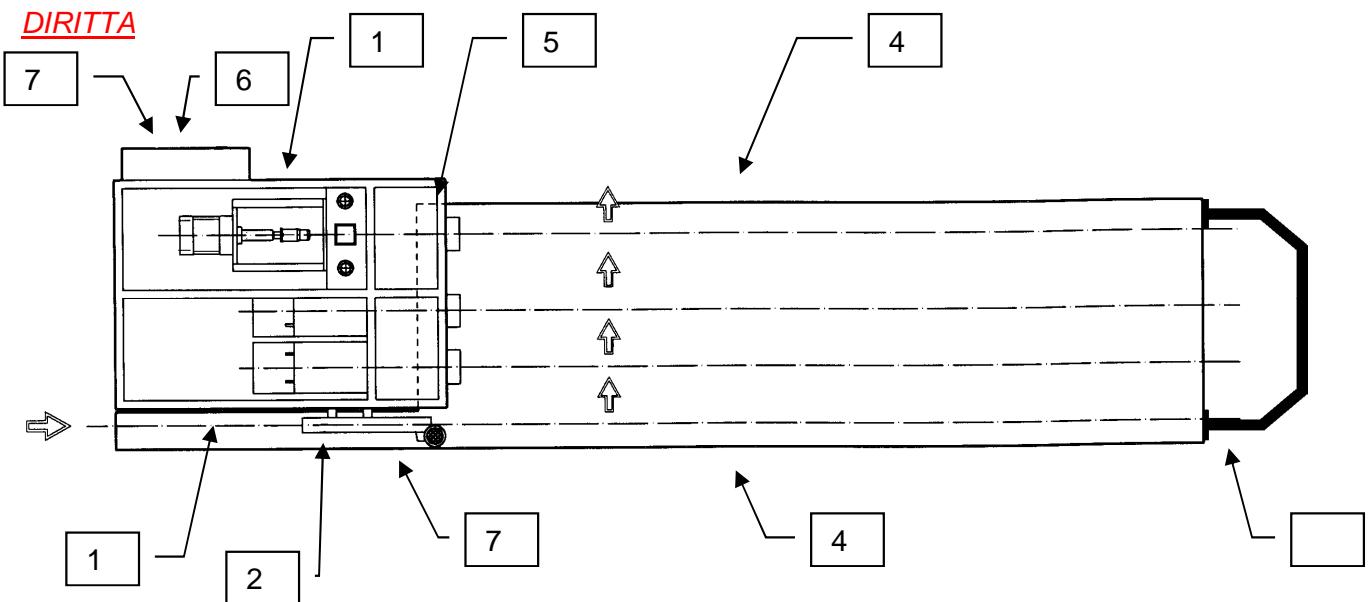
- A. Burns risk caused by the electrical resistances of the ovens.



DIRECTIONS: Do not place easily inflammable materials neighbourhood the electric cabinets, danger of fire.

PROTECTIONS FOR ACCIDENT PREVENTION

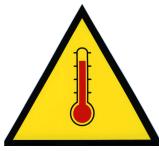
The protections for accident prevention are the following:



1. Mobile and fixed safety guards on all the sides of the belling machine head.
2. Fixed safety guard on the entry side (where the haul-off and the pipes transports are)
4. Fixed safety guards on the lower part of the mobile plane.
5. Mobile safety guard in the area of the socketing vice
6. Switch with door locking device on the electric box
7. Emergency push buttons all over the machine
- Sectioning device of the pneumatic energy at the entry of the machine, for emergencies.

The warning plates of the machine are:

- Thermometer symbol "High temperature", on the ovens
- Electric tension symbol on the electric box and on all the connector blocks
- Inscription "Break current before reaching the board" on the panel of the electric box



- (I) ATTENZIONE, ALTA TEMPERATURA
(GB) CAUTION, HIGH TEMPERATURE
(F) ATTENTION, TEMPÉRATURE HAUTE
(D) ACHTUNG, HOHE TEMPERATUR
(E) CUIDADO, ALTA TEMPERATURA
(P) CUIDADO, TEMPERADURA ELEVADA
- (I) ATTENZIONE, PERICOLO SUPERFICIE CALDA
(GB) CAUTION, DANGER HOT SURFACE
(F) ATTENTION, DANGER SURFACE CHAUDE
(D) ACHTUNG, VORSICHT HEISSE OBERFLÄCHE
(E) CUIDADO, PELIGRO SUPERFICIE CALIENTE
(P) CUIDADO, PERIGO SUPERFÍCIE QUENTE





(I) VIETATO LUBRIFICARE E PULIRE DURANTE IL MOTO
(GB) DO NOT LUBRICATE NOR CLEAN WHILE THE MACHINE IS ON
(F) DEFENSE DE LUBRIFIER ET NETTOYER PENDANT LE MOUVEMENT
(D) SCHMIEREN UND REINIGEN WÄHREND DES BETRIEBS VERBOTEN
(E) PROHIBIDO LUBRIFICAR O LIMPIAR DURANTE LA MARCHA
(P) È PROIBIDO LUBRIFICAR OU LIMPAR DURANTE O MOTO



(I) DIVIETO DI SPEGNERE CON ACQUA
(GB) DO NOT EXTINGUISH FIRE WITH WATER
(F) DEFENSE D'ETEINDRE AVEC EAU
(D) LÖSCHEN MIT WASSER VERBOTEN
(E) PROHIBIDO EXTINGUIR CON AGUA
(P) È PROIBIDO EXTINGUIR COM ÁGUA



(I) VIETATO APRIRE AL PERSONALE NON AUTORIZZATO
(GB) DO NOT OPEN TO UNAUTHORIZED PERSONNEL
(F) DEFENE DE OUVRIR LES PERSONNEL NON AUTORISÉ
(D) ÖFFNEN SIE NICHT DIE NICHT AUTORISIERTES PERSONAL
(E) PROHIBIDO ABRIR A PERSONAL NO AUTORIZADO
(P) PROIBIDO ABERTA AO PESSOAL NÃO AUTORIZADO



(I) LEGGERE LE ISTRUZIONI PER L'USO
(GB) READ THE INSTRUCTION MANUAL
(F) LIRE LES INSTRUCTIONS
(D) LESEN SIE DIE HINWEISE
(E) LEA LAS INSTRUCCIONES
(P) LEIA AS INSTRUÇÕES

! CAUTION

It is strictly prohibited to remove, neutralize or modify any safety, protection or control device from any part of the machine.

All safety and protection devices, belonging either to the machine or to its accessories, must be kept in perfect working order.

It is strictly prohibited to remove or modify the safety tags. In case this has been done the manufacturer declines any responsibility for the machine's safety.

3.4. WORKING CONTROLS AND RULES

Before starting the machine verify the calibration of the upstream protection devices and check, if the protections against electric and mechanical accidental contacts are well positioned and fixed.

While working some parts of the machine are subject to dangerous electric voltages. The machine must be disconnected from the power supply for repair on the machine or the equipment connected to it.

While working the machine is naturally subject to high mechanical stress. Make sure that ordinary and extraordinary maintenance operations are carried out by skilled personnel in respect of good technique rules.

Please keep manual and machine instructions always in mind.

! CAUTION

Every change concerning the safety of the machine or risk prevention may be effected only by the manufacturer who will then certify the compliance of the machine with the safety rules.

Therefore every modification or maintenance intervention not explained in this manual must be considered arbitrary.

If the required maintenance interventions are not explained in this Use and Maintenance Manual please contact the manufacturer.

Check periodically:

The tightening of mechanical parts and screws.

The correct functioning, tightening and state of the cables and insulation parts.

The temperature of the electric motors

The noise of the machine.

The machine's vibrations.

VERIFICATION OF NOISE EMISSIONS LEVEL

Verify the levels of noise emissions of the machine and check with the "Technical Features" paragraph.

Please take the adequate precautions to lower noise levels. For more specific data consult the Directive of the Council of the European Community n. 896/188 dated 12.05.1986.

4. INSTALLATION

4.1. MACHINE'S DELIVERY

All the goods have been thoroughly checked by the manufacturer before shipment. When receiving the machine, make sure it has not been damaged during transportation and check, if the packaging has not been unduly opened with consequent removal of parts.

In case you find any part damaged or missing, please contact immediately the Technical Customer Service.

4.1.1. PACKAGING

The machine has to be dispatched in one of the following ways:

- a. Without packing, on a truck, well locked and covered
- b. In a normal box with protective packing - Seaworthy packing for shipping
- c. In containers with internal lockings against rolling

The choice among the above-mentioned 3 solutions depends on the transport distance, on the customer's directions and the storage times of the machine in the packing.

4.1.2. UNPACKING OF THE MACHINE

Follow these indications:

1. Open the packing which protects the machine.
2. Control the integrity of the machine components.
3. Lift the machine and then lean it to the ground.

NOTE

The customer has to eliminate the packing material observing the relevant national rules.

WARNINGS

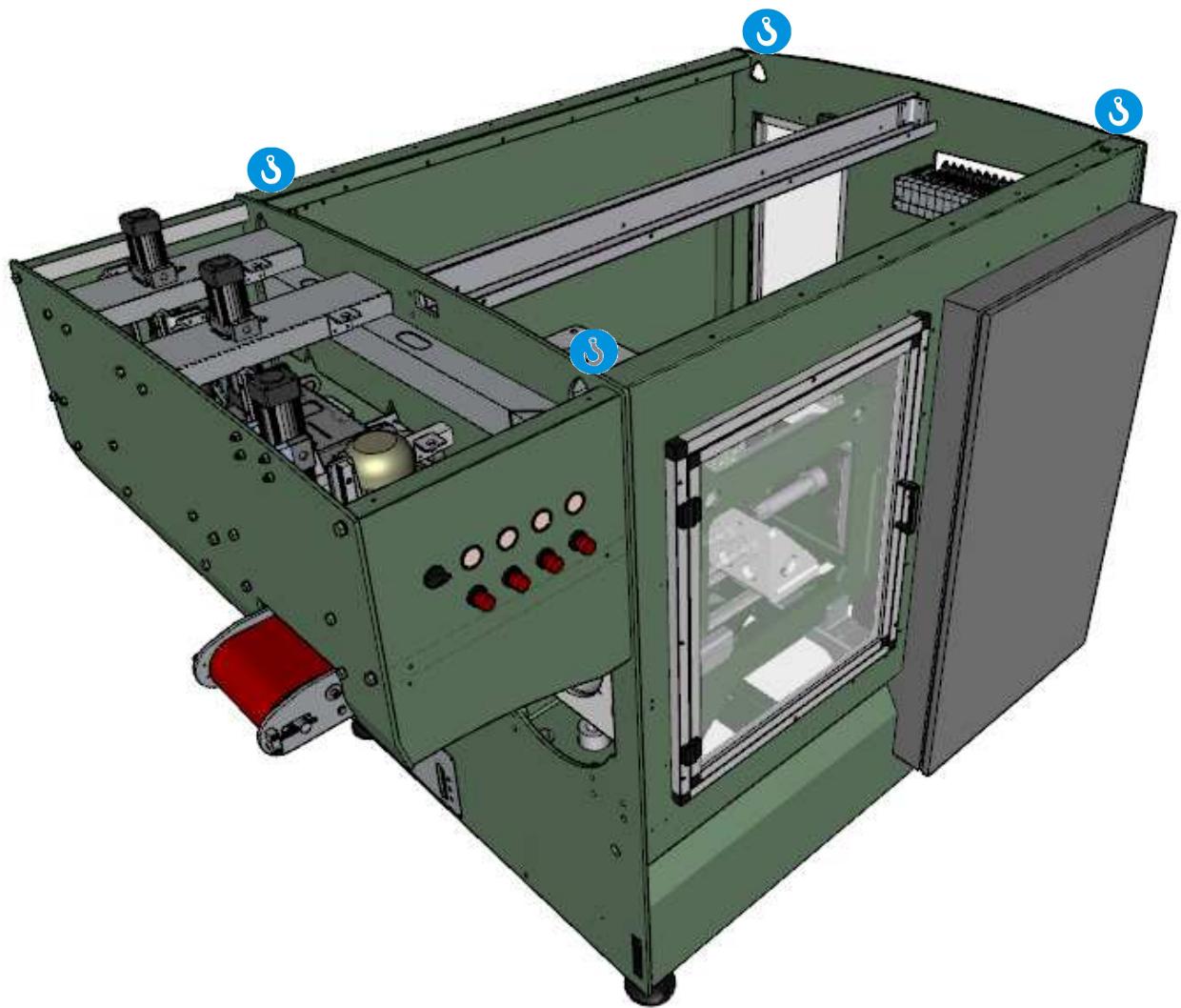
The weight of the machine is indicated in the table Technical Features. Use suitable lifters with capacity load higher than the indicated weight and use the hooks indicated in the diagram (Ref. A). The unloading must be carried out by skilled technicians (i.e. lift truck or crane operators).

Operator assigned to machine assembly:

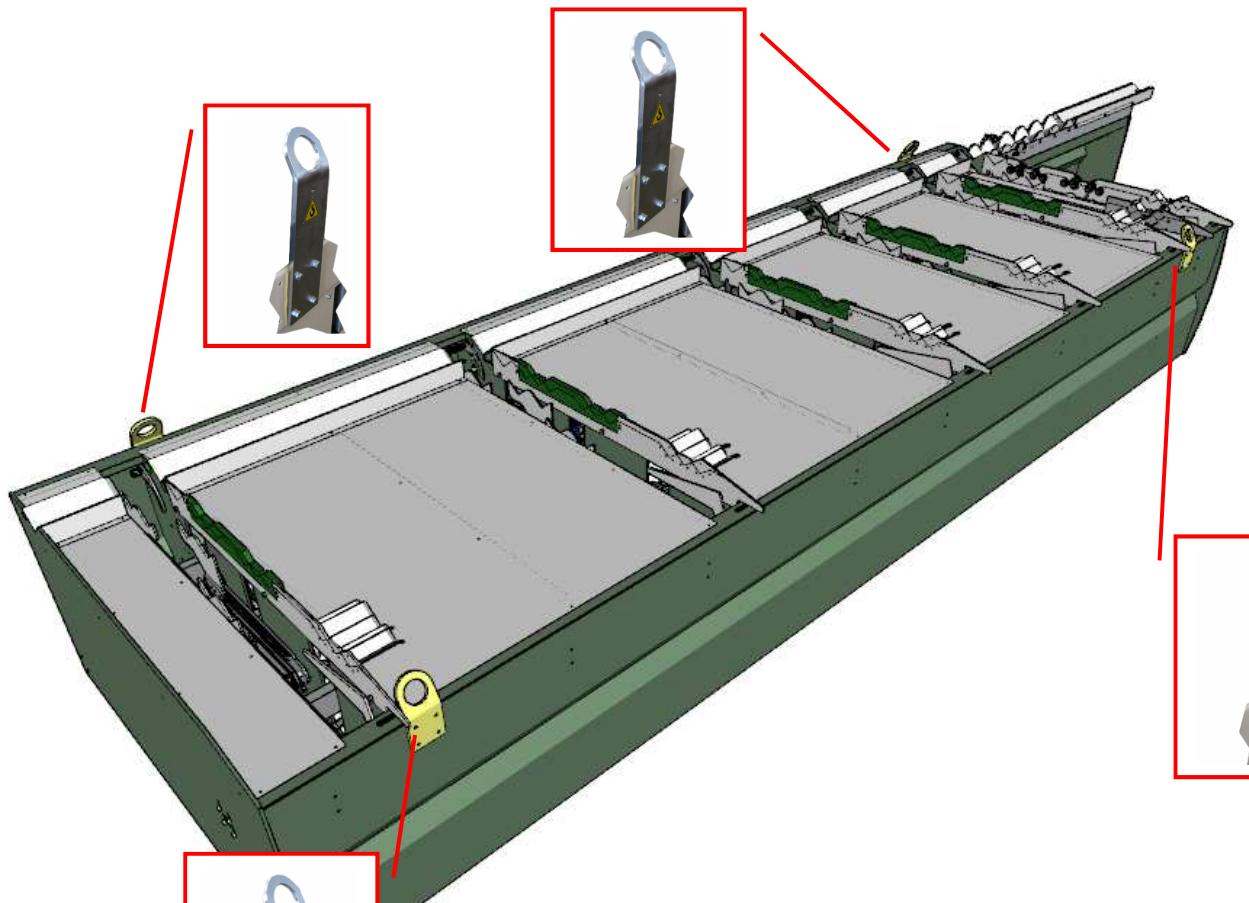
Therefore, the operator has to be equipped with the following safety equipment before effecting the unloading:



- Safety shoes
- Protective gloves for the hands
- Safety helmet

HEAD

MOBILE PLAN



! **CAUTION**

During lifting and moving pay extreme attention in order to avoid accidents. Avoid rough movements which might damage the machine. Make sure that there is nobody in the dangerous zone.

While being moved the machine must be in a stable and safe position. During lifting the area around the machine must be considered dangerous.

Until the unit is not completely lifted, verify if it is well-balanced. Keep the load as low as possible during handling in order to have better stability and visibility.

4.1.3. ENVIRONMENTAL OPERATION CONDITIONS

The machine must be placed under shelter with controlled temperature and low levels of dust and humidity.

The environmental operational conditions, except for special indications, must be the following:

min. room temperature 0°
max. room temperature 40°
max humidity 90%

Conditions different from the above-mentioned ones may cause mechanical breakages with consequent dangers for the personnel.

4.1.4. ILLUMINATION

The illumination of the installation room must be sufficient to allow a good visibility in every part of the machine.

In particular, there must not be less than 300 lux brightness, a uniform illumination and no reflections on the control panel (display).

We recommend to provide for an adequate illumination in case of maintenance interventions.

The customer must also provide the room with adequate illumination systems according to the rules in force.

4.1.5. ATMOSPHERE WITH EXPLOSION OR FIRE DANGER

The machine itself cannot cause neither explosion nor fire. Anyway, it must not be installed in premises which might, even casually, be saturated with explosive gases.

As a precaution, place powder extinguishers near the machine.

To prevent fire it is necessary to keep the machine clean from plastic pieces, oils, solvents, paper and rags.

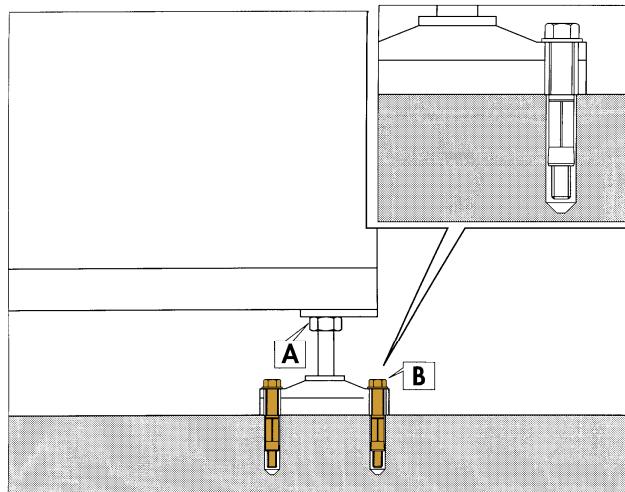
4.1.6. INSTALLATION PLACE

Choose the place verifying that there is enough surrounding space and that the operator can easily walk around the machine. In any case, the minimum free space around the machine must be at least 1500 mm in every direction.

It is most important to keep the electric box always accessible. It must always be possible to open its doors fully and easily without any obstacles. Make sure that there is enough space for regular as well as for maintenance operations and for the peripheral equipment.

4.2. PLACING AND ASSEMBLY

1. Make sure that the bearing surface is flat and strong enough to bear the weight of the machine.
2. Approach the two blocks (HEAD and MOBILE TABLE)
3. Position the head of the machine in axis with the extruder (this condition is obtained when the center of the ovens and of the socketing tool is at the same height as the center of the die head of the extruder) using the adjustable feet (Ref. A). Check the perfect leveling of the head with a water level.
4. Join the mobile table to the head using the special brackets and the given screws.
5. Connect the two blocks using the multipolar fixed plugs (which cannot be exchanged by mistake).
6. We advise to fix the machine to the ground with screw anchors. (Ref. B)



7. Remove the blocks used to hold the mobile parts of the machine during transportation.
 - a) Oven unit advancement block
 - b) Oven and socketing unit pipe-holder block
 - c) Entrance haul-off block

4.3. CONNECTIONS TO THE FEEDING NETWORKS

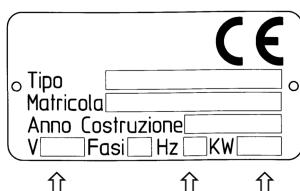
4.3.1. CONNECTIONS TO THE ELECTRIC FEEDING

DIRECTIONS

This connection has to be carried out by a skilled technician (electrician) at CEI 64-8 rule.

Before connecting the machine to the network, it is necessary to:

- make sure to have right voltage and frequency checking on the identification label (wrong feeding voltage might cause damage to the machine).



- verify the efficiency of the earthing system to the current tap
- verify the network voltage variation (MAX +/- 10%)
- verify the network frequency variation (MAX +/- 10%)
- use the **feeding cable** and the **ground cable** with min. 16,00 mmq. Section.
- to check, if the connection plug of the equipment has a superior or at least sufficient power for the max. absorbed power
- protect the feeding line from the overvoltages, like for ex. atmospheric discharges)
- protect the feeding line from thermic or magnetic overcurrents by means of suitable coordinate devices (ex. automatic switches)

Effect the connection to the electric network with greatest care making sure there is no voltage in the network and observing the safety rules. The feeding cable must be connected to the special terminal board, following the rules in force in the user's country (connect the ground cable to PE terminal).



4.3.2. CONNECTION TO THE PNEUMATIC NET

DIRECTIONS

A skilled technician must carry out this connection

It is necessary:

1. to make sure that the machine is not working nor under tension;
2. to insert a rubber hose (ref. diam. of the machine manifold - see ref.Z), and fix it by a hose clamp;
3. to check, if there are any losses.



It is necessary to install a device for the sectioning of the pneumatic feeding near the connection to the machine.

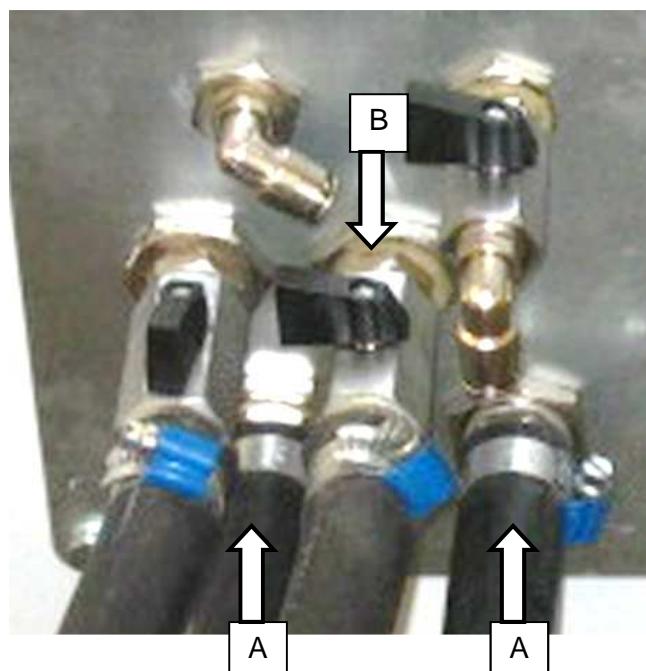
4.3.3. CONNECTION TO THE WATER SUPPLY

It is necessary to install a device for the sectioning of the water supply near the connection to the machine.

On the bellringing machine there is a rubber-holder (near it there is the indication for the feeding from the water net).

It is necessary:

1. to make sure that the machine is not working nor under tension
2. to insert a rubber hose (Ref B), - coming from the supply net - on the rubber-holder and fix it by means of a hose clamp
3. to insert a rubber hose (Ref. B), - coming from the sewer net - on the rubber-holder and fix it by means of a hose clamp.
4. To control if there are any losses.



! **CAUTION**

It is necessary to eliminate eventual losses, as they could be very dangerous.

4.4. LUBRICANTS AND GREASES TABLE

GREASINGS	ROLOIL <i>LITEX EP00 CH-MP</i>	MOBIL <i>MOBILUX EP004 GREASE MP</i>	BP <i>GREASE UNIVERSAL</i>	TOTAL <i>MULTIS EP200 MULTIS WR200 MULTIS L2</i>
GEAR BOX	ROLOIL <i>EP/220</i>	SHELL <i>OMALA 220</i>		TOTAL <i>CARTER EP220</i>

5. STARTING

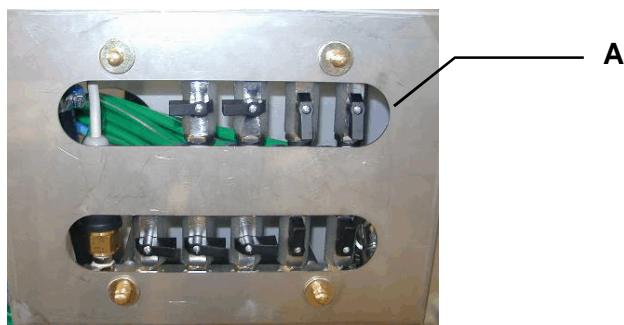
5.1. SETTINGS, CONTROLS AND TESTINGS BEFORE STARTING

WARNINGS

The following operations must be carried out by skilled technicians and in the order in which they are described.

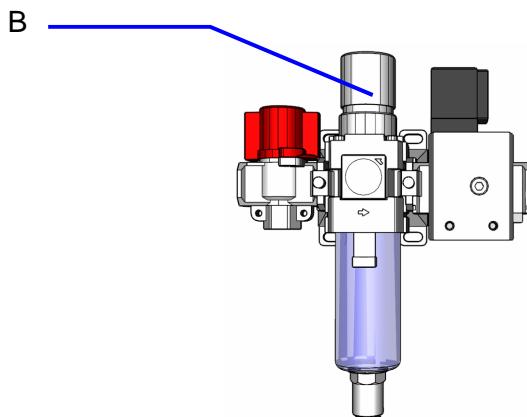
5.1.1. WATER COOLING CIRCUIT ACTIVATION

1. Verify that the outer sectioning device is open
2. Open the taps of every cooling zone(ref. A). Note: in every zone you have delivery and return taps: open both of them.



5.1.2. CONTROL OF PNEUMATIC ENERGY PRESENCE

1. Control if the sectioning device upstream the belling machine is open
2. adjust the pressure regulator of the F.R. unit on 6 bar.



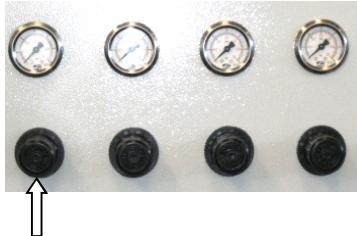
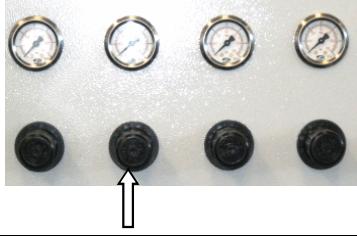
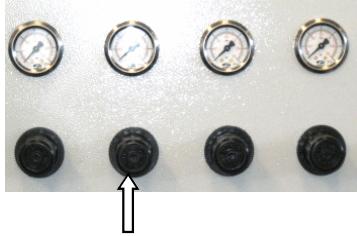
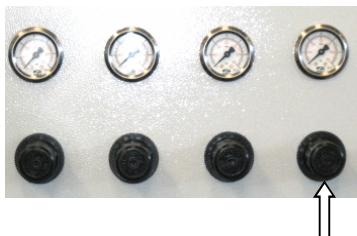
5.1.3. CONTROL OF ROTATION DIRECTION OF THE ELECTRIC MOTORS

Control if the rotation of the motor for the mobile plane lifting is right; if this rotation is right, consequently the other ones are right.

1. Turn the main switch of the control panel to ON position.
2. Make sure that the emergency push-buttons have not been pushed and that the mobile safety guards are in the right position.
3. Push the button "START AUX"
4. Follow the procedures "Regulation of Mobile Table Height" (manual positioning) as described later on in this chapter
5. If You move the Joystick upwards, the mobile plane **MUST BE LIFTED**. If the movement is correct, You can pass to the following point, otherwise it is necessary to **STOP IMMEDIATELY THE TESTING** and to check the paragraph "**Connection to the electric net**" of the chapter **INSTALLATION**, then it is necessary to invert two following phases of the feeding cable; at the end of this operation, repeat the process, if everything has been carried out in the correct way, now the rotation should be right.

5.1.4. SETTING OF PRESSURE REGULATORS

1. Turn the main switch of the control panel to **ON**
2. Make sure that emergency buttons have not been pushed and that the mobile guards are in the right position.
3. Put the machine on MANUAL RUN following the directions of paragraph "Belling Machine Starting" in the chapter "WORKING and USE".
4. Push the button for manual movements on the VT.
5. Using the buttons **PGUP** and **PGDOWN** find the page concerning the pneumatic movement you intend to regulate.
6. Move the joystick in the direction indicated by the VT to obtain the pneumatic movement.
7. Regulate the pressure reducing valve according to the following scheme.

	THRUST PIPE HAUL-OFF <i>Calibrate at about 2 bar</i>
	PRESS PIPE LINE OVEN 1 <i>Calibrate at about 2 bar</i>
	PRESS PIPE LINE OVEN 2 <i>Calibrate at about 2 bar</i>
	PRESS PIPE LINE FORMATION <i>Calibrate at about 2 bar</i>

5.2. MECHANICAL ADJUSTMENTS

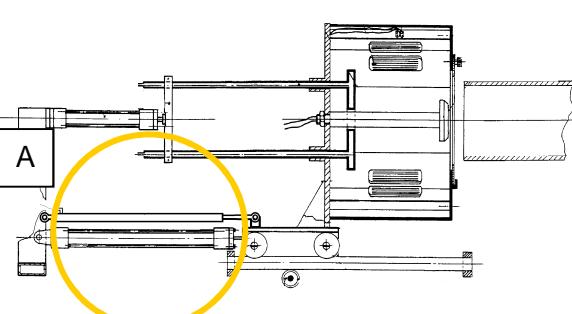
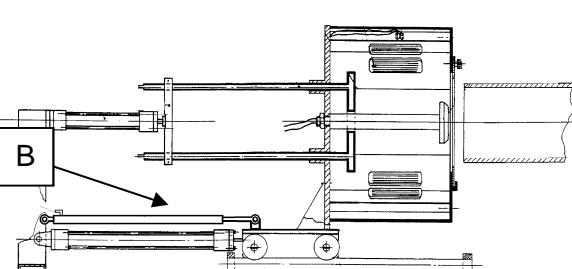
5.2.1. MOBILE TABLE HEIGHT REGULATION

*Mobile Table **MANUAL** Positioning*

1. Turn the main switch of the control panel ON.
2. make sure that emergency buttons are not pushed and that the mobile guards are in the right position.
3. Put the machine on MANUAL RUN following the directions of paragraph “Belling Machine Starting” in the chapter “WORKING and USE”.
4. Push the button for manual movements on the VT
5. Using the buttons PGUP and PGDOWN find the page concerning the regulation of the mobile table's height.
6. With reference to the nonius bring the mobile table in the desired position using the joystick.

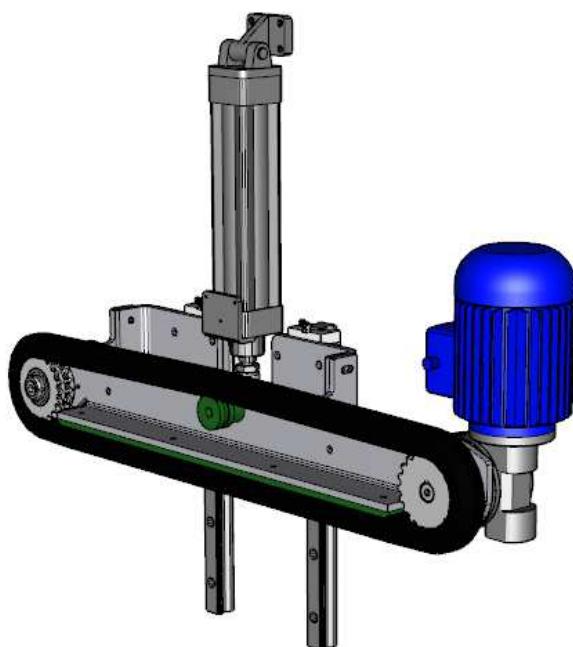


5.2.2. LENGTH ADJUSTMENT OF OVENS HEATING AREA

<i>Belling machine with AUTOMATIC adjustment of the oven's position</i>	
	<p>On setting of the value “OVENS’ ADVANCEMENT”, the program can control the oven’s run by the potentiometer bars and the locking valves mounted on the pneumatic cylinder.</p>
	<p>The cylinder is unlocked when the oven is to advance. (Cylinder with locking valve Ref.A)</p>
	<p>The oven starts its run and the program, controlling the covered distance by the potentiometer bar, locks the oven again when the measured distance corresponds to the value set on the VT. (Potentiometer bars Ref.B)</p>

5.2.3. ADJUSTMENT OF ENTRY HAUL-OFF HEIGHT

Adjustment of the haul-off is done automatically.

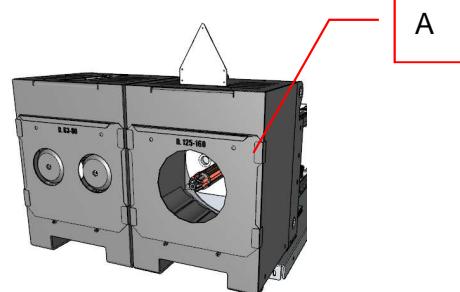


5.2.4. ASSEMBLY OF THE OVEN REDUCTIONS

! CAUTION

Before carrying out this operation, control that the ovens are off (for an hour at least) to avoid the residual risk of accumulated heat inside the oven.

1. Unscrew the old oven reductions
2. Insert the new reductions into the ovens, centering them in their supports (Ref. A).



NOTE

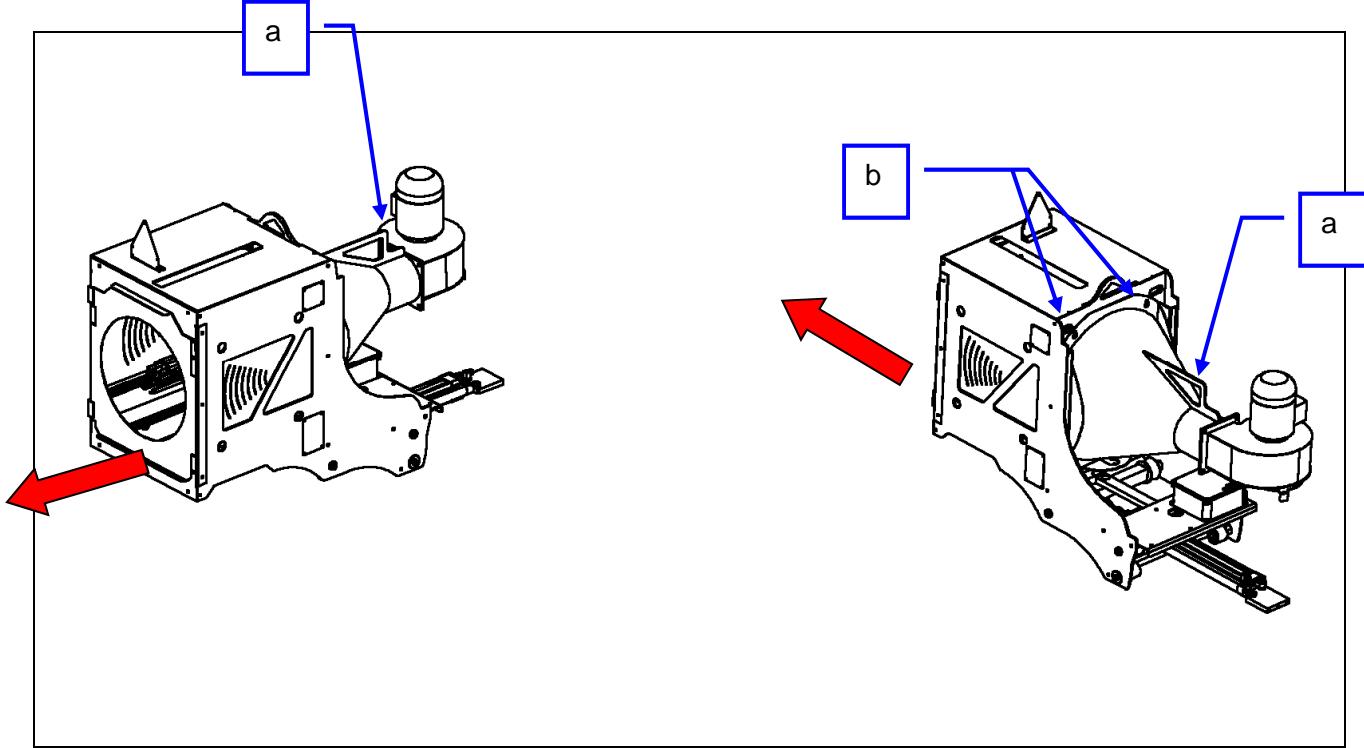
On each reduction there is the max. and min. diameter of use, it is necessary to assemble the right reduction for the pipe diameter to socket.

5.2.5. REPLACEMENT OF THE CENTRAL HEATING RESISTANCE

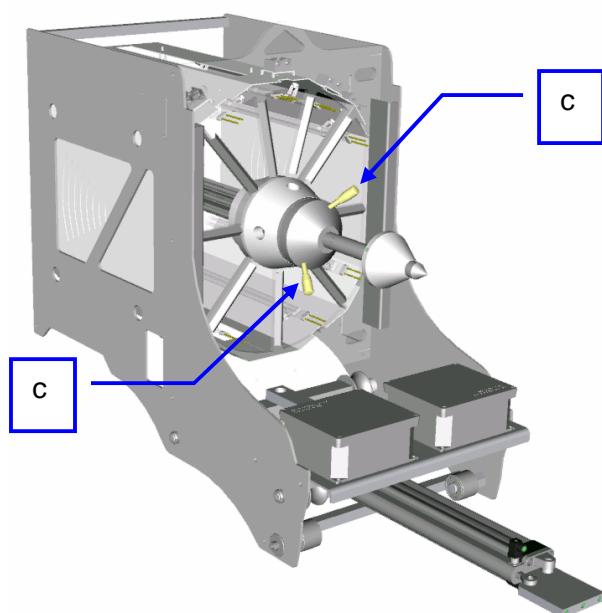


HIGH TEMPERATURE

Before reaching any tools, verify that they have got cool; or use protective gloves.



- Put the machine in emergency stop mode
- Turn the selector towards the position for heating resistance replacement
- Hook up the hoist in the lifting ring designed for that purpose (ref. a)
- Unscrew the Allen screws which fix the suction bonnet (ref.b)
- Lift lightly the bonnet until it is detached from the oven
- Move manually the oven forwards until you can see its back part and you can enter it



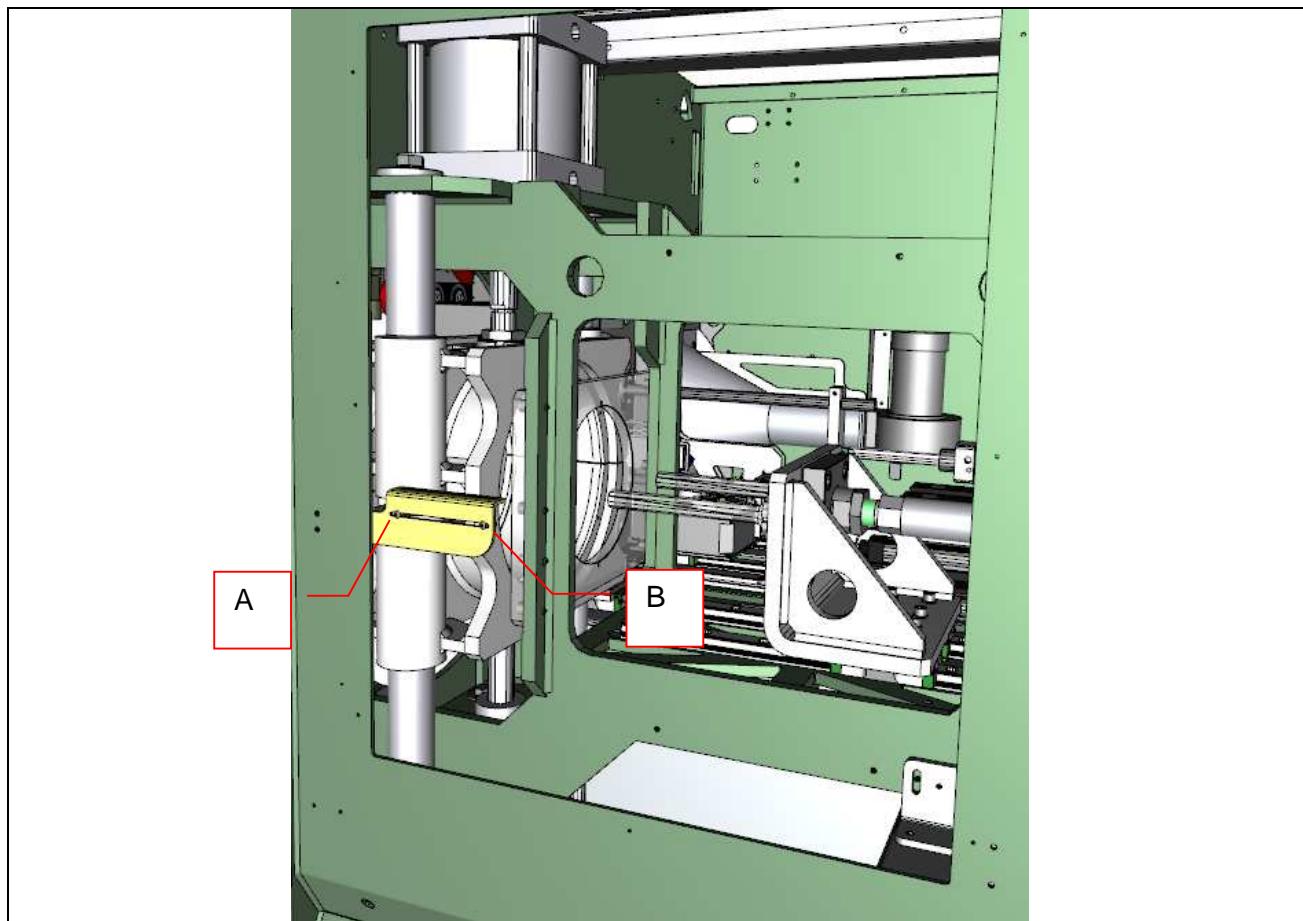
- Unscrew the lock nut by means of the ball grips (ref.c).
- Remove the central heating resistance and replace it, if necessary
- Reassemble the oven following the same previous instructions but the opposite way
- Before putting the machine into operation, make sure that the pneumatic selector has been restored in its working position

5.2.6. ADJUSTMENT OF PIPE STOP POSITION IN FORMATION LINE

Position the photoelectric cells, which determine the slowing-down (A) and the stop (B) of the pipe in formation line with the fastening screws.

Adjust it according to the socket you wish to produce.

	Adjustment is to be done with the machine off, opening the protection wings which are equipped with a safety switch
! CAUTION:	<p>Do not act on the photoelectric cell, generally speaking, on the head unit with other, improper tools.</p> <p>Do not act on the photoelectric cell, generally speaking, on the head unit with the machine in operation.</p> <p>Do not act on the photoelectric cell, generally speaking, on the head unit acceding to the machine from above.</p>



ASSEMBLY OF THE SOCKETING TOOLS

For the assembly of the socketing tools, it is necessary to move the mandrel-holder trolley backwards, and to open the blockage vice; to obtain that, You have to effect a machine reset:

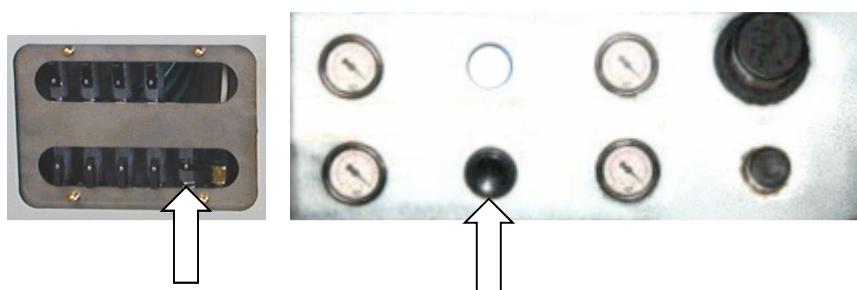
1. Turn the main switch of the control panel to **ON**.
2. Make sure that the emergency push-buttons have not been pushed and that the mobile safety guards are in the right position.
3. Push the button "**START AUX**"
4. Turn the selector **MAN - AUT** on **AUT** position
5. Push the button "**RUN STOP (RUN)**" If the push-button is blinking, it means the machine is going to zero position, when the blinking stops, the machine is set to zero; otherwise, if the push button is steadily luminous, the machine is already in zero position and it means it is ready to start in automatic mode; if it is pushed again, the machine is stopped.
6. Disconnect the main switch of the control panel.
7. Open the mobile protection and assemble the tools.
8. Before to dismantle the socketing tool, empty it of the residual cooling water by following the procedure of the pad cleaning.

Now, it is possible to assemble the different socketing tools (see the following instructions). For each pipe diameter or thickness change, it is necessary to assemble different socketing tools.

NOTE **ONLY in case of pipes in diameter range from 32mm to 114mm it is possible to socket two pipes each cycle.**

5.3.1. PROCEDURE OF PAD CLEANING:

1. Close the machine water supplies (see Connection to the water supply).
2. Go on in emptying the circuit opening the compressed air cock (or by the pneumatic push button according to the machine model).



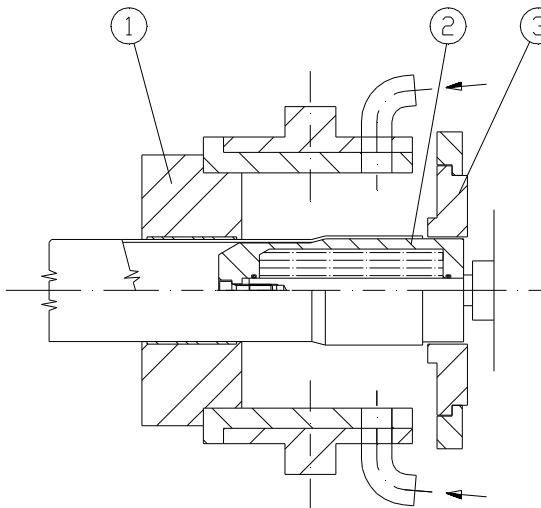
3. Close the cock.
4. Go on in disassembling and to the assembling the belling tools as here below described.
5. Reactivate the machine water supplies (see Connection to the water supply).

5.3.2. SMOOTH SOCKET (BA)

Assemble the different parts in the following order:

- External mandrel N° 1
- Internal mandrel N° 2
- Extraction flange N° 3

For the socketing of pipes having the same diameter, but different thickness, replace only the internal mandrel (Detail 2).



For this kind of socketing, the working cycle of the machine is the following:

The heated pipe arrives at formation line, the formation trolley advances until the pipe covers the photoelectric cell (for the pipe length). The trolley stops and the blocking vices are closed, then the mandrel is inserted into the pipe. Now, the **FORMATION TIME** begins (to set on the VT keyboard). After the end of this phase, the **COOLING TIME** begins.

For the smooth socketing, it is necessary to set the cooling time only, the formation time is set to zero.

After the end of the cooling, the mandrel is withdrawn, the blocking vices are opened, the formation unit is moved backwards; finally the socketed pipe is expelled laterally.

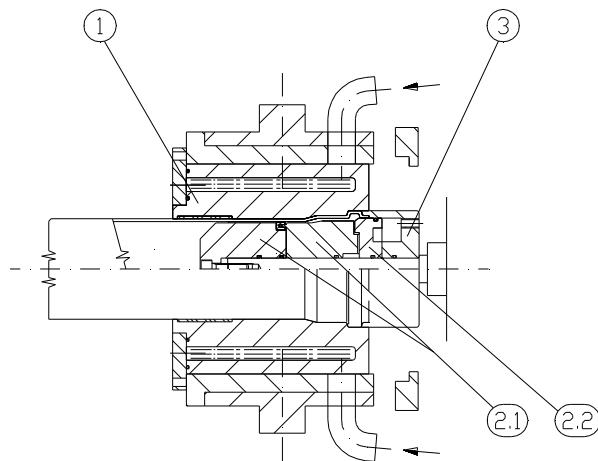
5.3.3. SHAPED SOCKET BY BLOWING SYSTEM (BA)

Assemble the different parts in the following order:

- Mandrel with water cooling Det. 1
- Blowing mandrel Det. 2.1 or 2.2
- Checking flange Det. 3

For the socketing of pipes having the same diameter, but slightly different thickness, replace:

- Mandrel with water cooling Det 1
- Blowing mandrel Det. 2.1
- Checking flange Det. 3



For this kind of socketing, the working cycle of the machine is the following:

The heated pipe arrives at formation line, the formation trolley advances until the pipe covers the photoelectric cell (for the pipe length). The trolley stops and the blocking vices are closed, then the mandrel is inserted into the pipe, now, the **FORMATION TIME** begins (to set on the VT keyboard). During this phase, the socket is inflated with compressed air to have the pipe adhere to the mould. After the end of this phase, the **COOLING TIME** begins. First the air is released from the socket; the pipe cooling is achieved by keeping the mandrel cold.

For the blowing system, only the formation time has to be set and the cooling time is nearly zero: the pipe is cooled anyway because the mandrel is kept cold by water circulation.

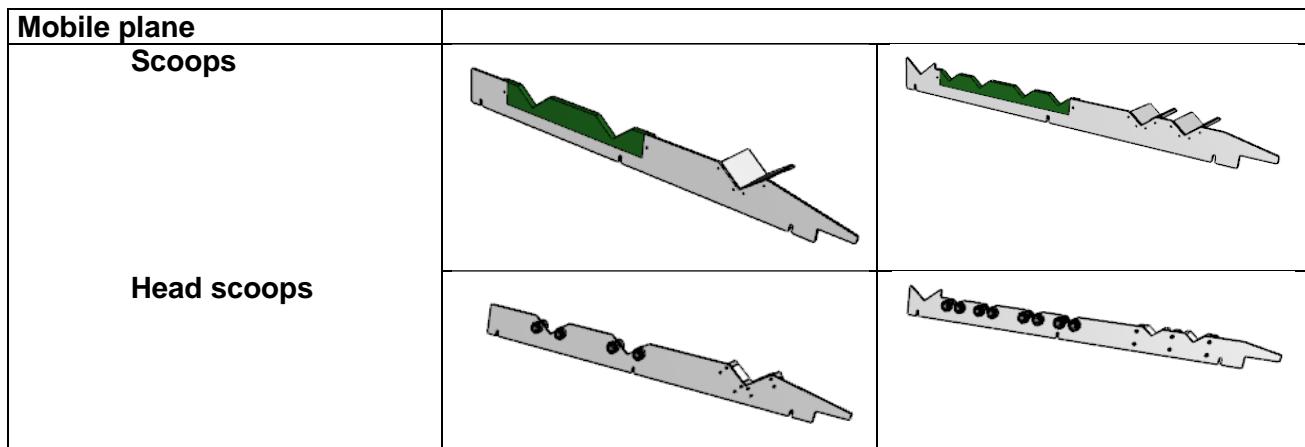
After the end of the cooling phase, the mandrel is extracted, the blocking vices are opened and the formation trolley is withdrawn. Finally the machine expels the pipe laterally.

DIRECTIONS

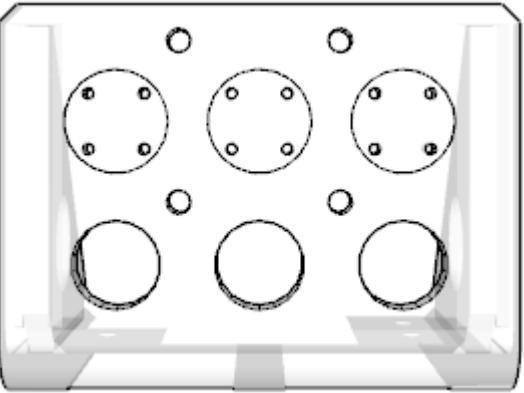
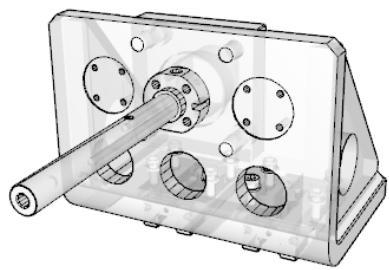
All the above-mentioned tools are fixed and screwed by means of bolts, which have been supplied with the machine.

To set the machine in order to socket two pipes per cycle, it is necessary to change the following tools:

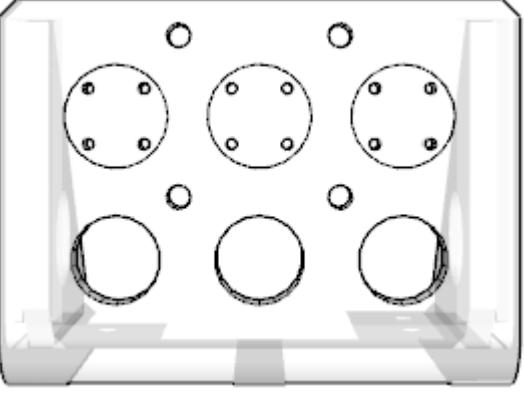
Mandrel	<i>SINGLE</i>	<i>DOUBLE</i>
Ovens		

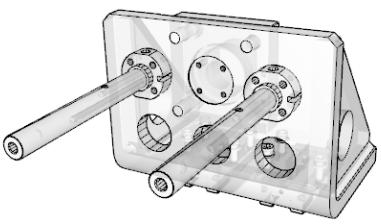


Assembling of double mandrels for the single socketing

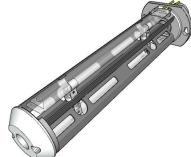
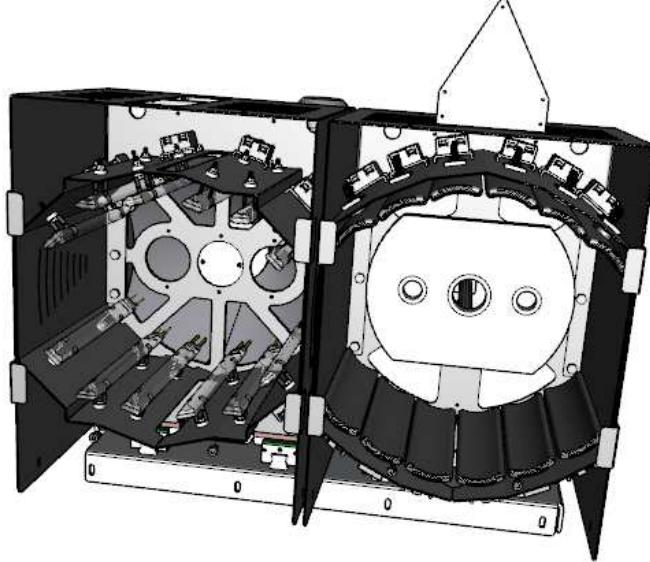
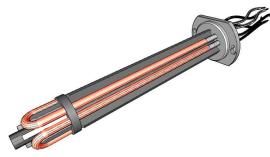
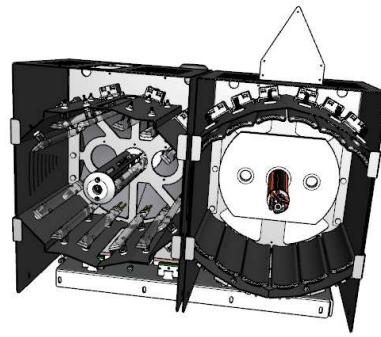
PHASE 1	PHASE 2	
		
PHASE 3		
		
Assembled tool.		

Assembling of double mandrels for the double socketing

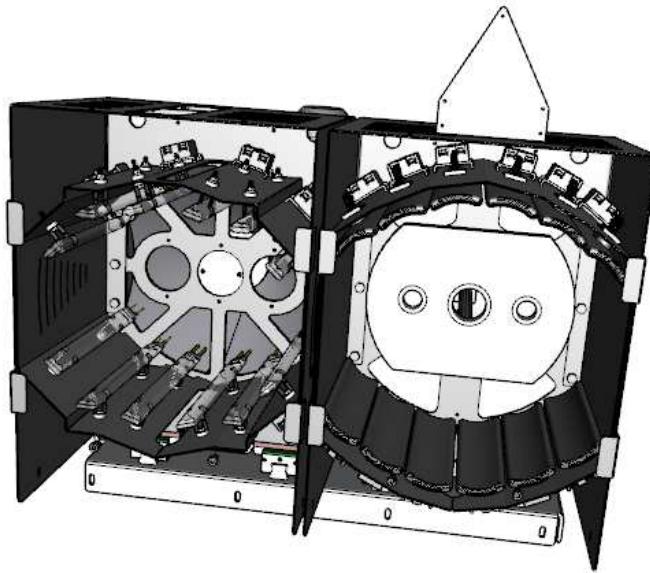
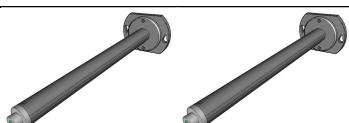
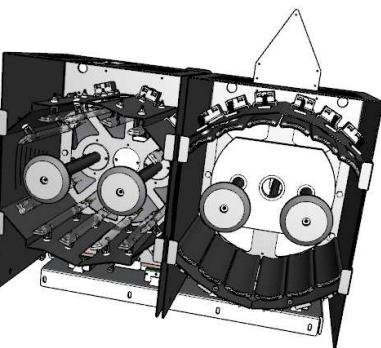
PHASE 1	PHASE 2	
		
PHASE 3		

		
Assembled tool.		

Montage ovens spark plugs for single socketing

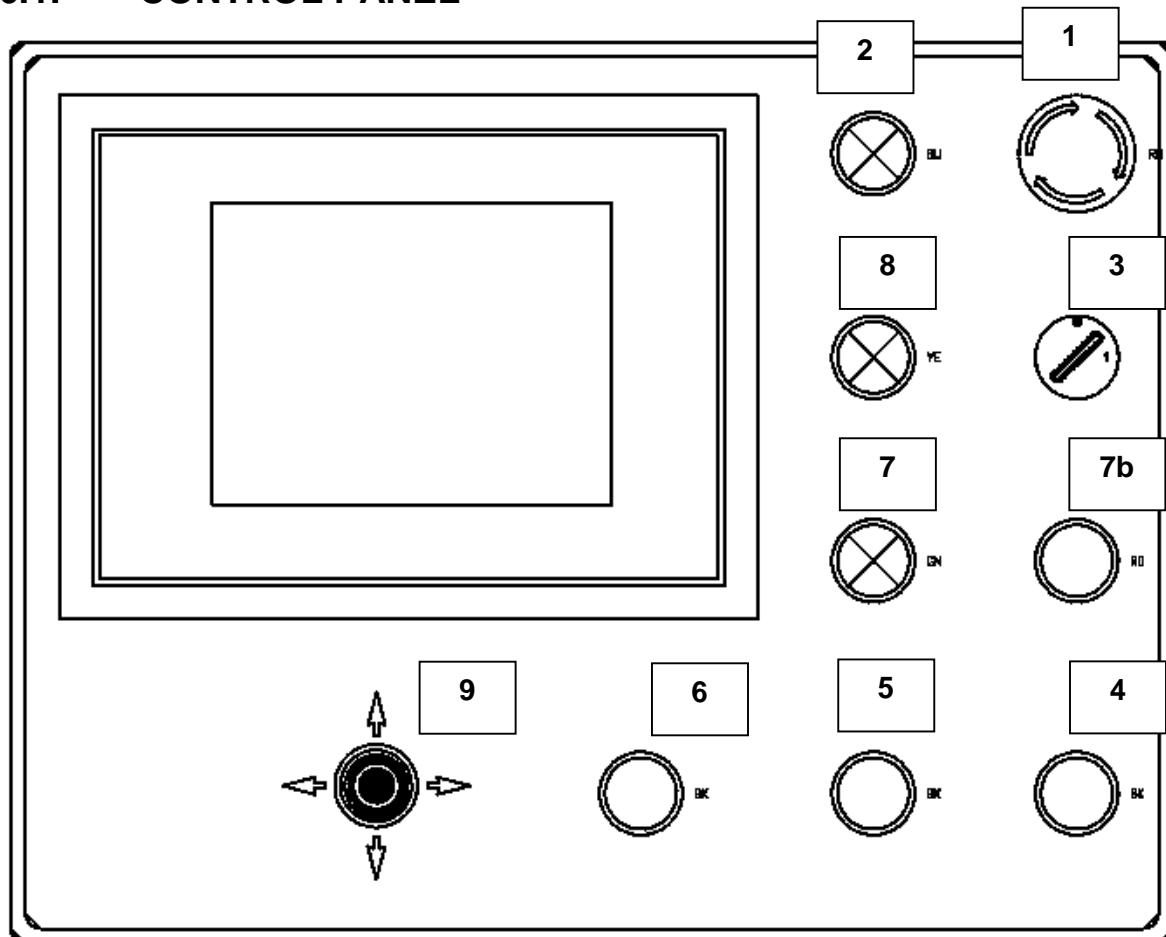
PHASE 1	PHASE 2	
		
		
PHASE 3		
		
Assembled tool.		

Montage ovens spark plugs for double socketing

PHASE 1	PHASE 2	
		
		
		
Assembled tool.		

6. WORKING AND USE

6.1. CONTROL PANEL



Ref.	INDICATION	TYPE	FUNCTION	Colour
1	EMERGENCY	<i>Self-blocking push-button</i>	Push button for the immediate stopping of the machine: after it has been disconnected, it does not allow the restart of the machine	Yellow and red
2	START AUX.	<i>Luminous push button</i>	Push button for the reset of auxil. circuits: if it is luminous, it means that these circuits are working. Each time an emergency button has been pushed or a mobile safety guard has been opened, the auxil. circuits stop working and have to be reset in order to restart the machine.	Luminous Blue

Ref.	INDICATION	TYPE	FUNCTION	Colour
7	RUN	Luminous Push button	If it is pushed, the machine is in condition of RUN (in this case the button is steadily luminous).	
7b	STOP	Push button	If button is pushed, the machine is in condition of STOP .	
3	MAN-AUT	Key Selector	Selector to choose the mode: MANUAL or AUTOMATIC .	
8	ALARMS ZERO SETTING	Push button	Push button for reset of the active alarms.	Yellow
9		Joystick	Multifunctional control, according to the VT messages, it carries out the indications shown, it is used for the manual movements of the machine.	
4	FORM ZERO SETTING COOLING ZERO SETTING	Push button	Push button for the zero setting of formation time (when the machine is in the formation phase) or the zero setting of cooling time (when the machine is in the cooling phase).	Black
5	OVEN 2 HEATING 2 ZERO SETTING	Push button	If it is pushed it for a short time during the heating phase, the oven moves backwards, so You can see the plasticization degree of the pipe, if it is pushed again, the oven returns to the heating position; during this phase, the time counting is unchanged until the end of the heating phase. If the button is kept pushed until the oven has reached the rest position, the heating time is set to zero and the pipe is ready for the following phase.	Black
6	OVEN 1 HEATING 1 ZERO SETTING	Push button	If it is pushed it for a short time during the heating phase, the oven moves backwards, so You can see the plasticization degree of the pipe, if it is pushed again, the oven returns to the heating position; during this phase, the time counting is unchanged until the end of the heating phase. If the button is kept pushed until the oven has reached the rest position, the heating time is set to zero and the pipe is ready for the following phase	Black
8 + 7		Push button + Push button	Push these keys in swift sequence for machine reset.	

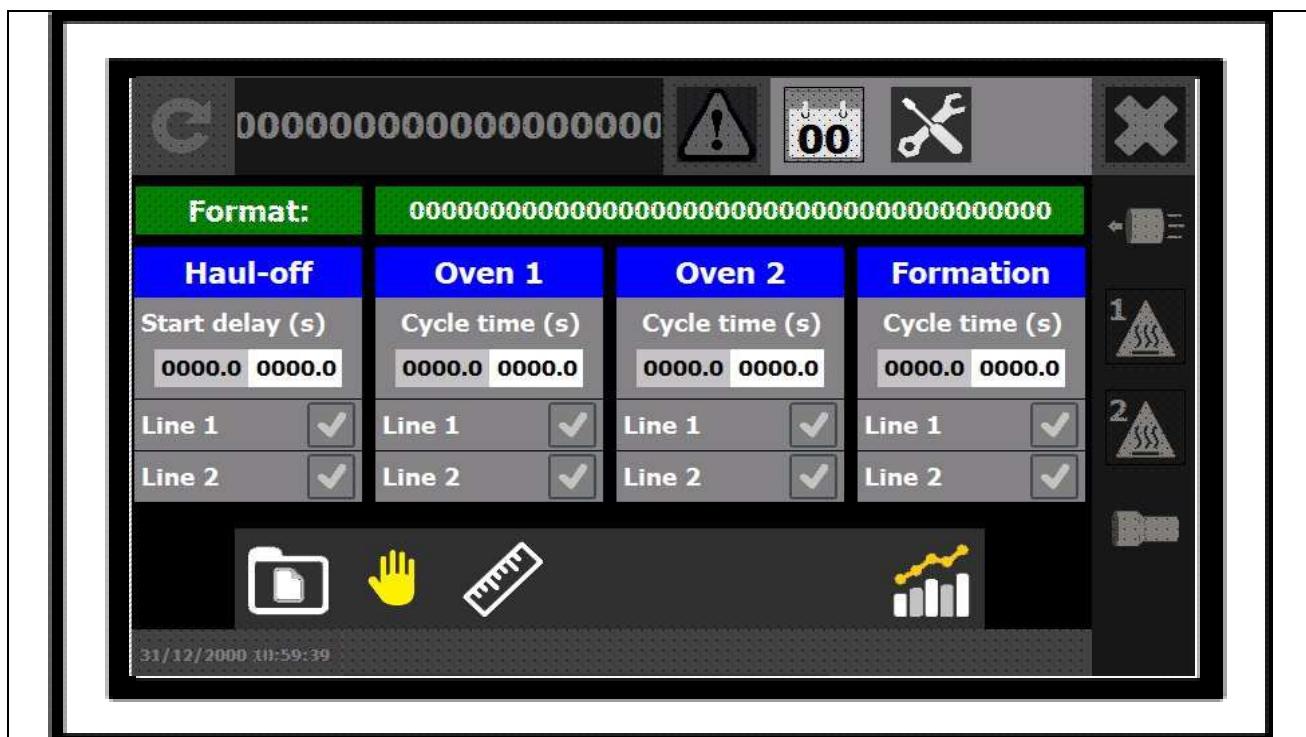
FUNCTION SELECTOR	
	<<----BLOWING COOLING ----> T1
	<<----BLOWING COOLING ----> T2

▪ Selector BLOWING position: the machine effects a **Shaped socket** (obtained with a blowing mandrel)

▪ Selector in CENTRAL position: the machine effects a **Smooth socket**.

▪ Selector in COOLING position: the machine effects a **Smooth socket** cooling it with a compressed water jet from the clamps.

6.2. VIDEO TERMINAL VT DESCRIPTION



The PLC control software has the features of a graphic interface for easy comprehension and use by the operator. Its functions are described below.

6.2.1. START



When the machine is started there is the PLC's data initializing time; afterwards the videoterminal is ready and the screenpage appears as above. This is the main control page ("START").

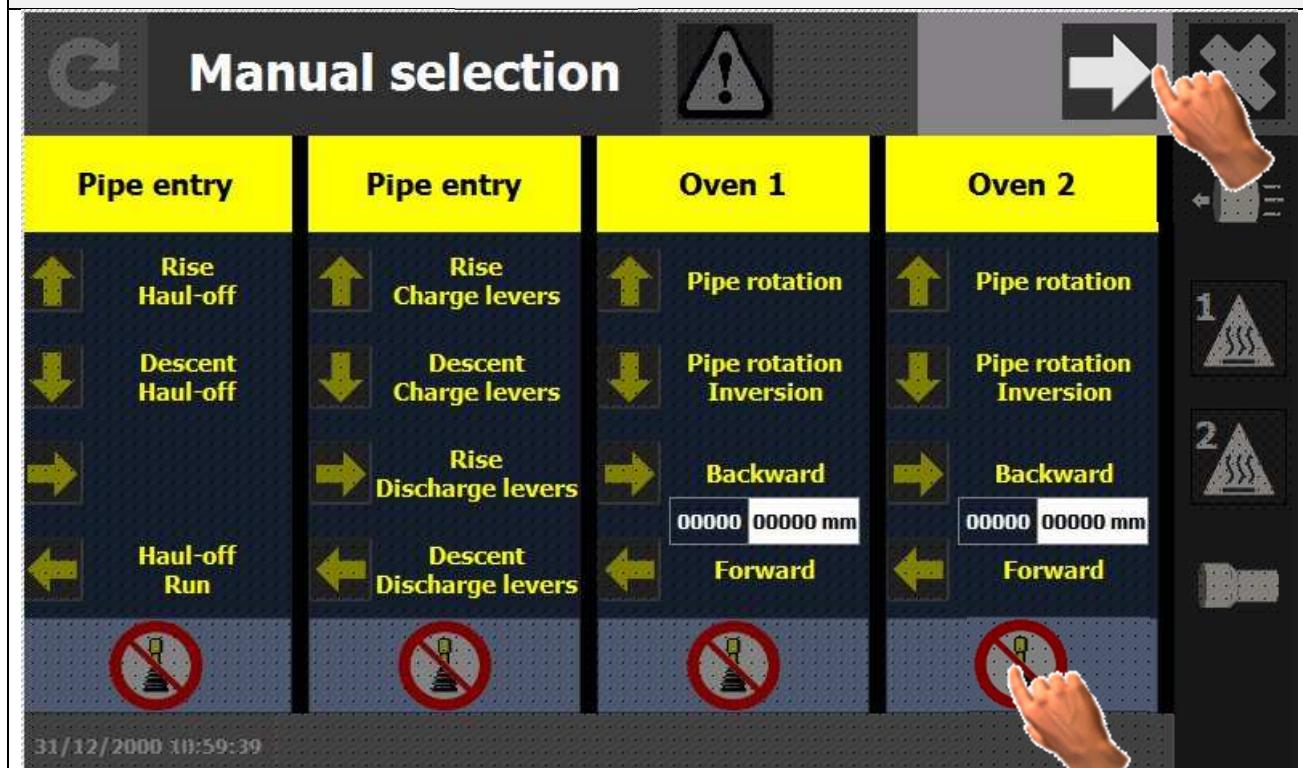
The interface is of graphic type, it is therefore of easy understanding and use for the operator, indeed it is enough touching the push buttons present on the video display unit to gain access to the sets up and to the selections of the functions which they represent.

For the modification of the values in the data fields, it is enough touching the data to modify, and by the keyboard which appears insert the desired value.

NOTE: the enabling to the data fields modification is connected to the operative level in use for the machine running, see "SET-UP SERVICE" pages.



6.2.2. MANUAL MOVEMENTS



THE FUNCTION KEY FEATURES A SERIES OF PAGES WHICH CAN BE SCROLLED WITH

THE KEYS

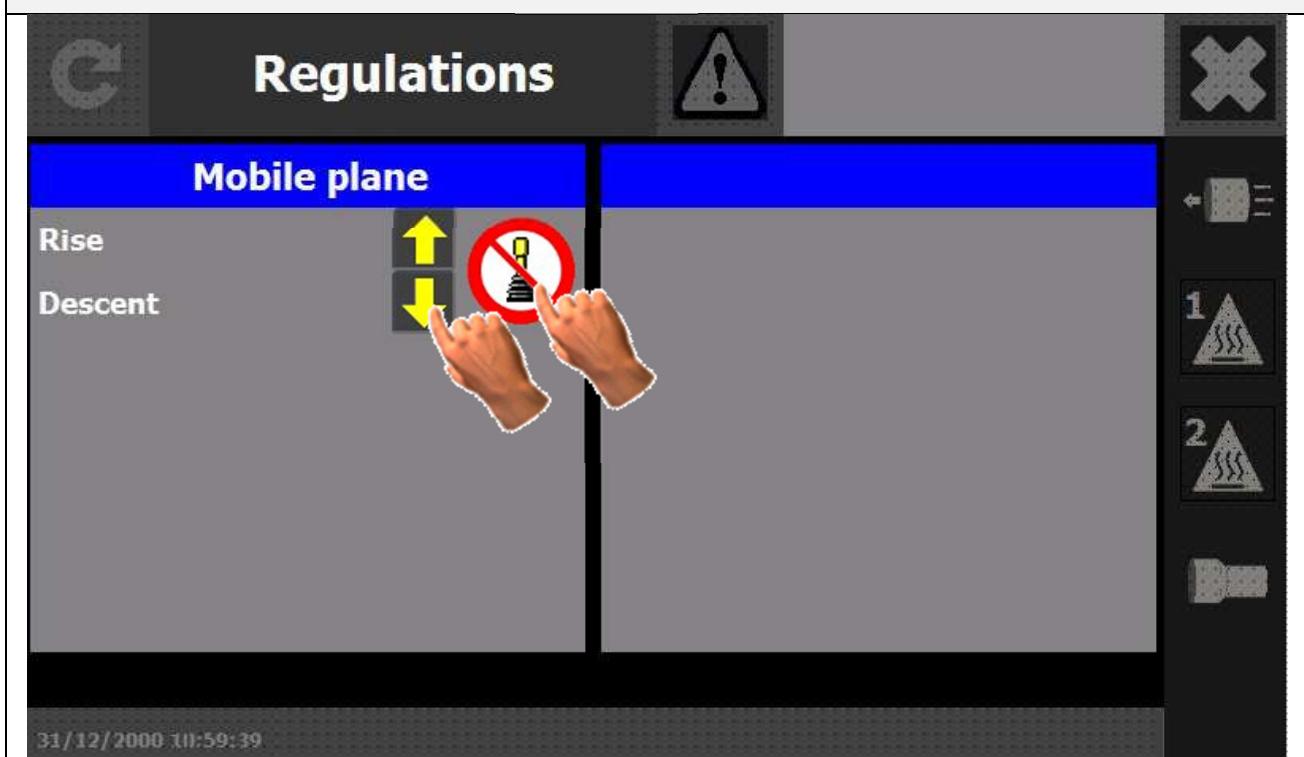


The machine has to be switched to **MANUAL RUN ON** in order to execute the manual controls; follow the instructions of the paragraph **Starting the machine** (manual operation) in the chapter **WORKING AND USE**.

Each actuator can effect a maximum of 4 operations indicated by the arrows active in the pictograph. Select the actuator to be moved and push the JOYSTICK into the arrow's direction.



6.2.3. SELECTING SETTINGS



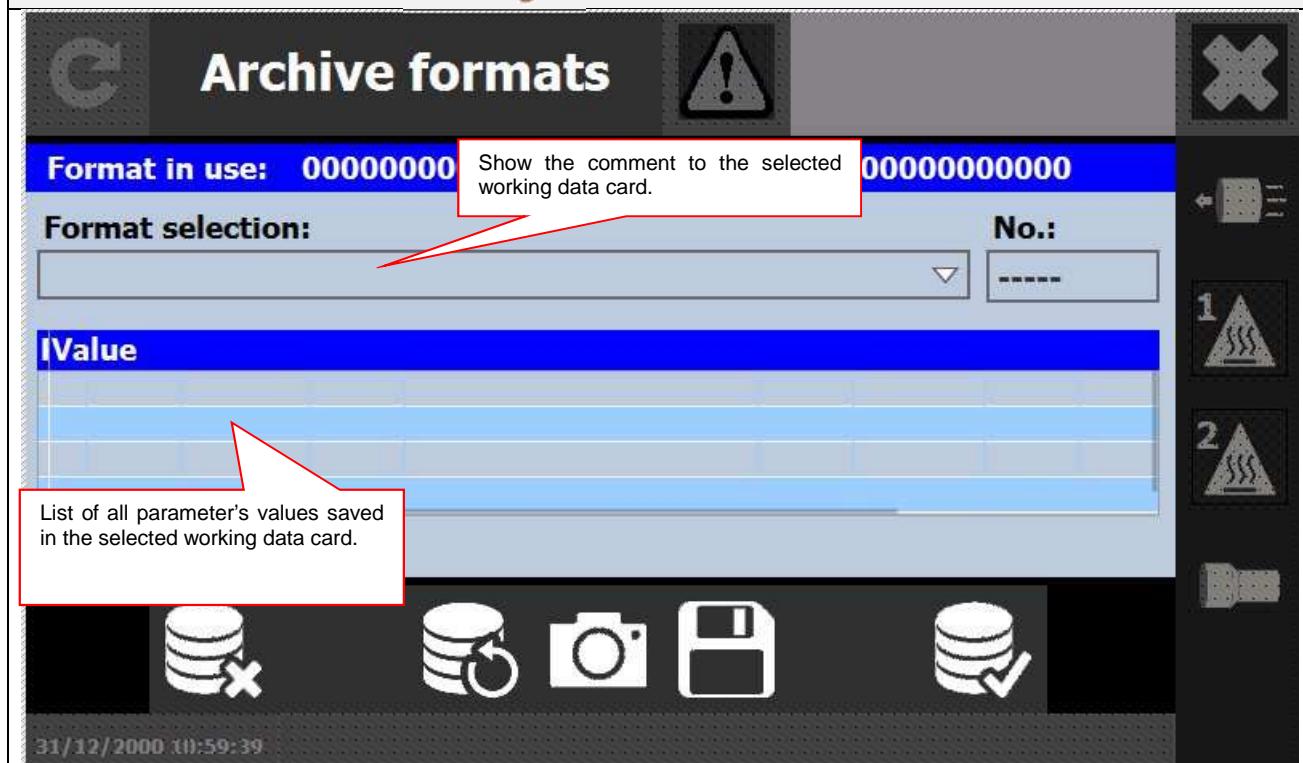
N.B.: with automatic operation ON

It sets the working level (in mm) of the desired actuator.

Set a level that is suitable for the pipe diameter.



6.2.4. FORMATS ARCHIVE

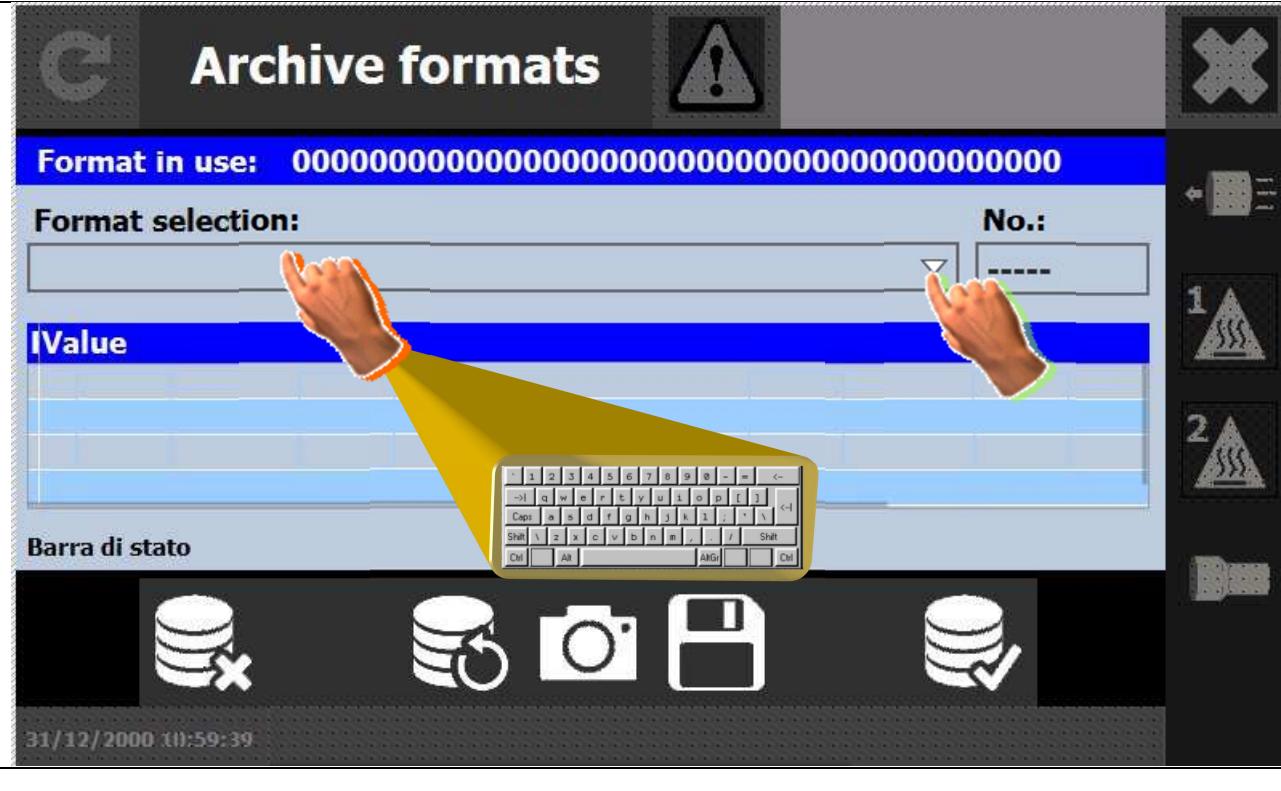


The production parameters set by the operator on the videoterminal are saved in a single file in the working data cards.

When the same product has to be fabricated, the operator can easily recall the working data card from the memory and load them in the PLC (in this way the production process is facilitated and accelerated).

The working data cards have to be used according to the instructions below:

6.2.4.1. THE CLICKABLE FIELDS IN THIS PAGE ARE:

	
	The comment of the working data card can be written or modified.
	A pull-down menu is opened; it includes all the working data cards, which have been saved. The required card can be selected.
	Use of the operative keys.

6.2.4.2. DESCRIPTION OF OPERATIVE KEYS:

REFERENCE	DESCRIPTION
	Push this key in order to save the working data card.
	Push this key in order to cancel the selected working data card.
	Push this key in order to load the working parameters, which have been saved previously, for operation.
	Push this key in order to create an image of the current machine parameters.

TO CREATE A NEW DATA CARD, CARRY OUT THE FOLLOWING STEPS:

1. When the working parameters have been set correctly and the product is effected as required,
2. Select "new card" from the list of available cards in order to create a new parameter card.
3. Assign a name to the card (touch the line "data record name" with the finger and insert the comment on the keyboard).
4. Push the key  in order to save the machine's current working parameters.
5. Push the key  in order to save the production parameters on the empty card.

TO USE A WORKING DATA CARD, CARRY OUT THE FOLLOWING STEPS:

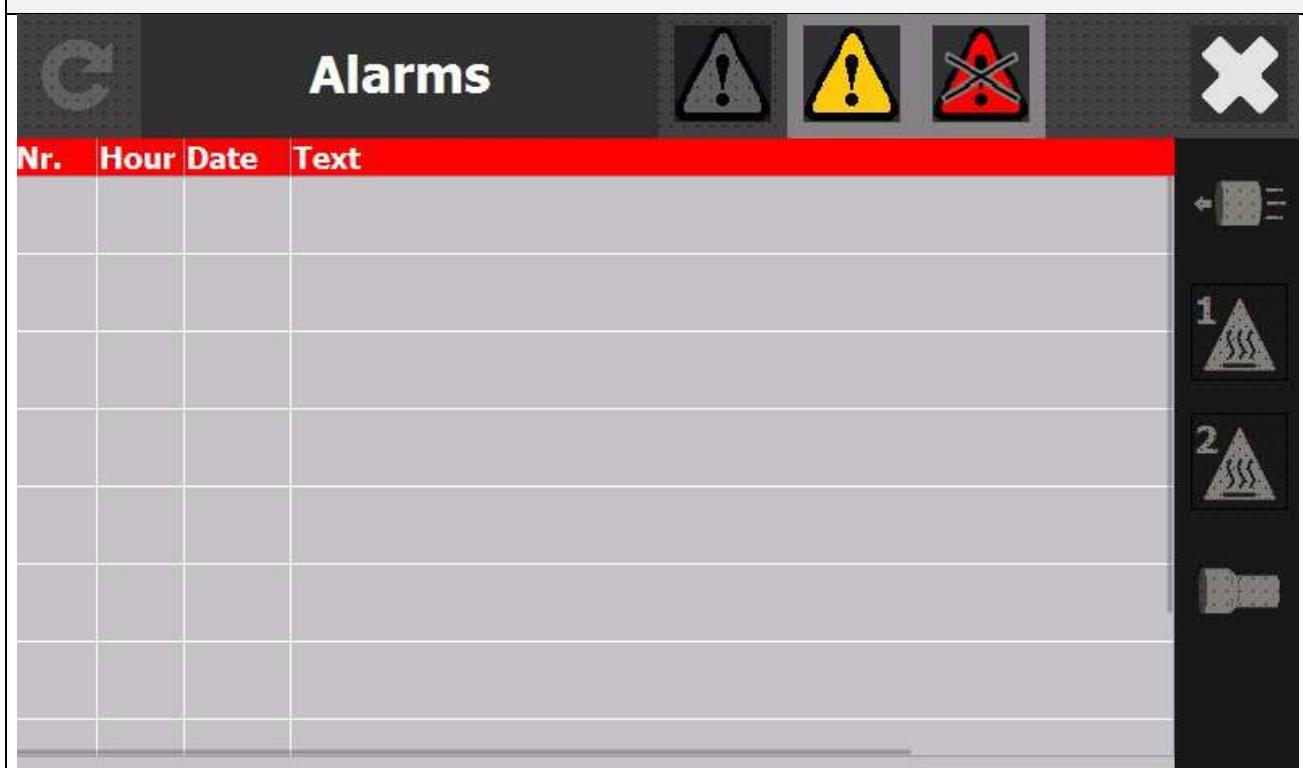
1. Select the required card in the list of cards available.
2. Push the key  to load the operative parameters, which have been saved on the card.

TO ELIMINATE A WORKING DATA CARD, CARRY OUT THE FOLLOWING STEP:

The key  cancels the selected working data card.



6.2.6. MACHINE ALARMS



In this page, the alarms of the machine are shown.

The alarms have to be set to zero:

1. Resolve the problem that is being signalled.
2. Push the key "**RESET ALARMS**" on the control panel.

When this has been done, the alarms, which signal the resolved problems have to be reset; they disappear from the machine's list of alarms.



6.2.7. PIPE ENTRY

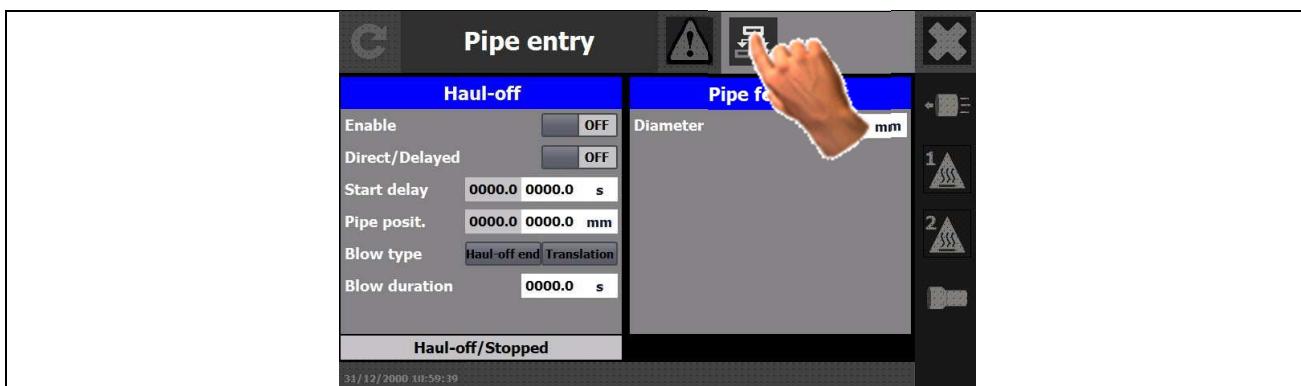
Pipe entry

Haul-off		Pipe features	
Enable	OFF	Diameter	0000.0 mm
Direct/Delayed	OFF		
Start delay	0000.0 0000.0 s		
Pipe posit.	0000.0 0000.0 mm		
Blow type	Haul-off end Translation		
Blow duration	0000.0 s		
Haul-off/Stopped			

31/12/2000 10:59:39

REFERENCE	DESCRIPTION	
Enable	Enable/disable the haul-off at operation	
Haul-off mode	DIRECT START	Pipe haul-off with direct start when the pipe has covered the position sensor the haul-off begins to position the pipe.
	DELAYED START	Pipe haul-off with delayed start, when the pipe has covered the position sensor the haul-off waits until the time for "HAUL-OFF DELAY" has expired and afterwards begins to position the pipe.
Starting haul-off delay	It defines the delay time before starting the entry haul-off. It is needed to select "haul-off mode" with delayed start or alternated start.	
Pipe posit.	Quote of advancement of the pipe, after have detected the FTC of	

	presence	
Blow type	BLOWING (END OF HAUL-OFF)	Pipe cleaning blow after positioning, the pipe is cleaned when the haul-off has been stopped.
	CONTINUOUS BLOWING	Continuous pipe cleaning blow, the pipe is cleaned during the pipe positioning phase.
Cleaning blow (at the end of the haul-off) time	It defines the duration of the cleaning blow when the pipe is at the end of the haul-off. It is needed to enable "Cleaning blow mode" with end of haul-off blow or continuous blow.	
Pipe diameter	It defines the diameter of the used pipe. This is used for the automatic calculation of the rotating time.	



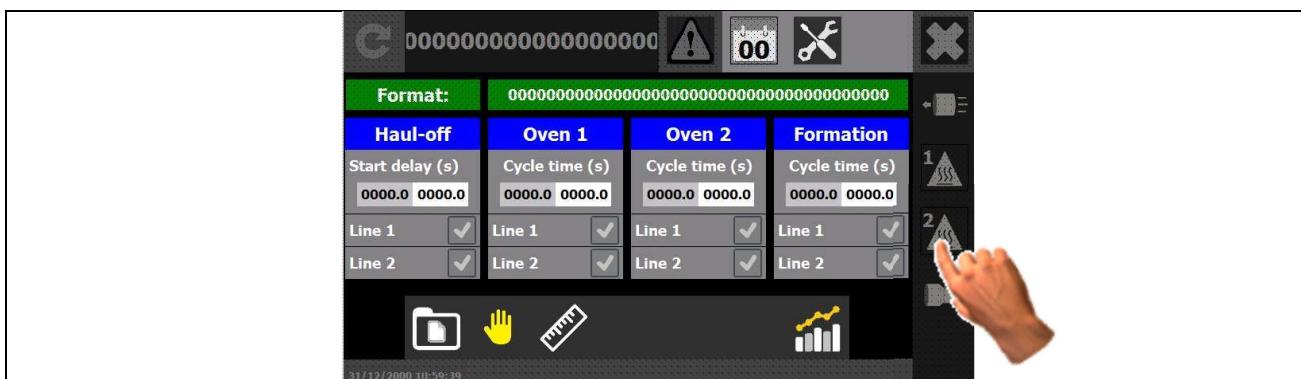
6.2.7.1. SETUP PIPE ENTRY

Set-up Pipe entry

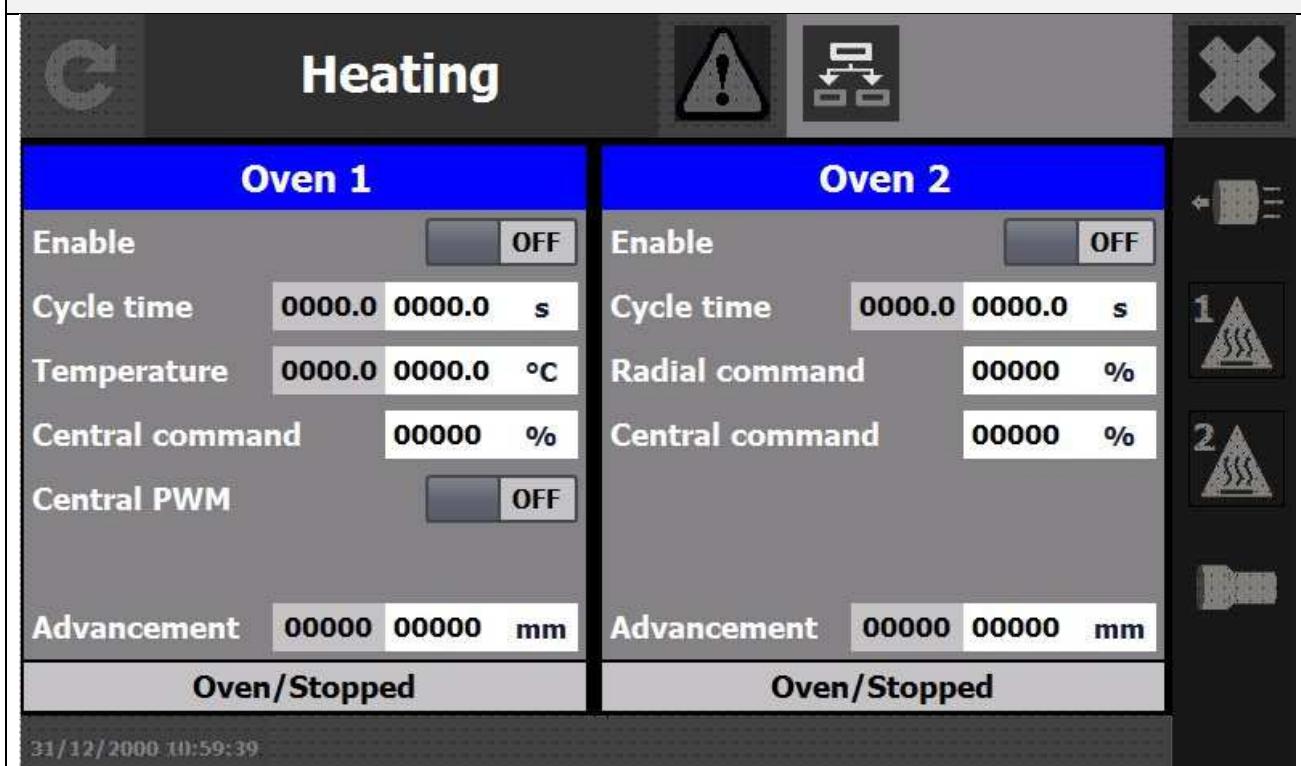
Parameter description	Setting
Haul-off: Pipe not cut verification time	0000.0 s
Haul-off: New attempt wait time	0000.0 s
Haul-off: MAX number of attempts	00000
Haul-off: Nominal speed / Correction off-set	00000.0 mm

31/12/2000 10:59:39

REFERENCE	DESCRIPTION
Pipe not cut verification time	The verification happens by controlling the state of the rotation sensor of the wheel placed in the haul-off. If during the hauling of the pipe the wheel stops or is moving slowly, and the rotation sensor isn't activated before the verification time, the condition of "pipe not cut" is set.
New attempt pipe haul-off waiting	After detecting a pipe which wasn't cut, the haul-off will wait this time before trying again.
MAX number of attempts haul-off pipe	Every failed attempt at hauling-off the pipe is counted, and when the MAX number of attempts is reached, the system will suspend the hauling operations and an anomaly message will be generated. To recover, remove the pipe and reset the anomaly.
Nominal speed / Correction o	Set the nominal speed of the haul-off. Set the value of correction over pipe position.



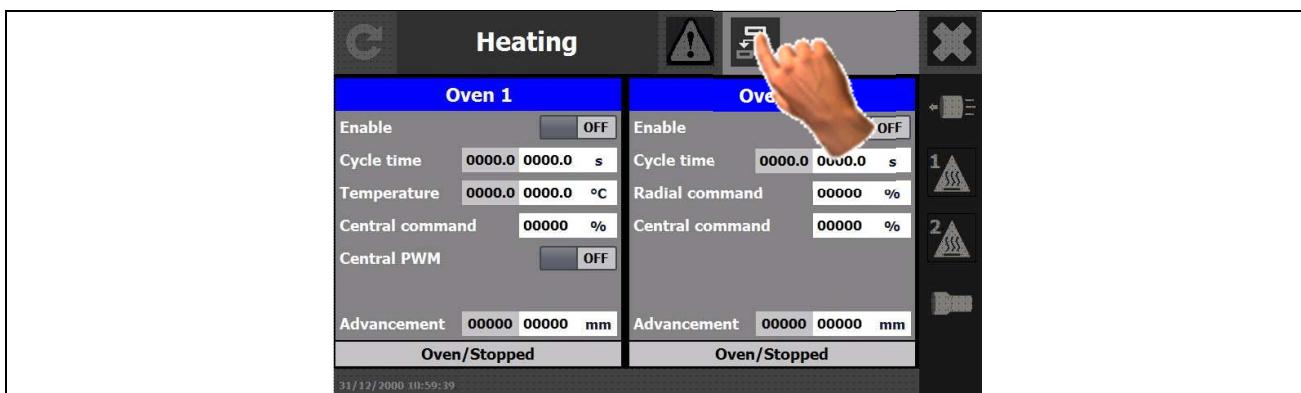
6.2.8. OVEN IR



REFERENCE	DESCRIPTION	
Enable	EXCLUDED	Oven OFF.
	ENABLE	Oven ON.
Heating cycle time	It defines the duration of the heating of the pipe in the oven.	
Radial radiation	This defines the percentage of radiation of the pipe in the oven. Ovens with ceramic resistors and PWM command, ON/OFF cycle = 2s. Ovens with OC resistors, power regulation.	
Central radiation	This defines the percentage of radiation of the pipe in the oven. Ovens with ceramic resistors and PWM command, ON/OFF cycle = 2s. Ovens with OC resistors, power regulation.	
Oven advancement	It defines the advancement position of the oven as the length of pipe to heat.	

6.2.9. OVEN SW

REFERENCE		DESCRIPTION	
Enable		EXCLUDED	Oven OFF.
ENABLE		Oven ON.	
Heating cycle time:		It defines the duration of the heating phase of the pipe in the oven.	
Pipe temperature:		It defines the heating temperature of the pipe.	
Central radiation		This defines the percentage of radiation of the pipe in the oven. Ovens with ceramic resistors and PWM command, ON/OFF cycle = 2s. Ovens with OC resistors, power regulation.	
Central PWM		It needs in order to communicate at the machine when it works, with mounted the ceramic resistors and PWM command.	
Oven advancement		It defines the advancement position of the oven as the lenght of pipe to heat.	



6.2.9.1. SETUP OVEN

The screenshot shows the 'Set-up Ovens' screen. At the top is a title bar with 'Set-up Ovens' and various control icons. Below is a table with two columns: 'Parameter description' and 'Setting'. The table rows correspond to the parameters in the previous screenshot. The bottom of the screen shows the date/time '31/12/2000 10:59:39'.

Parameter description	Setting
Pipe rotation: Nominal speed	00000.0mm/s
Advancement: Slider length	000000.0 mm
Absorption: Transducer full-scale	0000.0 A

REFERENCE	DESCRIPTION
Pipe rotation:	This is obtained by measuring the periferical speed of the pipe rotation wheels. It is used to calculate the rotating time.
Advancement:	Max length of the potentiometric bar.
MAX measure absorption transducer:	It defines the max value for the transducer used in the measurement of the absorption of the heating zones.

setup oven IR

C Set-up Oven 2

Parameter description

		Setting		
Advancement: Oven <-> Pipe distance		000000.0 mm	000000.0 mm	
Radial zone 1: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Radial zone 2: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Radial zone 3: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Central zone: Voltage / Power	OFF	00000 V	00000 W	0000.0A

31/12/2000 11:59:39

REFERENCE

DESCRIPTION

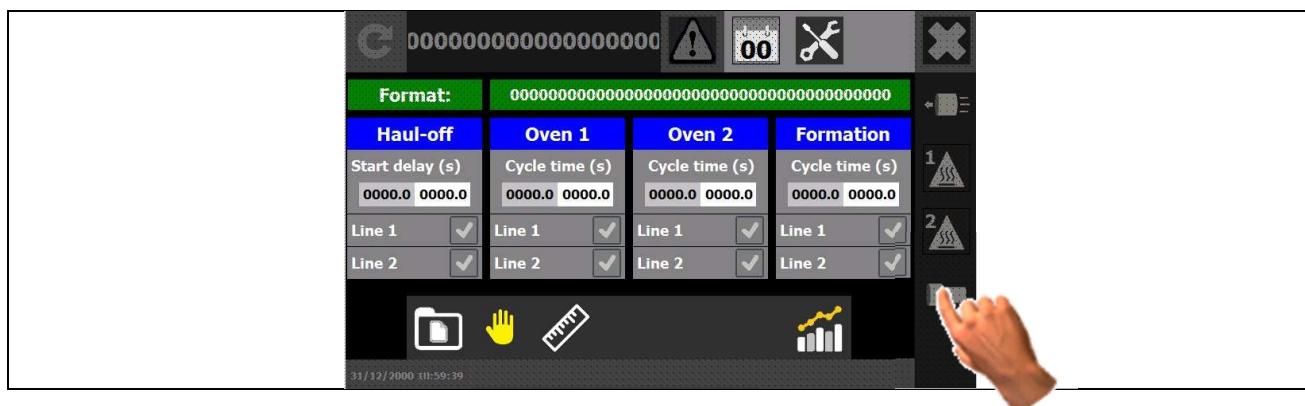
Oven <-> Pipe distance	It defines the empty space between the oven and the transported pipe. This space is recovered during the advancement of the oven.
Oven zone absorption	It defines the nominal value for the absorption of the heating zone. This is used to verify the correct working of the resistors every 3 minutes, and if the actual absorption is lower than the nominal one, there will be an anomaly message. It is needed to enable the zone with the lateral selector to enable heating. With an absorption value of 0, the control won't be made.

setup oven SW

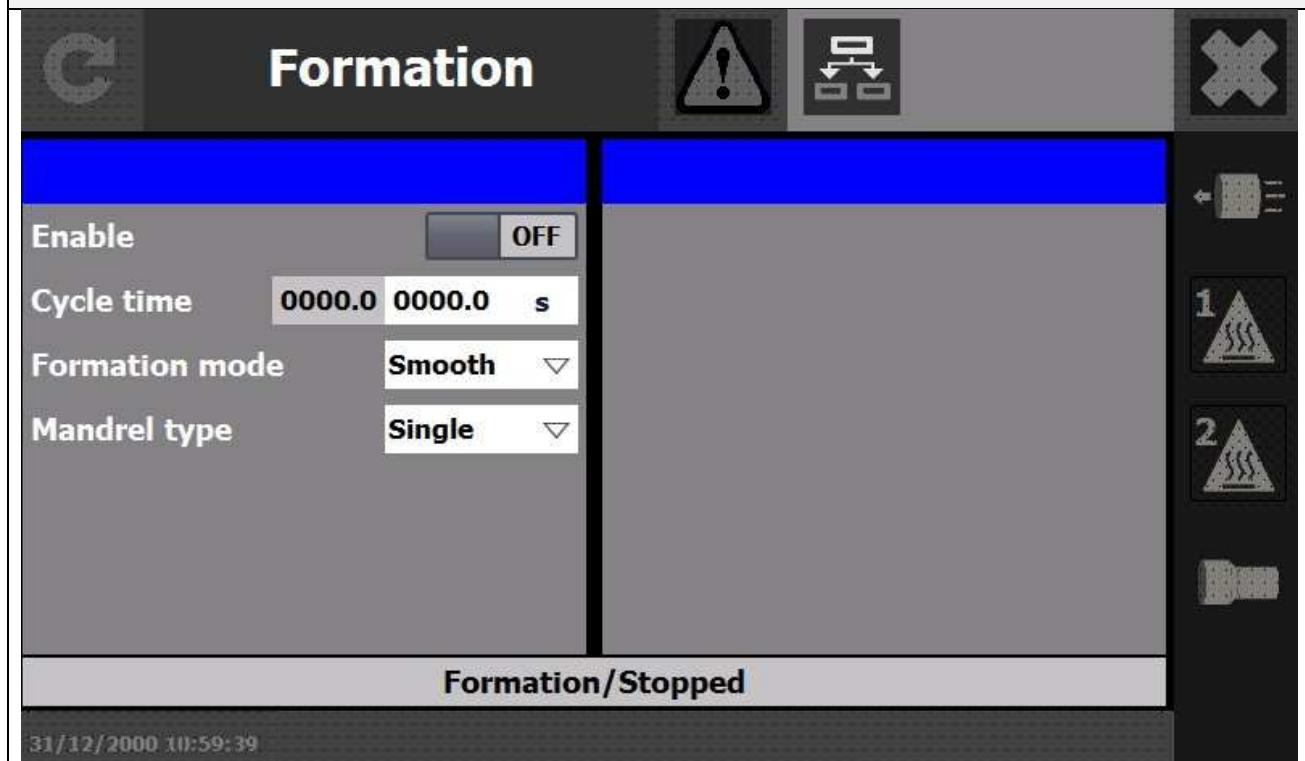
Set-up Oven 1

Parameter description		Setting		
Advancement: Oven <-> Pipe distance		000000.0 mm	000000.0 mm	
Radial zone 1: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Radial zone 2: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Radial zone 3: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Central zone SW: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Central zone LW: Voltage / Power	OFF	00000 V	00000 W	0000.0A
Temperature: Transducer full-scale / Measure		0000.0 °C	0000.0 °C	
Heating: Radial command MAX limit		00000 %		
31/12/2000 10:59:39				

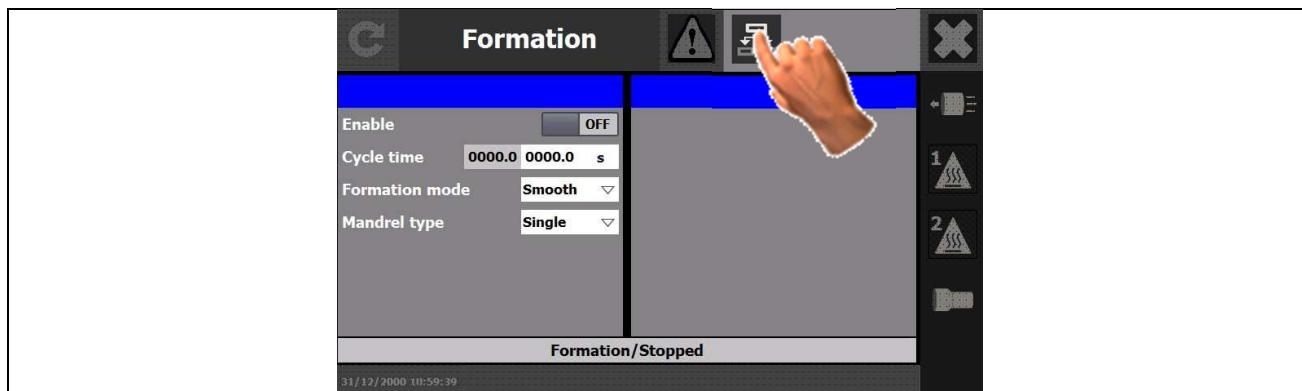
REFERENCE	DESCRIPTION
Advancement: Oven <-> Pipe	It defines the empty space between the oven and the transported pipe. This space is recovered during the advancement of the oven.
Oven zone absorption	It defines the nominal value for the absorption of the heating zone. This is used to verify the correct working of the resistors every 3 minutes, and if the actual absorption is lower than the nominal one, there will be an anomaly message. It is needed to enable the zone with the lateral selector to enable heating. With an absorption value of 0, the control won't be made.
Regulator output limitation MAX:	MAX value for the output of the PID regulator.



6.2.10. FORMATION



REFERENCE	DESCRIPTION
Formation time	It defines the duration of the formation cycle of the socket.
Formation mode	Select the socket type, i.e. the suitable tooling.
Mandrel type	Select the the suitable tooling.



6.2.10.1. SETUP FORMATION SOCKET

REFERENCE	DESCRIPTION
Formation haul-off forward speed/backward speed	<p>Setting of the speed of the formation haul-off for the entry of the pipe which will be socketed.</p> <p>The slow speed is pre-set at 10%.</p> <p>Setting of the speed of the formation haul-off for the exit of the socketed.</p>
Blowing mandrel:	Waiting time before pressure discharge of the blowing mandrel.
Pipe discharge time:	It defines the descent time for the discharge levers on the formation plane.



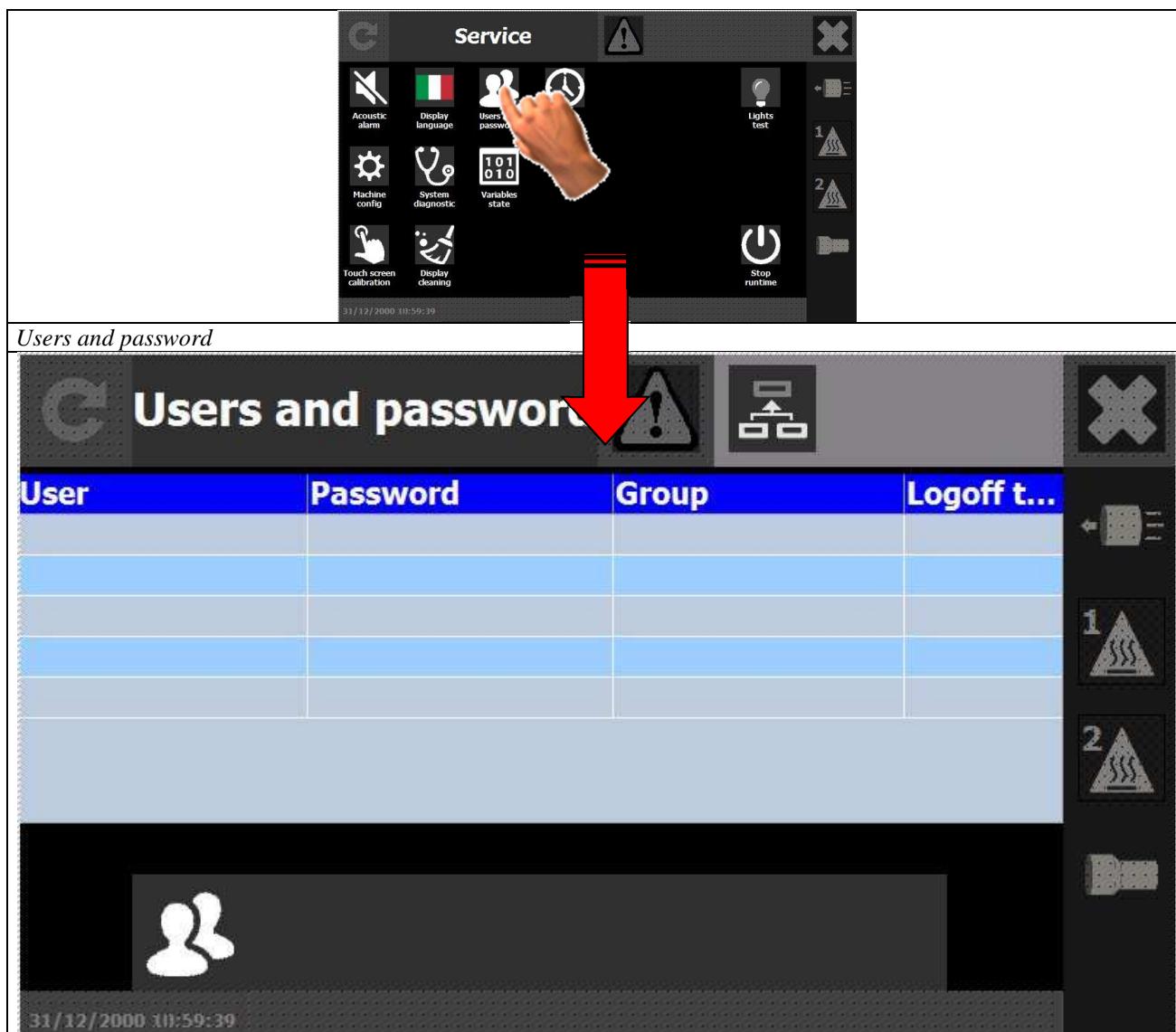
6.2.11. SET-UP SERVICE



The **SET-UP SERVICE** pages allow the insertion of the machine's service parameters. These parameters are usually set by the manufacturer and there is no need to modify them. The operator has reading access only to these parameters; for modification the authorization to the operative level "USER 2" is required.

N.B. :The operative PASSWORD for the user level 2 is not included in this manual; the safety manager will be informed about it and will see to its divulgence.

REFERENCE	DESCRIPTION
	Enable-disable the acoustic alarms.
	This key allows to modify the videoterminal's language.
	This key switches on the light in the forming chamber.
	This key calibrates the touch function of the display.
	This key allows to clean the display.



N :B : The authorization to operative level 3 is required for access to this function.

THE FUNCTION KEY allows the password administration for the passwords defining user's access to the operative levels. The access levels are the following:

User 1 – PSW 1234 – Operative Level “OPERATOR”: The working parameters, which can be set on the keyboard can be read and modified; the machine can be used in manual and automatic mode; The working parameters, which can be set on the keyboard and are protected by password can be modified.

User 2 - PSW– Operative Level “PRODUCTION”: beyond the access to all the options of User 1 it is possible to modify the SET-UP SERVICE parameters. Usually this operative level is reserved to the manufacturer, the user has no access. On special agreement, the customer may be granted access to the SET-UP SERVICE, on condition that there is skilled staff with profound experience with machines of the same type.

User 3 – PSW– Operative Level “MAINTENANCE”: The operator has no access to this operative level. It may be used by the manufacturer only (if necessary, contact the customer service).

6.3. MATERIAL LOADING

The pipe bars are charged on the entry line of the machine (in extrusion line, the flow of cut pipes, coming from the saw, arrives at the entry). The cut pipe employs the photo-electric cell "Haul-off start", the machine takes the pipe and moves it. In extrusion line.

6.4. STARTING OF THE BELLING MACHINE



6.4.1. STARTING FOR AUTOMATIC RUN

1. Turn the main switch of the control panel to **ON** position.
2. Control that the emergency push buttons and the mobile safety guards are in normal position.
3. Push the button "**START AUX.**"
4. Set the machine to zero.
5. Control that the selector "**MAN - AUT**" is in position **AUT**.
6. Press the push button "**RUN**" and control it is steadily luminous.

The machine is now in automatic RUN condition and it is ready to receive the product.



6.4.2. STARTING FOR MANUAL RUN

1. Turn the main switch of the control panel to **ON** position.
2. Check, if the emergency push buttons and the mobile safety guards are in normal position.
3. Push the button "**START AUX.**"
4. Check, if the selector "**MAN - AUT**" is in position **MAN**.
5. Password of level **1** on
6. Strike the key of the VT for the manual movements.
7. Push the button "**RUN**".
8. Choose the movements You intend to do: by scrolling the keyboard pages (use the keys **Page UP** and **Page DOWN**).
9. Control the manual movements by using the **JOYSTICK**: move it in the direction of the indicator (arrow).

6.4.3. ZERO-SETTING SEQUENCE

1. Strike in swift sequence the keys **ALARMS ZERO SETTING** (Ref 8) and **RUN** (Ref 7).

 **PRECAUTION:** effect the zero-setting of the machine when it is first started, after an emergency stop and when passing from manual to automatic mode.

6.5. STOP OF THE BELLING MACHINE

6.5.1. INTENTIONAL STOP

- Wait until the machine finishes the socketing of the pipes inside it.
- Push the button "**STOP**": its light is now switched off, i.e. the **RUN** condition has ended.
- Switch off the main switch on the control panel.
- Close the cooling circuits

6.5.2. EMERGENCY STOP

To stop the machine in emergency condition, push one of the **EMERGENCY BUTTONS** (which are all over the machine)

The machine is now in emergency condition, but the residual risk of the high oven temperature still remains.

7. MAINTENANCE

7.1. SAFETY: PRECAUTIONS AND PREPARATION TO MAINTENANCE

Operator assigned to maintenance:

Obviously, during the machine maintenance, there is the risk of injuries, i.e. of:

- ⇒ on the upper limbs (abrasion on mechanical parts),
- ⇒ on the lower limbs (falling of mechanical parts),
- ⇒ on the eyes (danger due to liquids under pressure),
- ⇒ on the head (collision with machine parts).
- ⇒ scaldings by hot parts (risk due to the electric resistances of the oven, to the residual heat in the hydraulic control unit and in the electrical motors after machine use)

Therefore, the maintenance operator has to be equipped with the following safety equipment before effecting the tool change over:



- Safety shoes
- Protective gloves for the hands
- Safety eyeglasses
- Safety helmet
- **Suitable heat protection gloves** (according to standards **UNI-EN 388 UNI-EN 407**) or equivalent equipment, according to the national accident prevention standards.
- Suitable personal protection devices recommended in the safety sheet of the used oils.

To carry out maintenance operations the machine must be:

- disconnected from the electric network (except for cases in which it is strictly necessary)
- disconnected from the pneumatic plant
- disconnected from the hydraulic plant, using the upstream sectioning device
- Pay attention that the ovens might still be hot if the machine has been switched off lately.
- Put a visible sign reading “MACHINE IN MAINTENANCE” and at the same time fence the machine.

General Information

For the routine maintenance, the presence of skilled technicians is required both for the mechanical and the electrical part. These technicians must have a good experience in the downstream equipment trade.

7.2. ROUTINE MAINTENANCE

Operations of routine maintenance:

1. Replace the PLC battery.
2. Keep the filter at the entry of the water cooling system clean
3. Keep the tanks of compressed air clean.
4. Fill lubricant into the lubricators to lubricate the moving parts
5. Lubricate the chains
6. Lubricate the worked parts

7.3. MAINTENANCE OPERATIONS DESCRIPTION

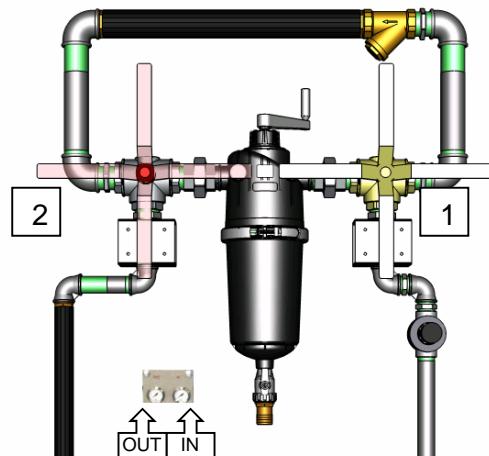
Cleaning of the filter for the incoming water

FREQUENCY OF THE INTERVENTION
When the pressure in entrance is different from the pressure in exit.



The minimal required pressure for cleaning of this filter is of 2 bar.

Check on the manometers that the pressure of the incoming water in the filter (IN) is different from the pressure of the water coming out from the filter (OUT) and follow the hereafter described procedure:



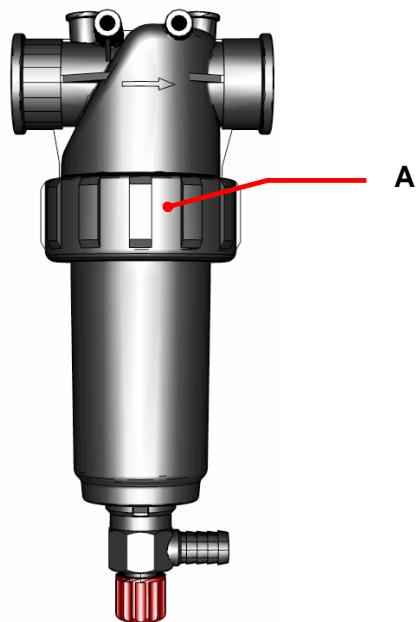
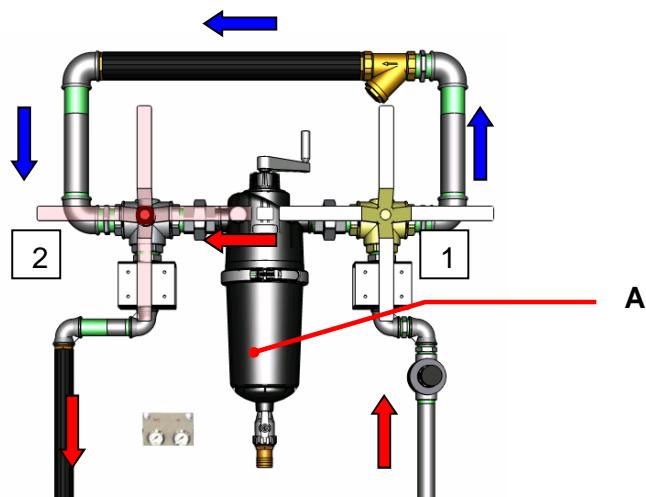
- Open the removable protection to gain access to the filter
- Lightly close the cock in exit as long as you reach the necessary pressure for the cleaning phase.
- Open the drain cock and turn the crank (depending on the model fitted).

FILTRATION	CLEANING	FILTRATION	WASHING

Water entry filter replacement

FREQUENCY OF OPERATION
When the cleaning of the filter is not enough any more

1. Open the guard in order to reach the filter.
2. Close the cocks (1) and (2) in order to convey the water to the by-pass circuit.
3. (depending on the model fitted) Unlock the hose clamp and remove the filter unit (ref A) or Unscrew the filter body (ref A) manually or by means of the proper spanner if the filter is of arranged type
4. Replace the filter cartridge with an identical or equivalent one.
5. Install the filter again.



Cleaning of the cooling groups

FREQUENCY OF THE INTERVENTION
Depending on the working conditions (T°C group – water flow H₂O) and on the hardness of the water which is used

<input checked="" type="checkbox"/> NOTE:	<i>Let the hardness of the water be checked, and if it is harder than normal values (10 or 15 French degrees), water has to be sweetened by means of a special water conditioner.</i>
<input checked="" type="checkbox"/> NOTE:	<i>Operation to be done only for open cooling circuits which are connected with the local water net.</i>

To let the cooling group work properly and preserve it for a long time, it is necessary to let regularly circulate some scales remover in order to eliminate limestone accumulations which inevitably form inside the water mains.

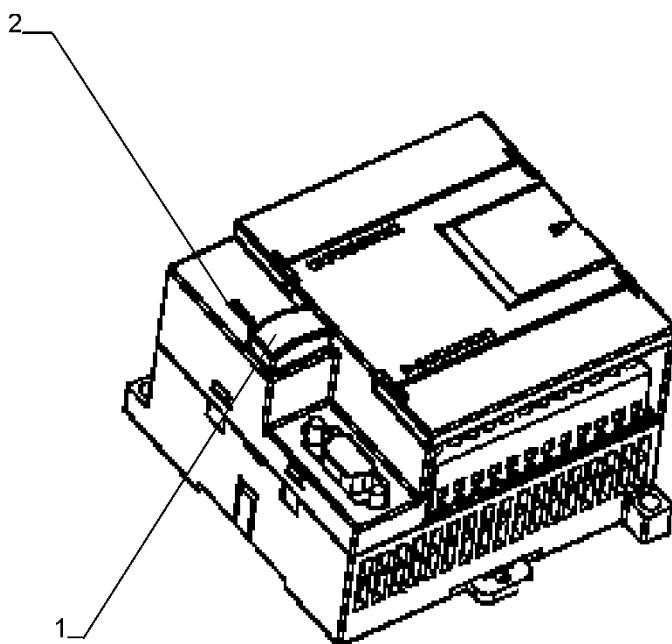
This descaling operation is done letting circulate - into a closed circuit - a thinned solution of scales remover. Once this treatment has been completed, rinse by water and discharge wastewater **according to the environmental laws which are in force in your country.**

<input checked="" type="checkbox"/> NOTE:	<i>1 French degree = 10 mg CaCO₃ each litre of water</i>
--	---

Replacement of PLC battery

FREQUENCY OF OPERATION
every 2 years**N.B. This operation must ONLY be executed, if:**

- the PLC SIEMENS model S7-200 has been installed on the machine.
- the machine is equipped with a video terminal.

Scheme of the PLC SIEMENS S7-200

- Stop the machine and switch it off by the main switch on the control panel.
- Open the door of the electric box with the suitable key.
- Extract the battery Ref. 1 and replace it with a new one.
- Close the electric box and start the machine.

NOTE: Do not throw away the old battery. Follow the national elimination rules in force.

The machine is now ready to work again.

instructions for loading the cpu program

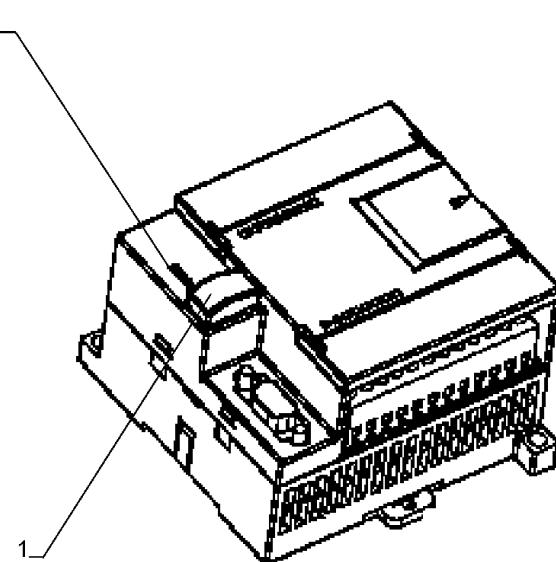
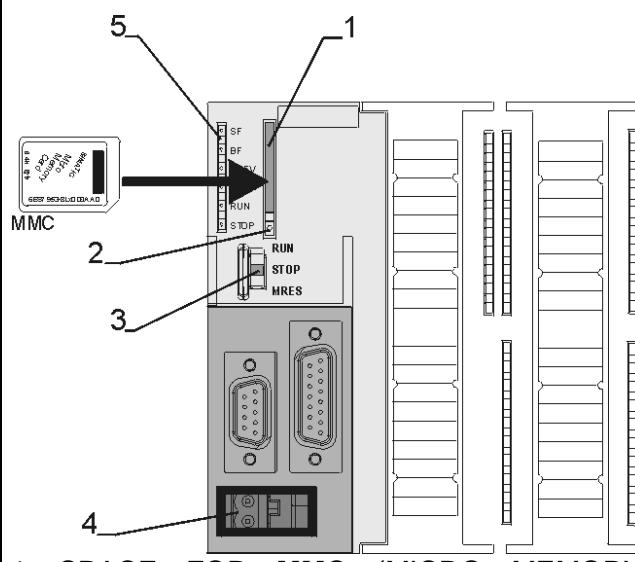
ATTENTION:

Due to these operations, the machine works with the new program. It becomes necessary to insert all the working parameters again, as overwriting the program implies cancelling all the parameters previously set. We therefore recommend to transcribe them before the program is updated.

Type the password for operative level 1 "1234" for parameter setting. When the program is loaded again, the SET-UP parameters are cancelled, too. These latter parameters can be set again on inserting the password for operative level 2.

CAUTION !: Carry out the instructions exactly in this order.

- Stop the machine and switch it off by the main switch on the control panel.
- Open the door of the electric box with the suitable key.

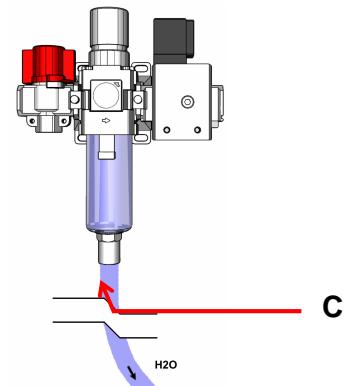
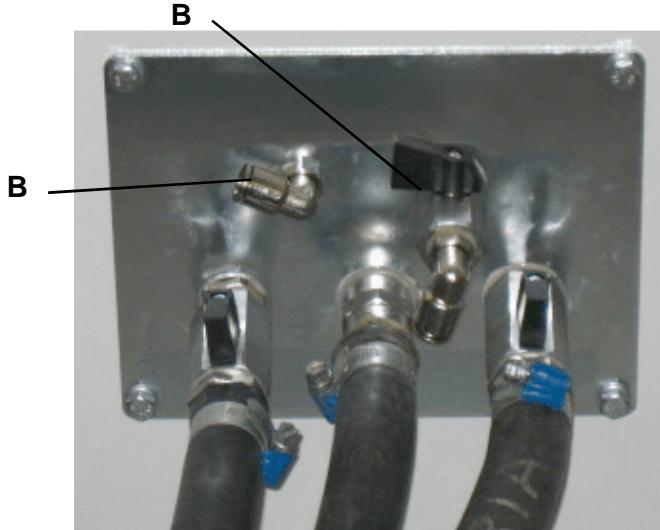
PLC SIEMENS model S7-200	PLC SIEMENS model S7-3xxC
 <p>1. EEPROM OR BATTERY 2. LED FOR STATUS INFORMATION.</p>	 <p>1. SPACE FOR MMC (MICRO MEMORY CARD). 2. EJECT BUTTON FOR EJECTION OF MMC. 3. SELECTOR FOR OPERATIVE MODES. 4. FEEDING CONNECTOR. 5. LED FOR STATUS INFORMATION.</p>

N.B. The buffer battery has to be inserted in the space Ref. 1 again, according to the instructions of the previous chapter, only if there is a video terminal installed on the machine.

- Extract the battery (if there is one) Ref. 1 and replace it with a programmed eeprom.
- Close the electric box and restart the machine.
- Now the PLC receives the data from the eeprom.

- Extract the current MMC with the eject button, Ref. 2, and replace it with the new programmed MMC inserting the new MMC in the space Ref. 1.
- Close the electric box and restart the machine.
- Now the PLC receives the data from the new MMC.

Maintenance of air treatment unit (F.R.)

FREQUENCY OF OPERATION
50 hours**Condense water drainage**

Condensate formation varies depending on air humidity and temperature.

Verify condensate formation in the water trap. Condensate is discharged automatically (Ref. C). It is necessary to drain also the condense water formed in the compensation tank. For this operation, the tap must be open (Ref. B) (**NOTE:** tank must be in pressure).

General greasings	FREQUENCY OF OPERATION 100 hours
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Note: Refer to the Lubricants and Greases Table

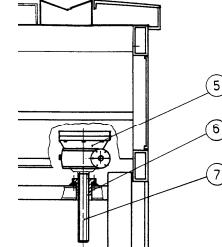
Lubricators

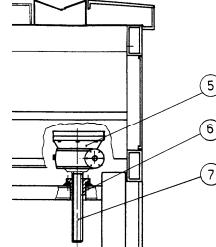
Proceed to the greasing of parts equipped with lubricator (marked with a red disk)

Sliding bars, moving parts

Lubricate the sliding bars, the pinions, the chains and all moving parts which are subject to wearing.

Screw-nut thread fit

Lubricate the connections between screw and nut thread (Ref. 6, 7)	
--	--



7.4. STARTING AFTER A LONG INACTIVITY

In case the machine has to be started after a long standstill, a series of tests and controls are necessary to resume production in safe and efficient conditions. Such operations must be carried out by a skilled technician.

Follow the instructions below:

- Clean the machine carefully
- Do a complete check up as described for ordinary maintenance.
- In case the machine has been disconnected from feeding circuits (water, electric and pneumatic connections) restore them.

If the machine does not work properly, please contact our Technical Customer Service.

8. DEMOLITION

8.1. MACHINE DEMOLITION



Obviously, during the machine demolition, there is the risk of injuries, i.e. of:

- ⇒ the upper members (scraping off due to mechanical parts),
- ⇒ the lower members (fall of mechanical parts),
- ⇒ the eyes (dangers caused by laser, class 4, and by fluids under pressure),
- ⇒ the head (collision with machine parts).

According to the described considerations, the operator has to use:

- Protective shoes
- Protective gloves
- Protective glasses
- Safety helmet

In case of scrapping it is necessary to adopt all safety measures to avoid risks connected to disassembly, transport, handling and separation of materials.

On demolition it is necessary to separate plastic material parts from the steel and aluminium ones or from other material for a differentiated salvage dump, in compliance with the normative law in force "National, regional and community laws, of the country where the elimination takes place.

Handle the electronic and electric equipments' wastes according to 2002/96/CE RHOS rule.



The packaging materials have to be eliminated or recycled observing the normative law in force in the country where the elimination take place.

During the work process, rejections will be produced, which must be collected, recycled or disposed of according to the national laws in force in the installation country.

Substances produced during the working phase:

- Machine shop rejections (pipes)
- Rejections resulting from ordinary maintenance

8.2. MACHINE DISASSEMBLY

Necessary preparations before disassembly:

- Disconnect the machine electrically.
- Disconnect the machine pneumatically.
- Disconnect the hydraulic system if installed on this machine.
- Disassemble the pneumatic solenoid valves.
- Disassemble all the protections of the machine.
- Disassemble all the toolings of the machine.

WARNING !



Signal that the machine is out of order !!!

If the machine is not taken away immediately from the place where it has been located, hang a poster or a plate on the control panel or in a well visible zone.

8.3. MACHINE SCRAPPING

In case of scrapping it is necessary to adopt a few safety measures before starting the demolition of the machine.

ATTENTION !!	<p>Make sure that the machine has been disconnected from all energy sources. Check if all pneumatic plants have been emptied, including the storage tanks. See to empty the hydraulic plant, trying not to disperse the lubrication oil, as pollutant.</p> <p>Free the machine from possible lubrication oil residuals, as pollutant. Effect the machine disassembly in transportable pieces.</p>
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**ELENCO RICAMBI
9. SPARE PARTS**

**PIECES DE RECHANGE
ERSATZTEILE – REPUESTOS –
LISTA DOS SUBSTITUIçÃOS**

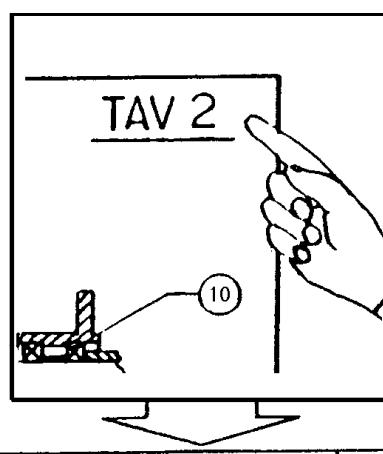
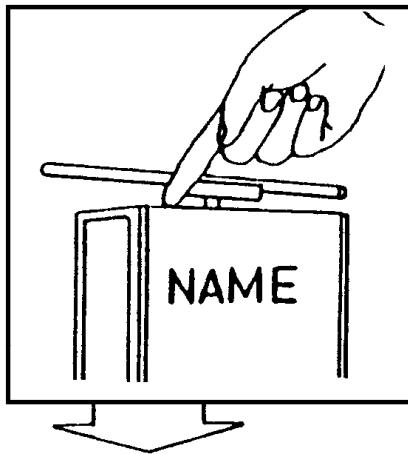
I) RICHIESTA PEZZI DI RICAMBIO
GB) DEMAND FOR SPARE PARTS
F) COMMANDE DES PIECES DETACHEES
D) ERSATZTEILANFORDERUNG
E) PEDIDO DE PIEZAS DE REPUESTO
P) PEDIDO DOS PEÇAS DE SUBSTITUIÇÃO



I) TIPO DI MACCHINA
 GB) TYPE OF MACHINE
 F) TYPE DE MACHINE
 D) MASCHINENTYP
 E) TIPO DE MAQUINA
 P) TIPO DE MÁQUINA

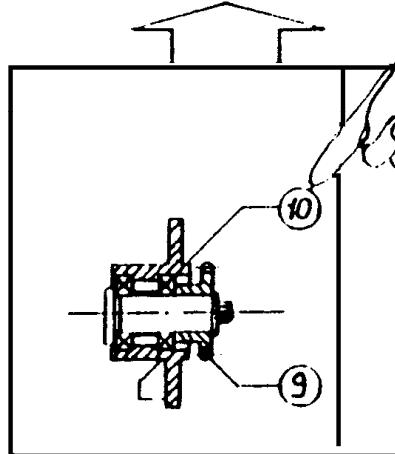
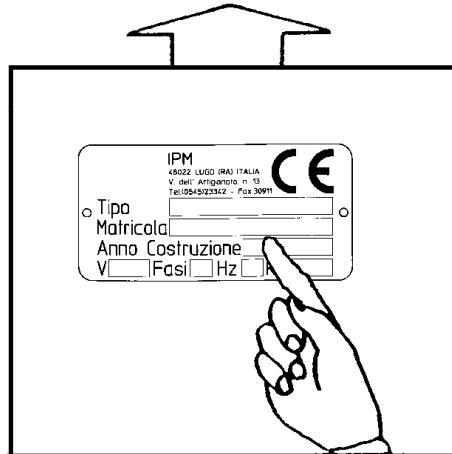
I) NUMERO DELLA TAVOLA
 GB) TABLE NUMBER
 F) NUMERO DU TABLEAU
 D) TABELLENNUMMER
 E) NUMERO DE TABLA
 P) NÚMERO DE TÁBUA

I) QUANTITA'
 GB) QUANTITY
 F) QUANTITÉ
 D) ANZAHL
 E) CANTIDAD
 P) QUANTIDADE



	QT.
L	1
A	2
O	1
R	3
E	4
N	10
A	

NAME		TAV. 2	10	2
------	--	--------	----	---



I) NUMERO DI MATRICOLA
 GB) SERIAL NUMBER
 F) NUMERO DE MATRICULE
 D) SERIENNUMMER
 E) NUMERO DE MATRICULA
 P) NÚMERO DE MATRÍCULA

I) NUMERO DEL PARTICOLARE
 GB) NUMBER OF SPARE PART
 F) NUMERO DE LA PIÈCE
 D) DETAILNUMMER
 E) NUMERO DE DETALLE
 P) NÚMERO DOS PEÇAS DE SUBSISTUIÇÃO

- I)** Per la richiesta dei pezzi di ricambio citare: tipo di macchina, numero di tavola, numero di matricola, numero del particolare, quantità.
- GB)** When requesting spare parts, please mention: type of machine, serial number, table number, number of spare part and quantity.
- F)** Pour la commande des pièces détachées, indique: le type de machine, le numéro du tableau, le numéro de la pièce, la quantité.
- D)** Für Anforderungen von Ersatzteilen, bitte: Maschinentyp, Seriennummer, Tabellennummer, Detailnummer und Anzahl nennen.
- E)** Para el pedido de las piezas de repuesto le rogamos citar: el tipo de maquina, el numero en la tabla, el numero del detalle y la cantidad.
- P)** Por a pedido dos peças de subsistuição mencionar: tipo de máquina, número de tábuia, número de matrícula, número dos peças de subsistuição, quantidade.



(I) MODULO PER LA RICHIESTA DI RICAMBI (GB) FORM FOR THE REQUEST FOR SPARES

Data: _____ Numero/Rif.ipm: _____
Date: _____ Number/Ref.ipm: _____

Richiedente: Requested by:	Destinatario: Addressee:
Società: Company:	<u>Uff. Acquisti/Ricambi</u> IPM S.r.l.
Indirizzo: Address:	Via dell'Artigianato 13 48022 Lugo (RA) Italia
Tél:	Tel 0545/23342 Fax 0545/30911-30672
Fax:	

<input type="checkbox"/>	OFFERTA RICAMBI OFFER FOR SPARES	Tipo di macchina: Type of machine:		Tensione/Hz Voltage/Hz	
<input type="checkbox"/>	ORDINE RICAMBI ORDER FOR SPARES	Matricola: Serial number:		Tensione aux Voltage aux	
		Anno di costruzione: Year of manufacturing:			

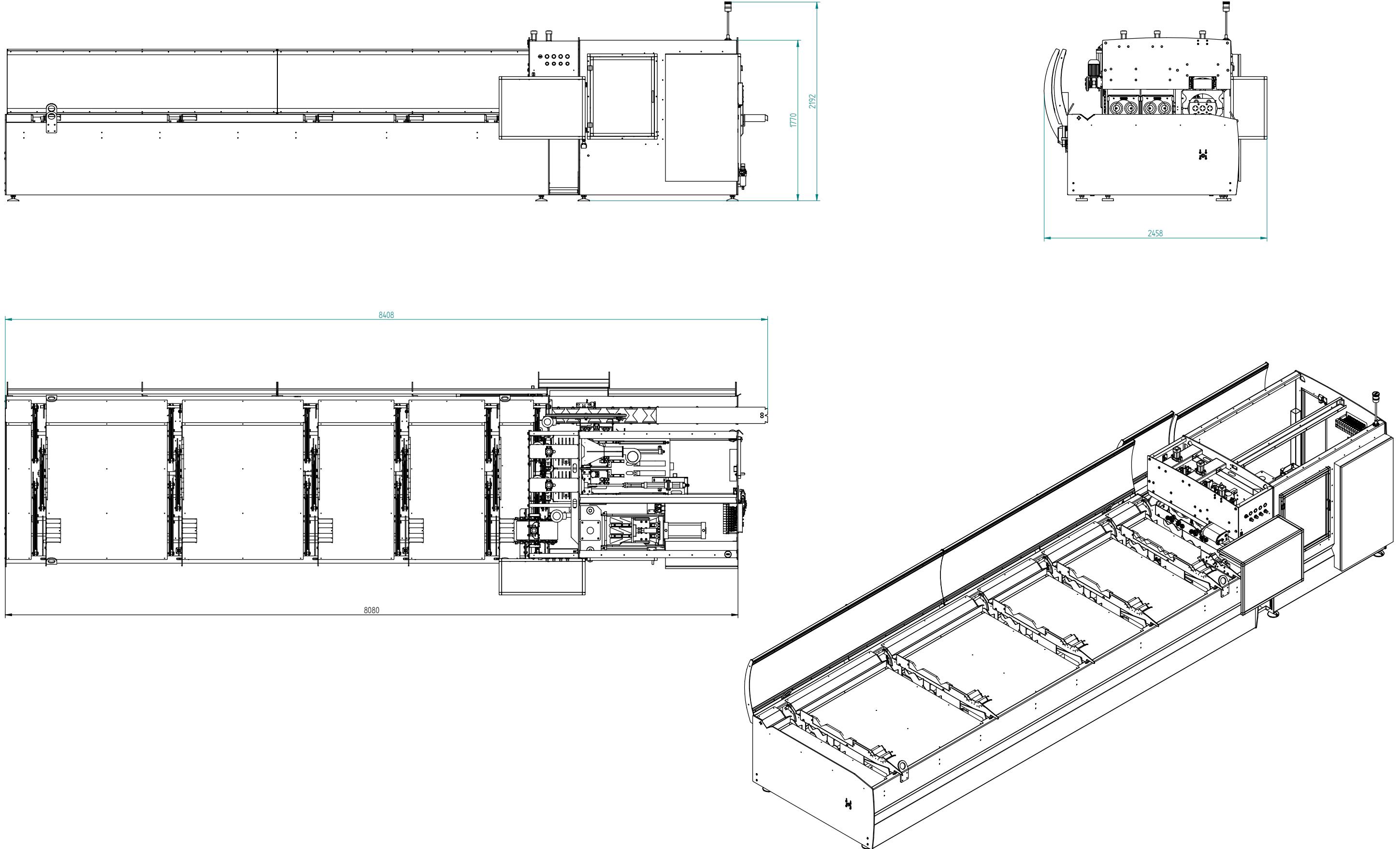
NOTE: _____
NOTES: _____

COMPILATION RESERVED TO THE SOCIETY IPM FILLING IN RESERVED TO IPM

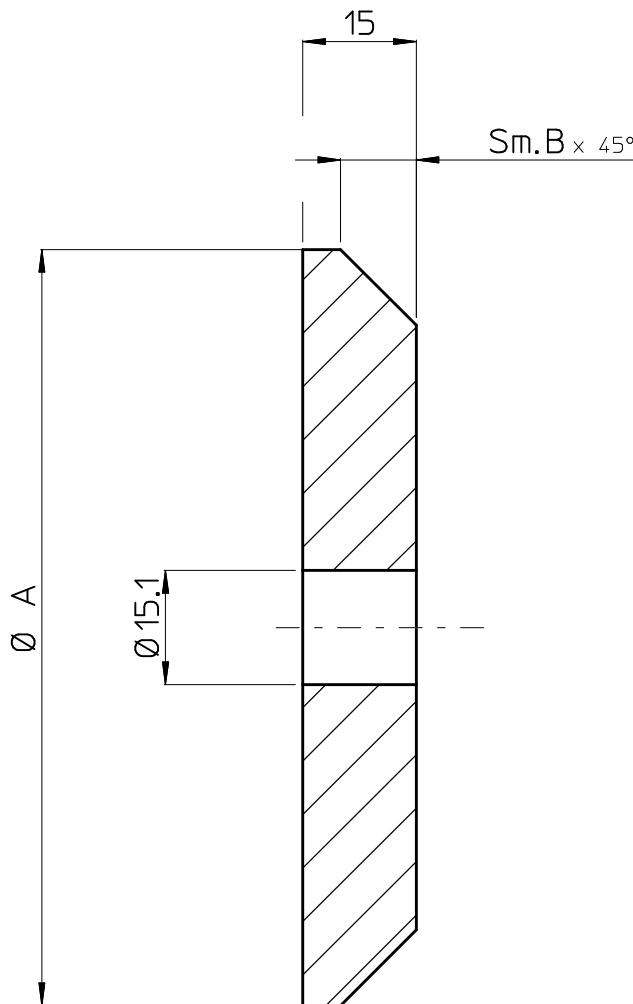
Rif.MOD.001: Validità offerta 60 GG.a partire da:
Ref.MOD.001: Offer valid 60 days beginning from:

Data prevista consegna: Vettore: Dimensione:
Delivery date foreseen: Carrier: Dimensions:

Peso: Aspetto esteriore:
Weight: Outward look:



DESCRIZIONE			
COMPLESSIVO BA 200/2F/2T-1oc 6m (std.)			
MATERIALE	STATO MATERIALE	PESO KG	SCALA
-	-	4291	1:20
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE	
-	QUOTE SENZA INDICAZIONE DI TOLLERANZA IN MM.	SISTEMARE L.	SISTEMARE DAL.
	PROSPETTICA BELLONI	A1	
RACCORDI NON QUOTATI	DISEGNOCATORE MANARA	CODICE DISEGNO	
SMUSSI NON QUOTATI	DATA 27/04/2016	REVISIONE	
		S0142749	
ITALIA 40022 LUINO (RA) - via della Piazzola, n. 13 Tel. 0545-30791 - 0545-23234 - fax: 0545-30672 E-mail: tecnico@ipm-luino.it (pm Italy)			



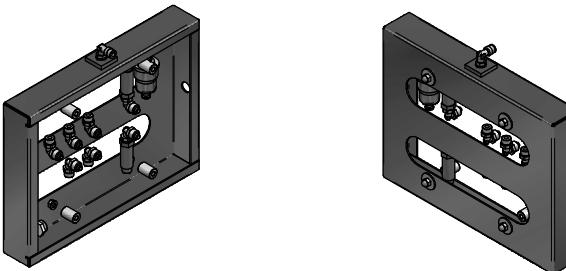
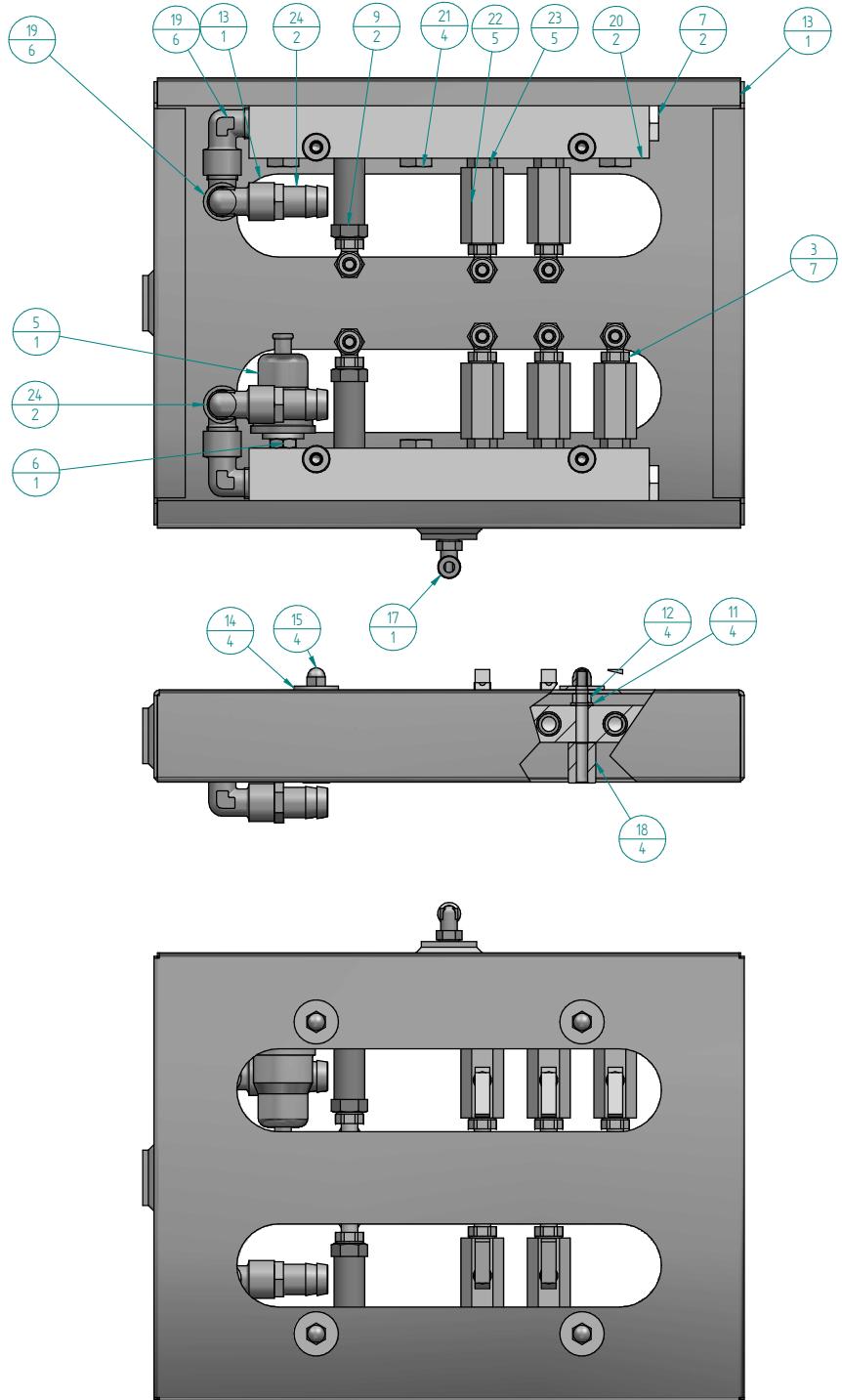
Codice Magaz.	Ø Tubo	Ø A	B	Q.ta
K4140502-T028	50 - 75	28	6	1
K4140502-T053	80 - 100	53	10	1
K4140502-T075	110 - 125	75	10	1
K4140502-T100	140 - 160	100	10	1
K4140502-T135	180 - 200	135	10	1

DESCRIZIONE

SET Puntali albero forno x tubi D 50-200

MATERIALE Alluminio 11 S Tondo	STATO MATERIALE Tondo	PEZZO SBAVATO CON CURA	SCALA 1:1
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	MARCARE CODICE E REV.	
 IPM s.n.c. 48022 LUGO (RA) ITALIA V. dell' Artigianato, n. 13 Tel. (0545) 30683 / 23342 / 33054 - Fax. 30911	QUOTE SENZA INDICAZIONE DI TOLLERANZA FORI TOLL. + ALBERI TOLL. -	VER.	SOSTITUISCE IL:
	RACCORDI NON QUOTATI	DISEGNATORE Tabanelli	SOSTITUITO DAL:
	SMUSSI NON QUOTATI 0.5x45°	DATA 8/4/97	CODICE DISEGNO K4140502
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.			

MODIFICHE:

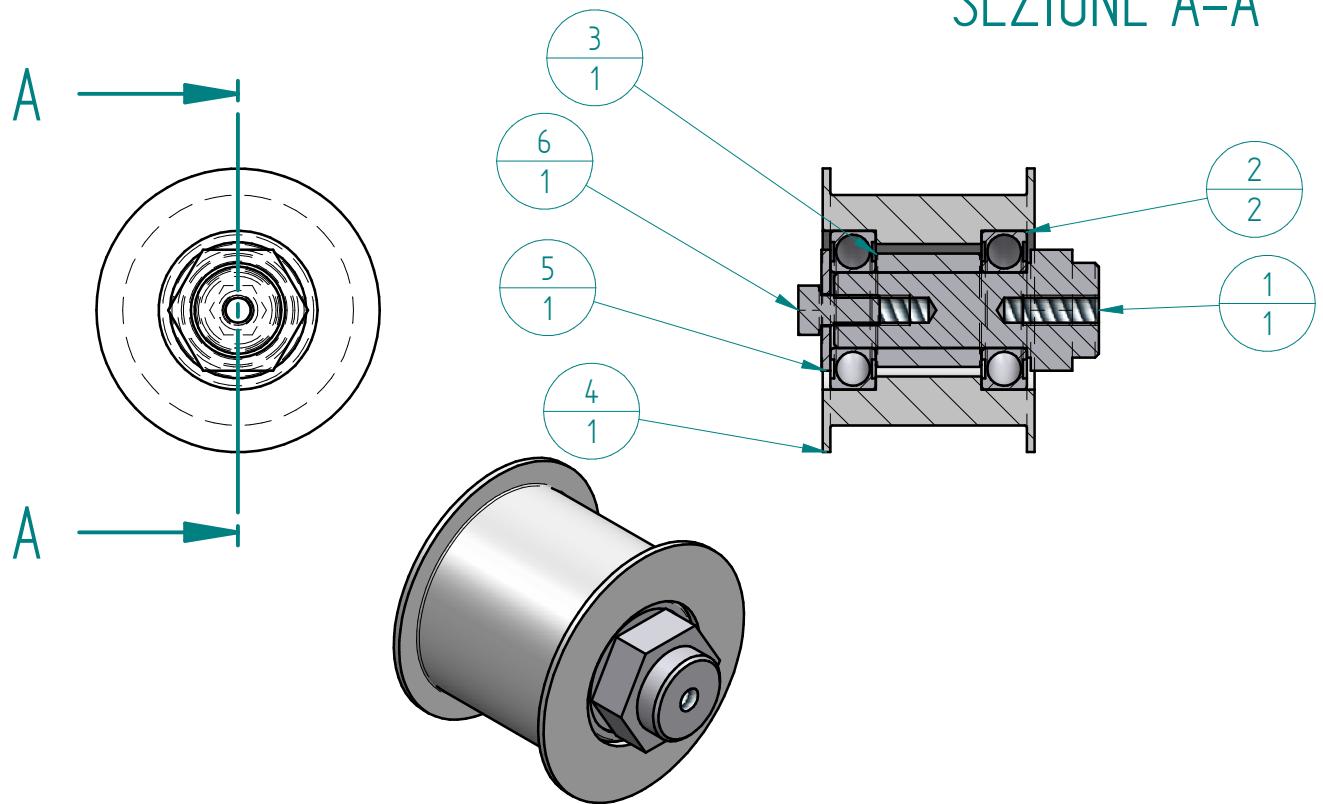


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
3	LIB01174	Raccordo testa girevole ghiera 1/4 L	Acciaio	0,211 kg	7
5	LIB08529	Pressostato PMN1A 0,1 - 1 Bar	Acciaio	0,254 kg	1
6	LIB02359	Riduzione F 1/4" - M 1/8"	Ottone	0,012 kg	1
7	LIB00905	Raccordo Tappo Esagonale 3/8" Ottone 2611 Camozzi	Ottone cromato	0,038 kg	2
9	LIB01149	Raccordo Prolunga M-F cilindrica 1/4" L=51	Ottone	0,109 kg	2
11	LIB00558	Rosetta piana M6 De. 12.3 Sp. 1.6 UNI 6592	Acciaio	0,004 kg	4
12	LIB00096	Dado Acc. 8 Esagonale M6 UNI 5588	Acciaio	0,009 kg	4
13	00005883	QUADRO VALVOLE REGOLAZIONE RAFFREDDAMENTO	Acciaio	2,011 kg	1
14	LIB00304	Rosetta piana M6 De. 24 Sp. 2 UNI 6593	Acciaio	0,026 kg	4
15	LIB02360	Dado esagonale cieco con calotta sferica M 6 Ottone	Ottone	0,017 kg	4
17	LIB01194	Raccordo gomito Innesto rapido 1/8" Ø6 Ottone nichelato	Ottone	0,023 kg	1
18	S0021593	DISTANZIALE D. 15 Di. 6 L. 22	Acciaio Fe 360	0,102 kg	4
19	LIB01175	Curva 3/8 M+F	Ottone	0,284 kg	6
20	LIB01171	Ripartitore a uscita lineari 152-06 2-3/8 6-1/4	Alluminio	0,507 kg	2
21	LIB01116	Raccordo Tappo Esagonale 1/4" Ottone 2611 Camozzi	Ottone	0,057 kg	4
22	LIB01173	Valvola sfera cromata DN 1/4"	Acciaio	0,545 kg	5
23	LIB01148	niplex 1/4"	Ottone	0,103 kg	5
24	LIB01141	Resca 3/8"	Ottone	0,059 kg	2

DESCRIZIONE
GRUPPO \$ Quadro regolazioni raffreddamento

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	4,62	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE		
		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
		SOSTITUIRE IL:	A2
		SOSTITUITO DAL:	
		ipm	
ITALIA: 46022 LUOGO (RA) V. dell'Angelino, n. 13 Tel. 0545-30708 / 0545-23342 - fax. 0545-30672 E-mail: tecnicos@pmn-italy.it pmn-italy.it	PROGETTISTA	SCENARIOS	
RACCORDI NON QUOTATI	DISEGNATORE	REVISIONE	
SIMUSSI NON QUOTATI	SALVATORI	CODICE DISEGNO	
	DATA	25/03/2005	
		Proprieta riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni e termini di legge.	
		S0014875	1

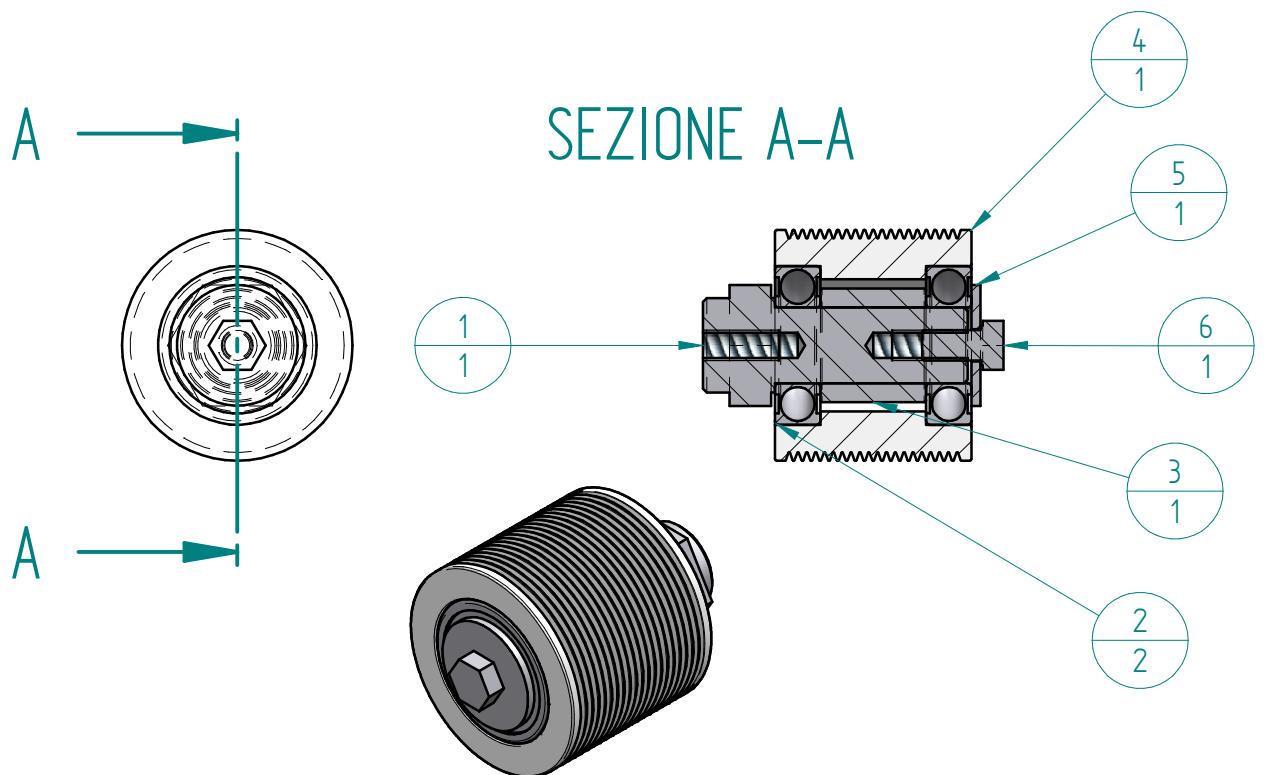
SEZIONE A-A



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0020516	PERNO	Acciaio C 40	0.219 kg	1
2	LIB00346	Cuscinetto radiale a sfere 6004 2Z (20-42-12)	Acciaio	0.090 kg	2
3	S0015522	DISTANZIALE D. 30 Di. 20 L. 28	Fe360	0.086 kg	1
4	S0015529	RUOTA Tipo Per_J20 \$ GALOPPINO	Alluminio 11S UNI-9002/ 5	0.281 kg	1
5	LIB00209	Rosetta piana M8 De. 32 Sp. 2 Acc. 100HV UNI 6593	Acciaio	0.014 kg	1
6	LIB01916	VITE TE M 8 x 16 UNI EN 24017	Acciaio	0.013 kg	1

DESCRIZIONE GRUPPO \$ GALOPPINO

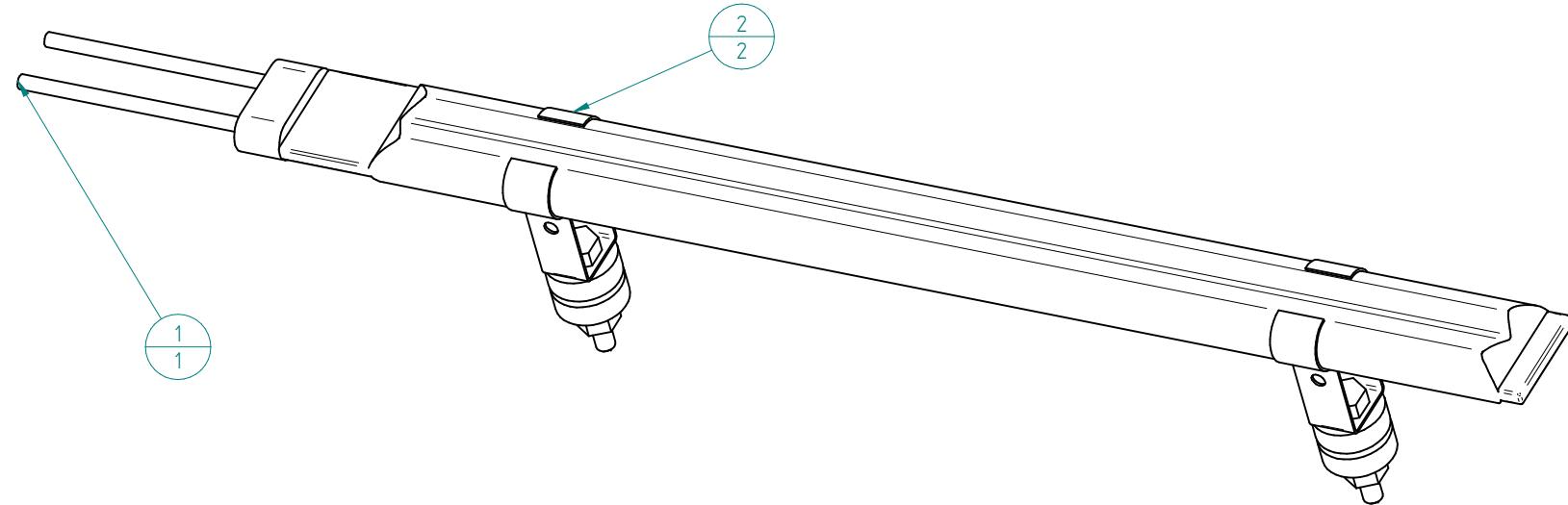
MATERIALE	STATO MATERIALE	Peso Kg	SCALA
-	-	0.7	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-	SOSTITUISCE IL:	SOSTITUITO DAL:
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	RIZZO	A4
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	RACCORDI NON QUOTATI	DISEGNATORE RIZZO	CODICE DISEGNO S0020517
	SMUSSI NON QUOTATI	DATA 10/11/2005	REVISIONE 0
			MODIFICA



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0020516	PERNO	Acciaio C 40	0.219 kg	1
2	LIB00346	Cuscinetto radiale a sfere 6004 2Z (20-42-12)	Acciaio	0.090 kg	2
3	S0015522	DISTANZIALE D. 30 Di. 20 L. 28	Fe360	0.086 kg	1
4	S0015518	PULEGGIA Dp. 63 La. 52 P. J-20	Alluminio 11S UNI-9002/ 5	0.224 kg	1
5	LIB00209	Rosetta piana M8 De. 32 Sp. 2 Acc. 100HV UNI 6593	Acciaio	0.014 kg	1
6	LIB01916	VITE TE M 8 x 16 UNI EN 24017	Acciaio	0.013 kg	1

DESCRIZIONE
GRUPPO \$ PULEGGIA

MATERIALE		STATO MATERIALE		Peso Kg	SCALA
-		-		0.64	1:2
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA RIZZO	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	-	DISEGNATORE RIZZO	-	A4
	SMUSSI NON QUOTATI	-	DATA 10/11/2005	CODICE DISEGNO S0020518	REVISIONE 0

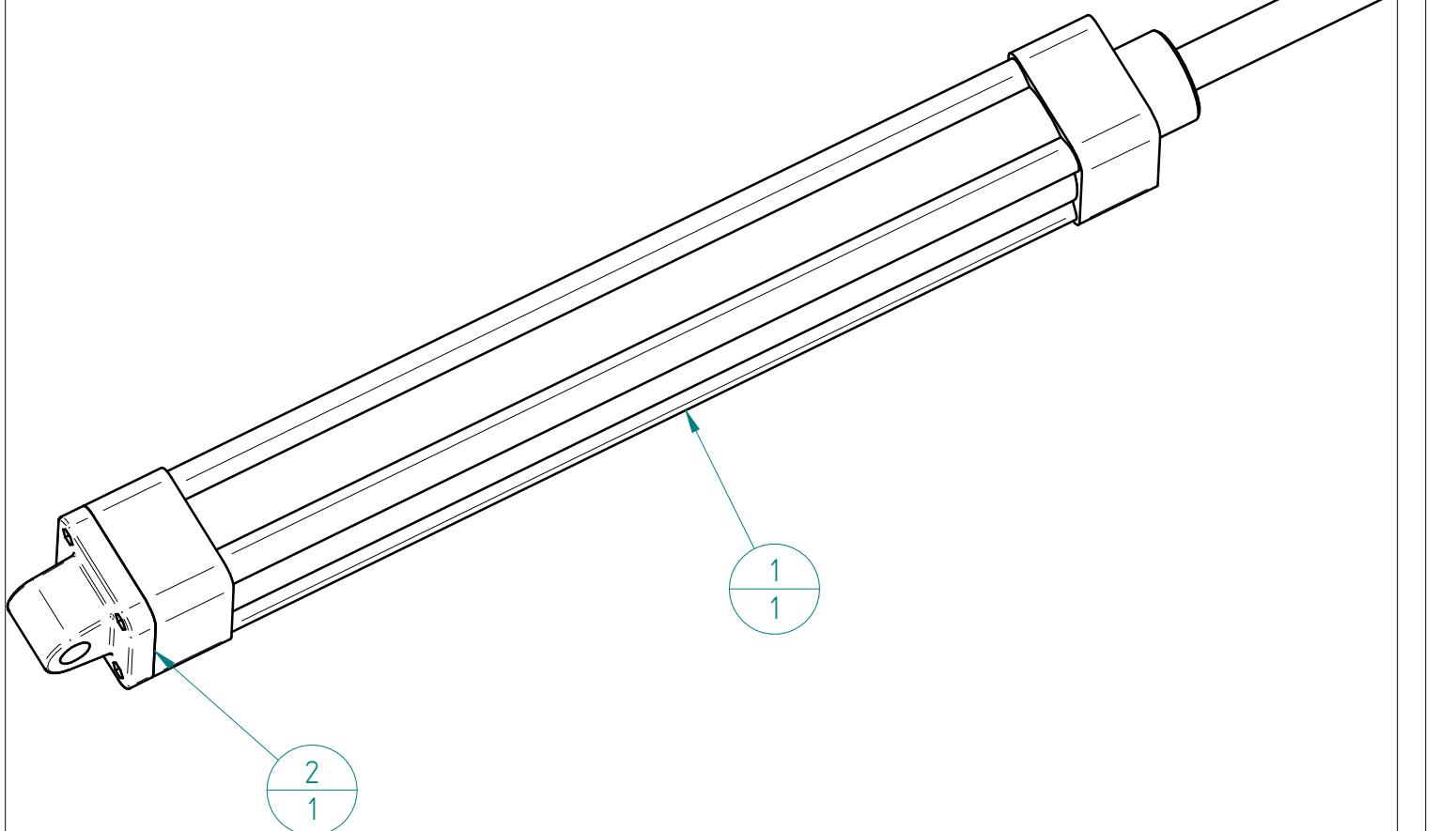


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB03357	Resistenza Onde Corte zbk 1000 230 G L. 285 Lu. 220 volt 230	-	0,060 kg	1
2	LIB02438	Supporto resistenza 01 per tipo gemellare	-	0,040 kg	2

**DESCRIZIONE
COMPLESSIVO \$ LAMPADA Lr=220**

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
-	-	0,1	1:1
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	LOUD SPEAKER
-	-	-	-
ipm <small>ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it</small>	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA RIZZO DISEGNATORE RIZZO DATA 16/06/2006	SOSTITUISCE IL: SOSTITUITO DAL: CODICE DISEGNO S0025415 REVISIONE 0

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

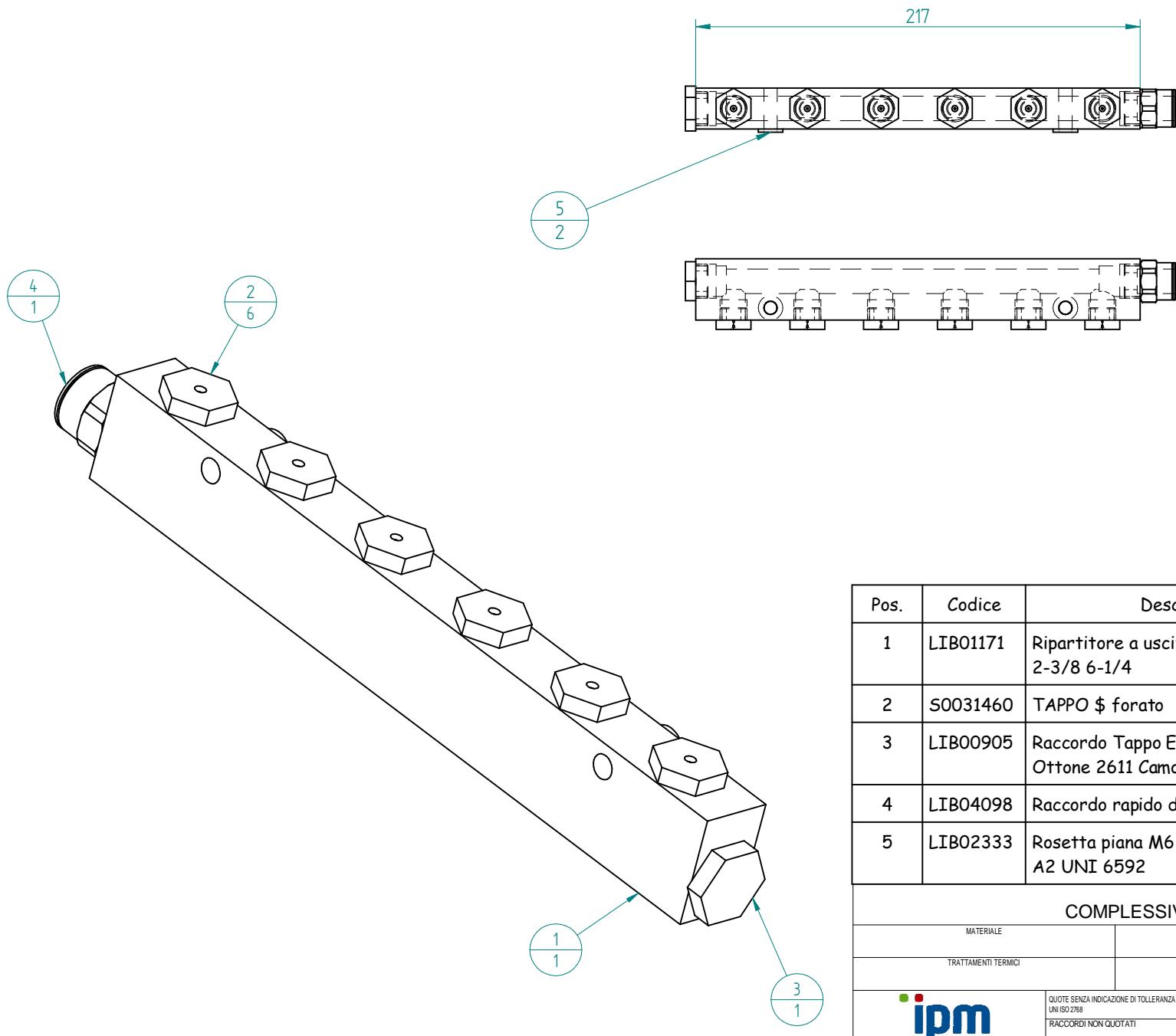


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB02110	Cilindro Pneumatico BPM Ø40 x 300 ISO 15552		1.650 kg	1
2	LIB00087	Cerniera maschio Ø40 ISO MP4	-	0.107 kg	1
3	LIB00088	Forcella Femmina FF 40		0.166 kg	1

DESCRIZIONE

COMPLESSIVO \$ CILINDRO AVANZAMENTO FORNO

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	1.92	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm <small>ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it</small>	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA ZAMA DISEGNATORE ZAMA DATA 06/09/2007	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0037388 REVISIONE 1



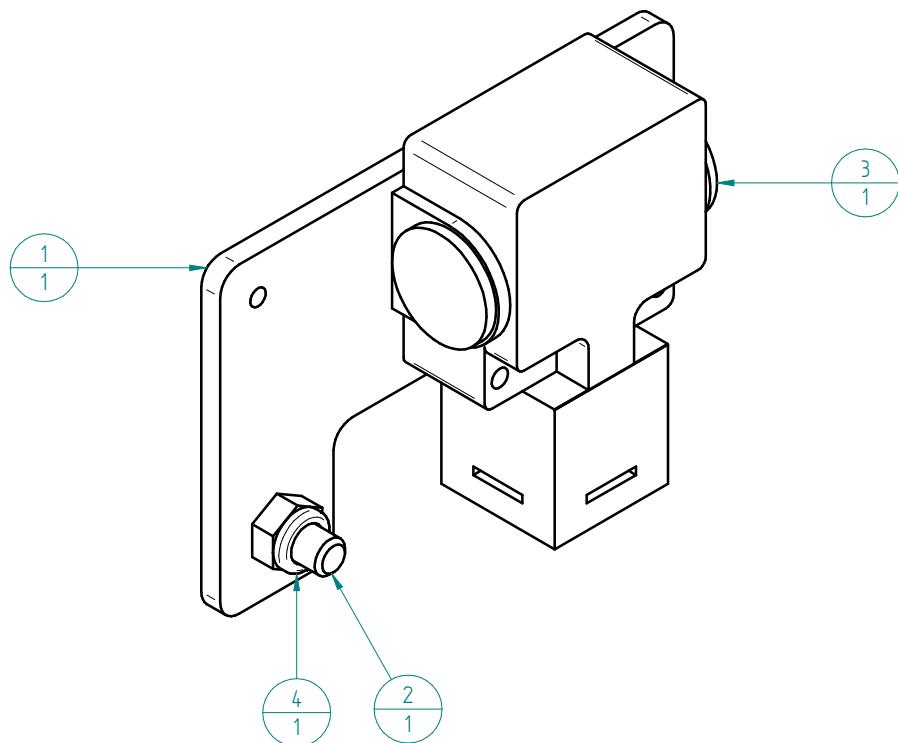
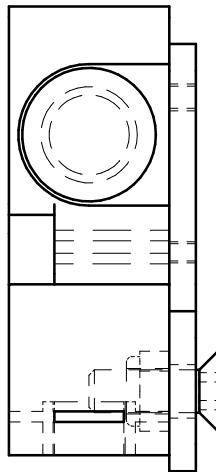
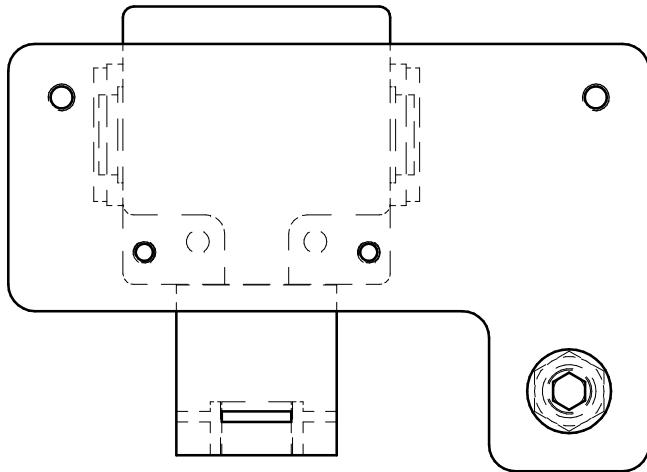
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB01171	Ripartitore a uscita lineari 152-06 2-3/8 6-1/4	Alluminio	0,253 kg	1
2	S0031460	TAPPO \$ forato	Ottone	0,085 kg	6
3	LIB00905	Raccordo Tappo Esagonale 3/8" Ottone 2611 Camozzi	Ottone cromato	0,019 kg	1
4	LIB04098	Raccordo rapido diritto 3/8" D12	Ottone	0,034 kg	1
5	LIB02333	Rosetta piana M6 De. 12 Sp. 1,6 Inox A2 UNI 6592	Inox	0,002 kg	2

**DESCRIZIONE
COMPLESSIVO \$ SOFFIO PULIZIA TUBO**

MATERIALE		STATO MATERIALE	Peso Kg	SCALA
			259,3	1:2
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA ZAMA	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	DISEGNATORE ZAMA	CODICE DISEGNO S0046619	REVISIONE 0
	SMUSSI NON QUOTATI	DATA 07/07/2008		

ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

Proprieta' riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



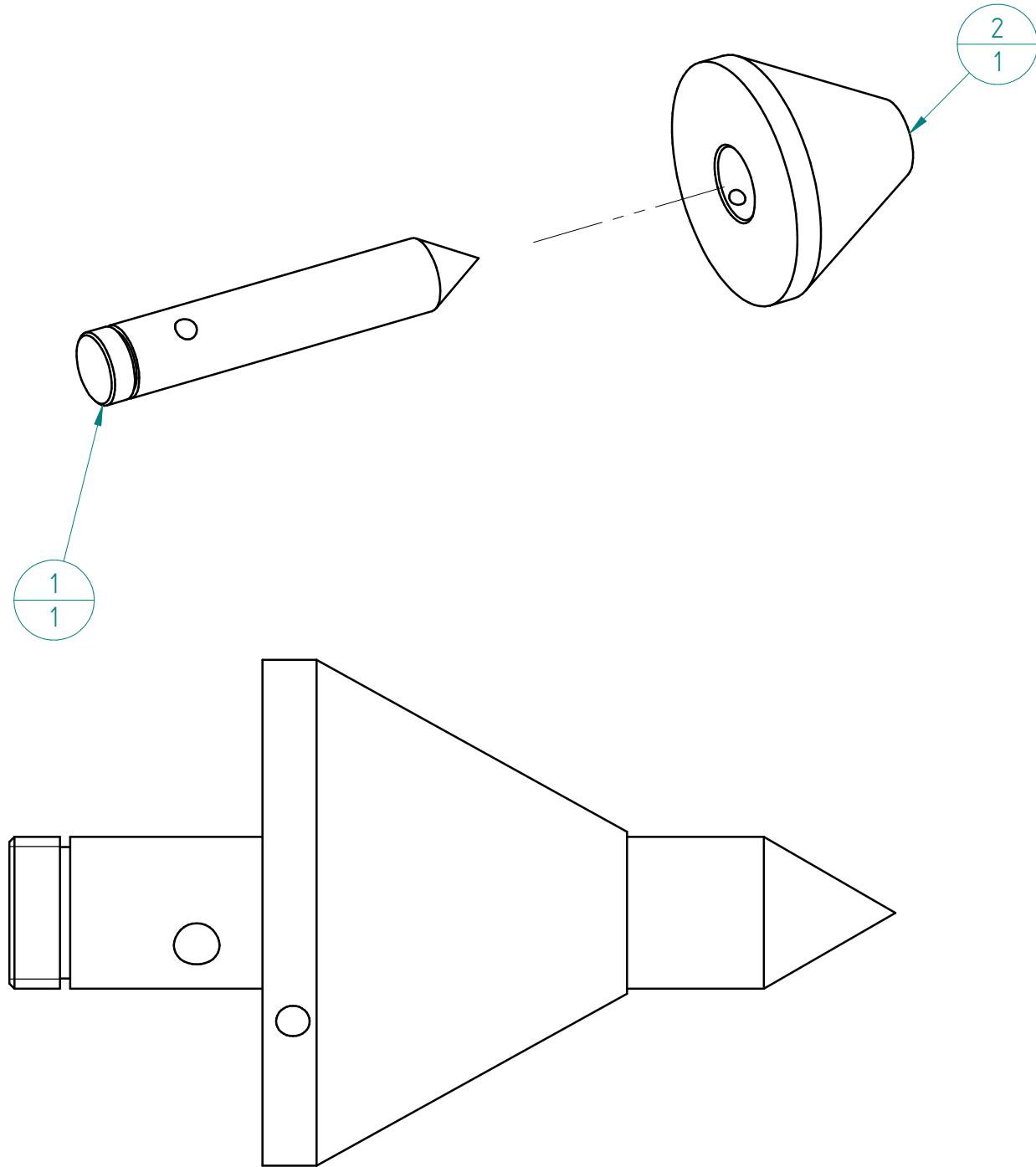
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0058041	LAMIERA Sp. 5 inviolabili e viti x calamite	Acciaio Fe 360	0.265 kg	1
2	LIB00249	Vite TS M8 x 25 UNI 5933	Acciaio	0.011 kg	1
3	LIB01382	Finecorsa sicurezza OMRON D4DS-5AFS-2NC	-	0.042 kg	1
4	LIB00964	Dado Acc. 8 Esagonale Basso Autobloccante M8 UNI 7474	Acciaio	0.005 kg	1

DESCRIZIONE GRUPPO blocco inviolabili e calamite per pannello

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Composto	0.32	1:1
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 17/11/2009	SOSTITUISCE IL: - SOSTITUITO DAL: -
		CODICE DISEGNO S0058042	REVISIONE 0

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Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



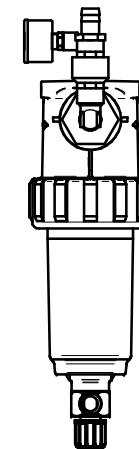
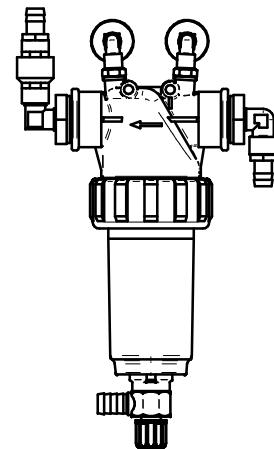
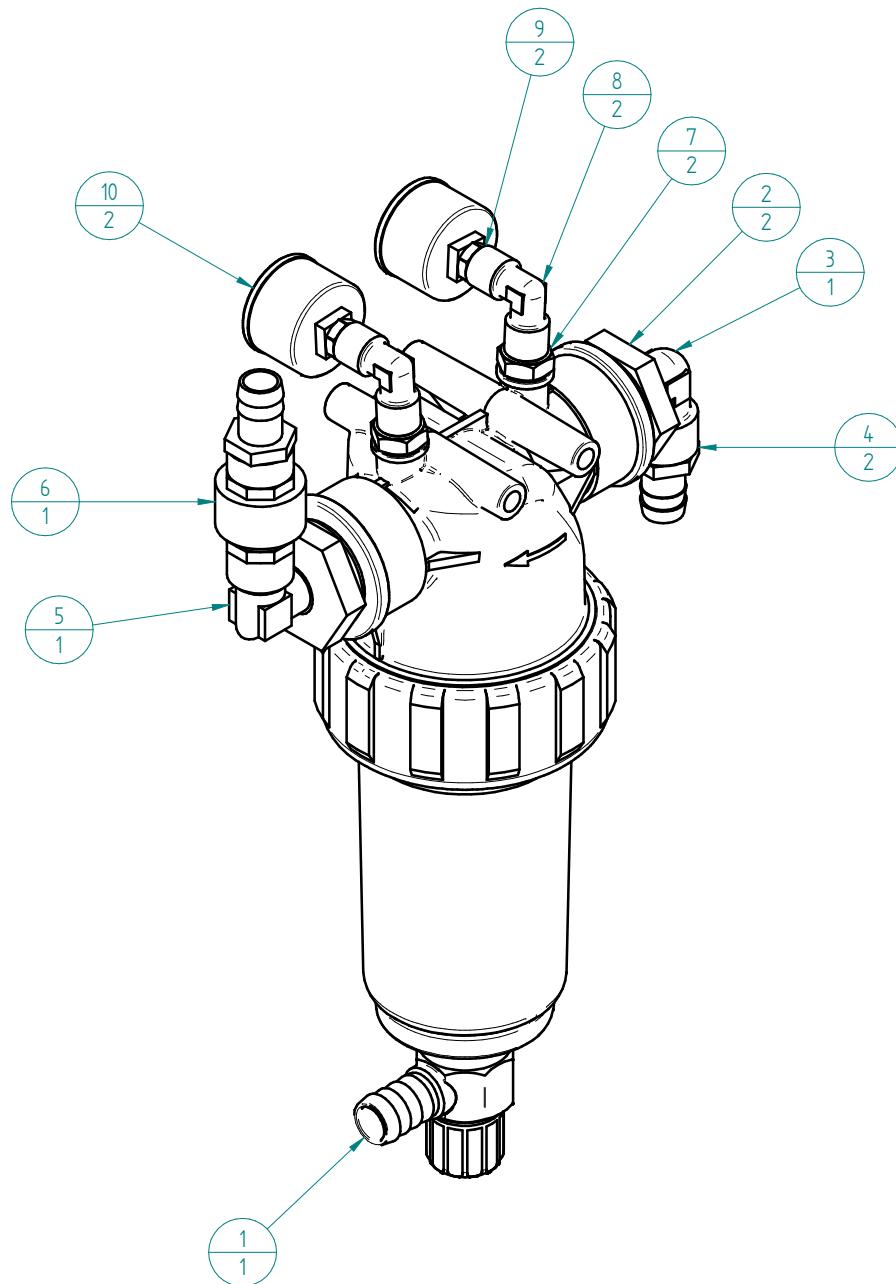
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0078485	ALBERO D. 30	Acciaio Fe 360	0,857 kg	1
2	S0061681	CONO deviatore	Alluminio 11S UNI-9002/5	0,701 kg	1

DESCRIZIONE

COMPLESSIVO deflettore candela centrale BA 200

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	1,69	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BEDESCHI DISEGNATORE BEDESCHI DATA 25/07/2011	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0078560 REVISIONE 0

MODIFICA



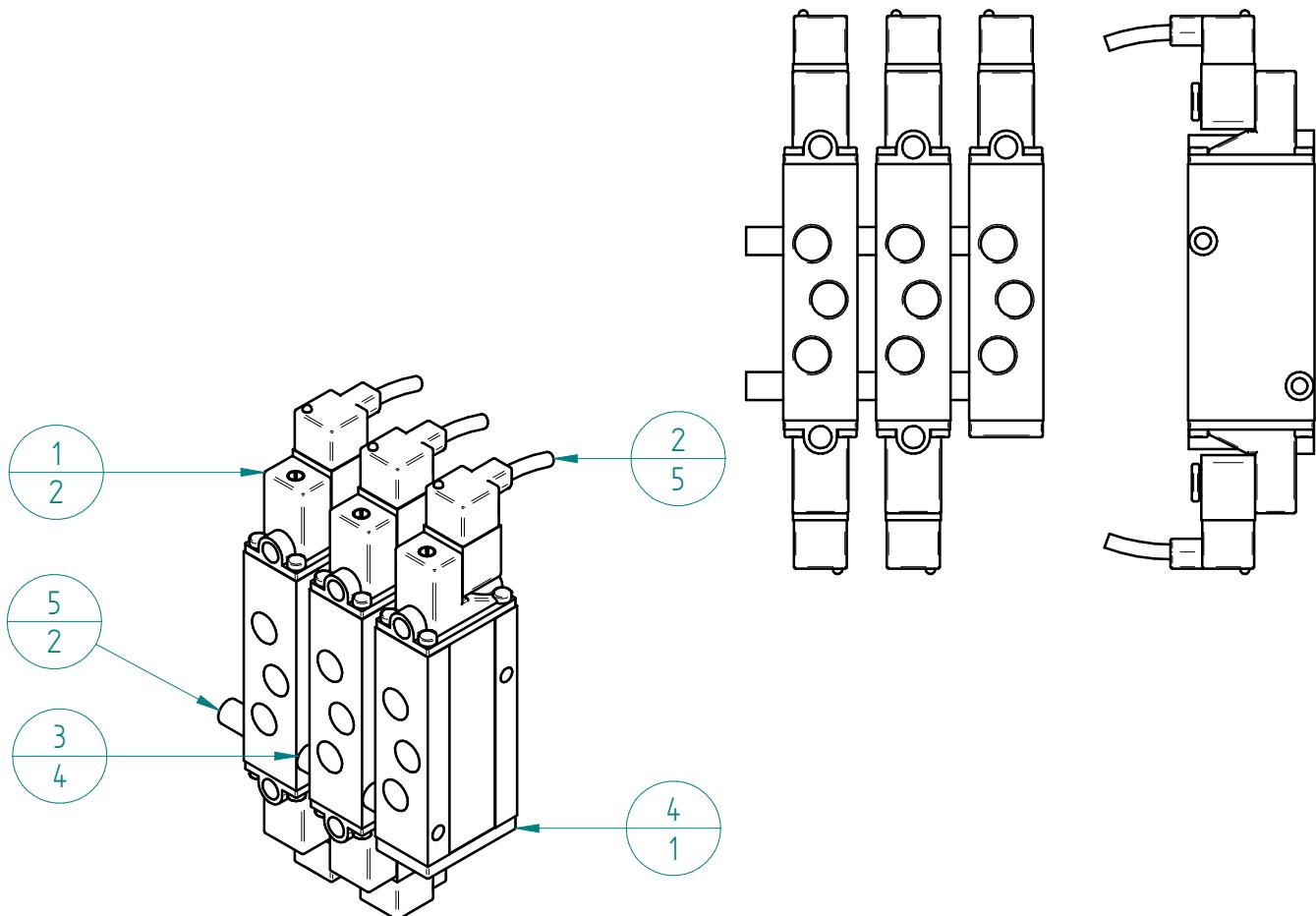
Pos.	Codice	Rev.	Descrizione	Materiale	Peso	Q.ta
1	LIB07529		Filtro acqua Autopulente 328 - 1" $\frac{1}{4}$ ARAG 200 Mesh (32821565)	PE	0.824 kg	1
2	LIB01145		Raccordo Riduzione M-F cilindrica M 1"1/4 - F 1/2" Acciaio	Acciaio	0.488 kg	2
3	LIB01135		Curva 1/2"	Ottone	0.093 kg	1
4	LIB01142		Resca 1/2"	Ottone	0.091 kg	2
5	LIB04874		Curva 1/2 M+M	-	0.100 kg	1
6	LIB01146		Valvola unidirezionale 1/2"	-	0.200 kg	1
7	LIB04881		Raccordo Nipplo M-M 1/4" Acciaio	Ghisa	0.066 kg	2
8	LIB05620		Raccordo Gomito F-F 1/4" Ottone nichelato	Ottone	0.087 kg	2
9	LIB02359		Riduzione F 1/4" - M 1/8"	Ottone	0.024 kg	2
10	LIB01075	0	Manometro 1/8 Bar 0:6 Wika d. 40	PVC	0.092 kg	2

DESCRIZIONE
GRUPPO Filtro Acqua 1" 1/4 x BA 75D Std. Staffa Reg.

MATERIALE		STATO MATERIALE Assemblato	Peso Kg 2.06	SCALA 1:5
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA MERS DISEGNATORE BELLONI DATA 25/09/2012	SOSTITUISCE IL: - SOSTITUITO DAL: -	A3
			CODICE DISEGNO S0090041	REVISIONE 0
				MODIFICA: -

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Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

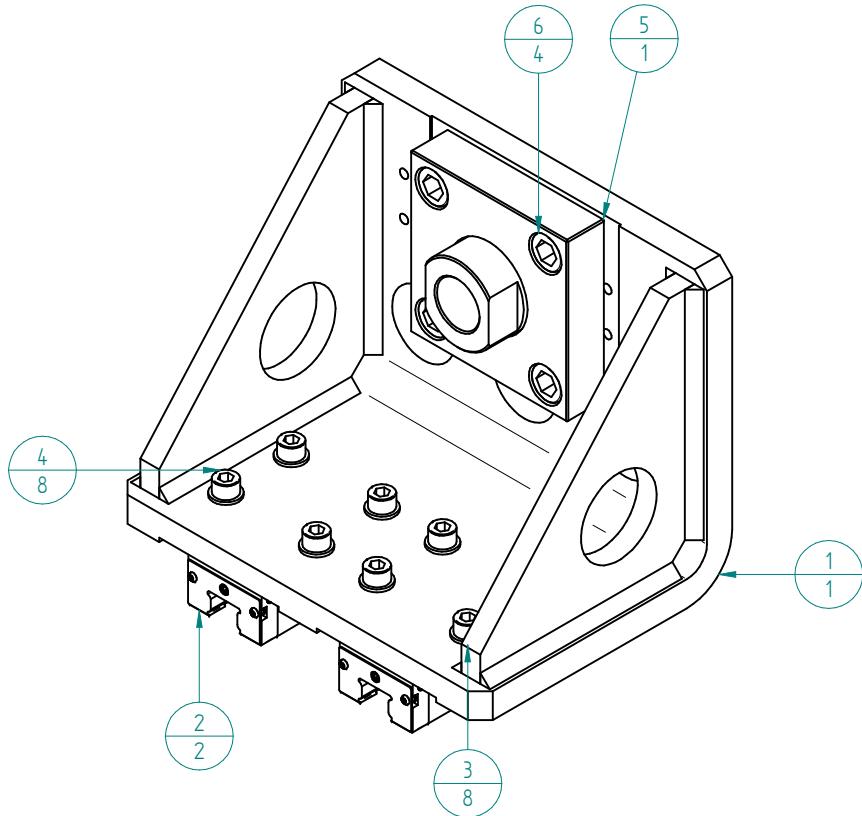
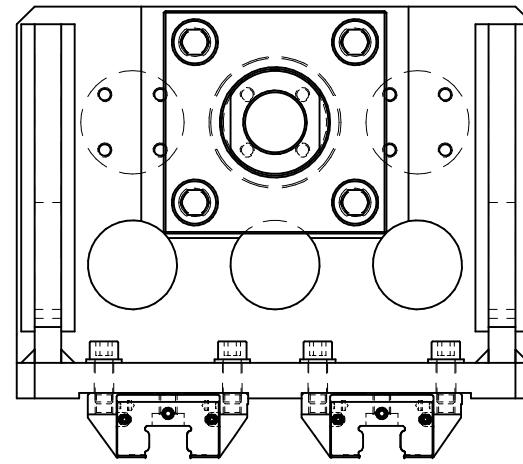
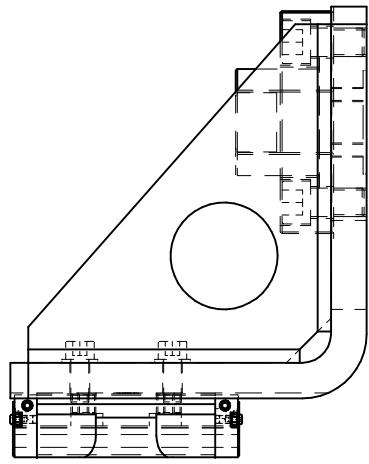
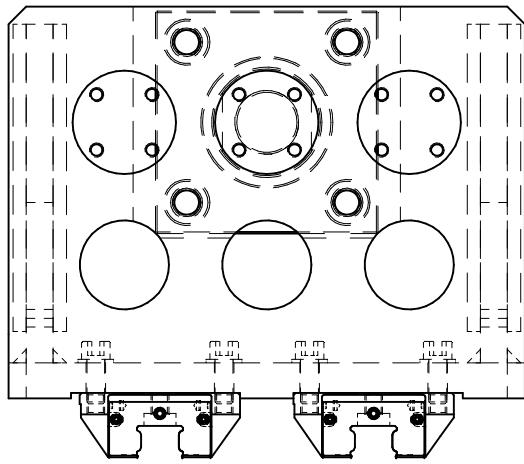


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB02417	Elettrovalvola 1/2" 5/2 2S SB 5725555202 Rexroth Bosch	-	2.400 kg	2
2	LIB00870	Testina + Bobina per elettrovalvole ISO 1	-	0.390 kg	5
3	S0023135	DISTANZIALE D. 15 Di. 8.5 L. 10	Acciaio Fe 360	0.038 kg	4
4	LIB02416	Elettrovalvola 1/2" 5/2 1S SB 5725455202 Rexroth Bosch	-	1.000 kg	1
5	S0048149	DISTANZIALE D. 15 Di. 8.5 L. 20	Acciaio Fe 360	0.038 kg	2

DESCRIZIONE

GRUPPO elettrovalvole 1/2" 5/2 (3EV - 2D - 1S)

MATERIALE	STATO MATERIALE Assemblato	Peso Kg 3,86	SCALA 1:4
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -
	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	DATA 15/04/2016	CODICE DISEGNO S0141902
			REVISIONE 0
			MODIFICA

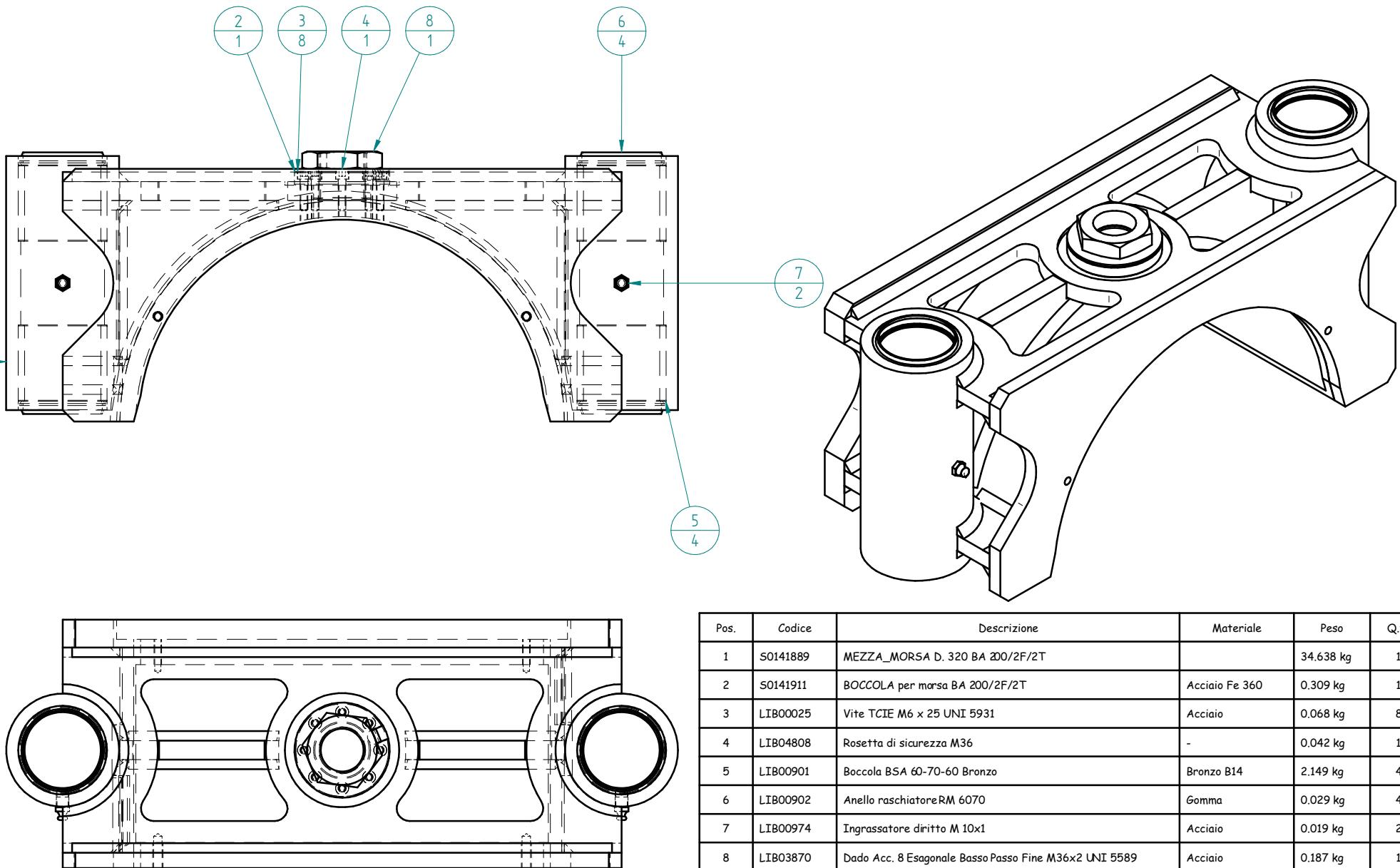


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0141908	CARRELLO porta mandrini BA 200/2F/2T		19,407 kg	1
2	LIB09905	Carrello KWVE 30-BL-G3 V1 (INA)	Acciaio	3,940 kg	2
3	LIB00136	Rosetta piana M10 De. 20 Sp. 2 Acciaio UNI 6592	Acciaio	0,029 kg	8
4	LIB00163	Vite TCIE M10 x 25 UNI 5931	Acciaio	0,219 kg	8
5	LIB04255	Flangie autoallineanti FA 36 Airon	Acciaio	3,364 kg	1
6	LIB01561	VITE TCIE M 16 x 30 UNI 5931	Acciaio	0,354 kg	4

DESCRIZIONE GRUPPO carrello formazione BA 200/2F/2T

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
-	Assemblato	27,31	1:3
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-	-	-
ipm <small>ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it</small>	PROGETTISTA BELLONI RACCORDI NON QUOTATI SMUSSI NON QUOTATI	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0141909	REVISIONE 0

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



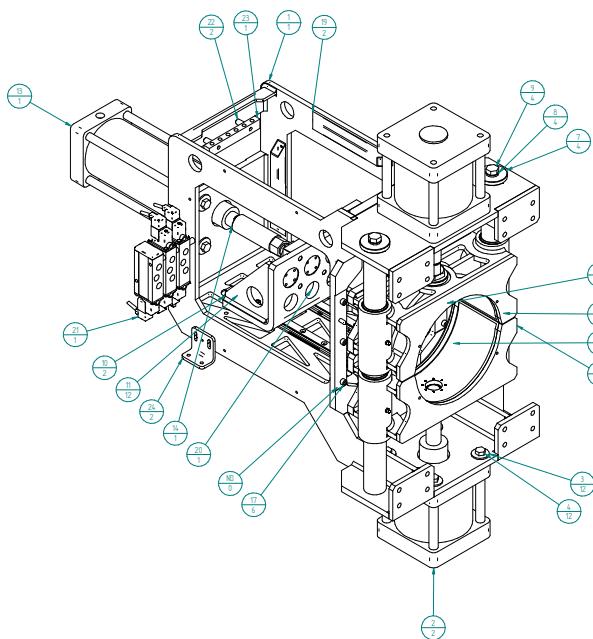
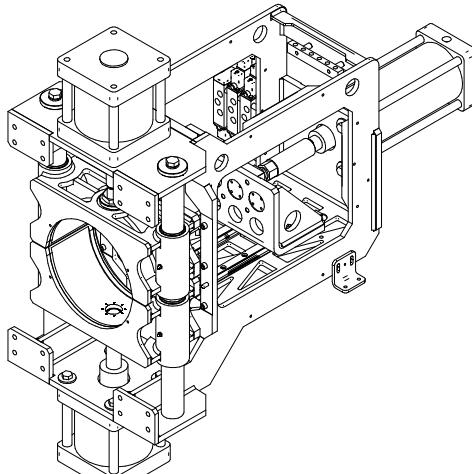
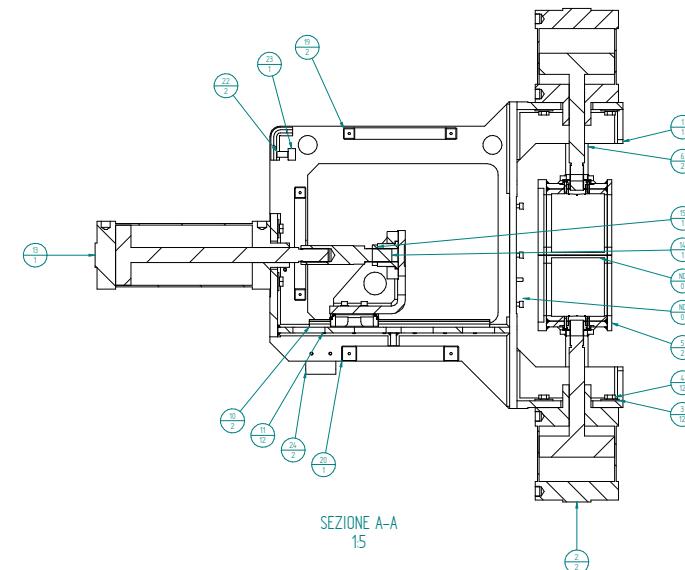
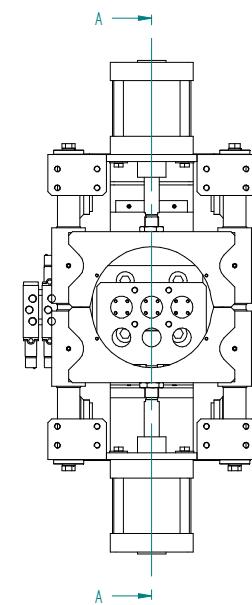
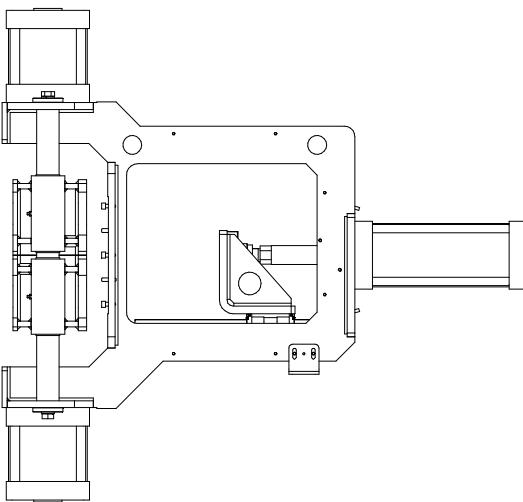
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0141889	MEZZA_MORSA D. 320 BA 200/2F/2T		34.638 kg	1
2	S0141911	BOCCOLA per morsa BA 200/2F/2T	Acciaio Fe 360	0.309 kg	1
3	LIB00025	Vite TCIE M6 x 25 UNI 5931	Acciaio	0.068 kg	8
4	LIB04808	Rosetta di sicurezza M36	-	0.042 kg	1
5	LIB00901	Boccola BSA 60-70-60 Bronzo	Bronzo B14	2.149 kg	4
6	LIB00902	Anello raschiatore RM 6070	Gomma	0.029 kg	4
7	LIB00974	Ingrassatore diritto M 10x1	Acciaio	0.019 kg	2
8	LIB03870	Dado Acc. 8 Esagonale Basso Passo Fine M36x2 UNI 5589	Acciaio	0.187 kg	1

DESCRIZIONE
GRUPPO mezza morsa BA 200/2F/2T

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
-	Assemblato	37.44	1:3
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-	-	-
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 15/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0141912 REVISIONE 0

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Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

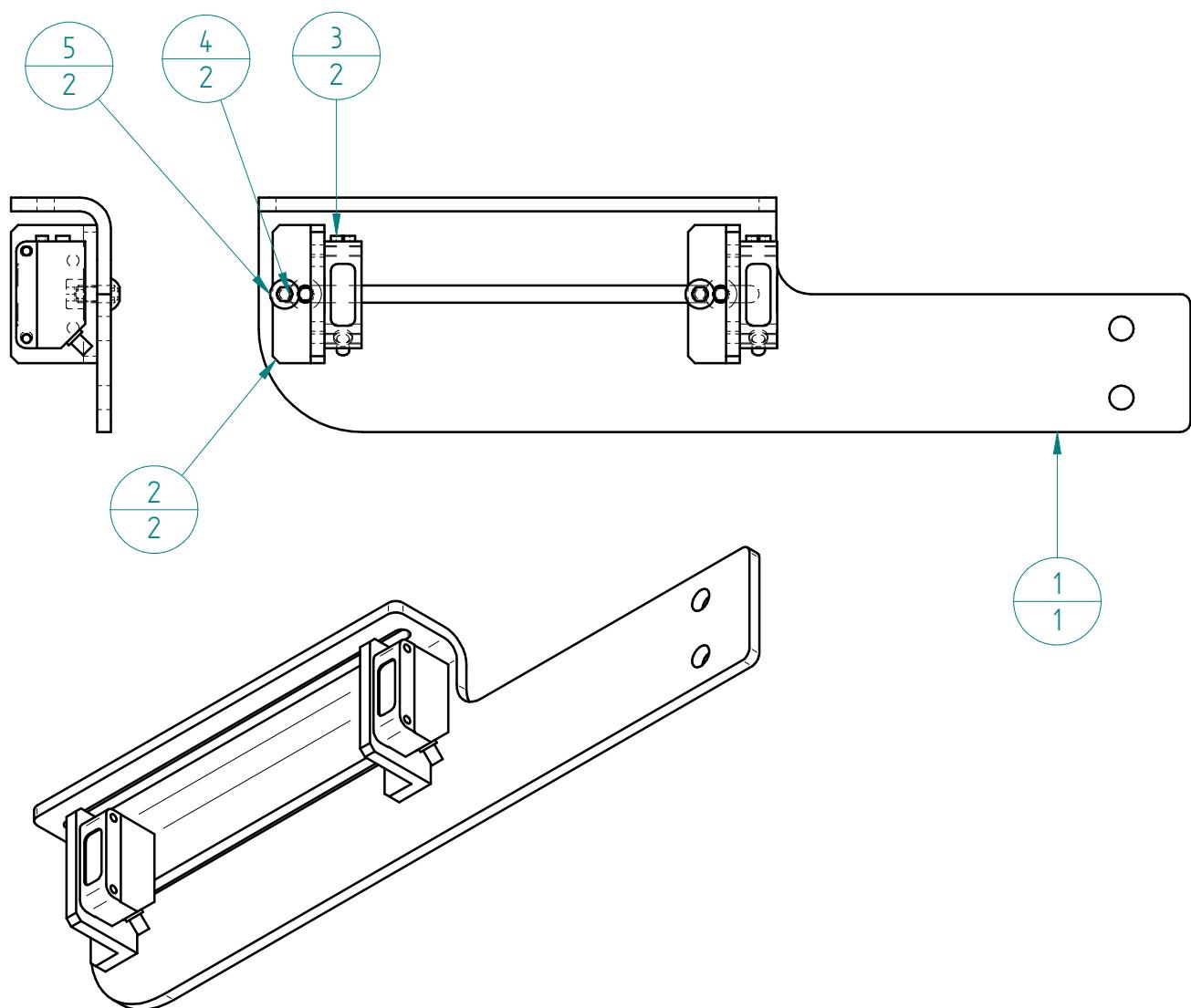


Pno	Codice	Descrizione	Materiale	Peso	Q.tà
1	SD44985	TELATO Pneumatico BA 200/2T (std)	-	152,368 kg	1
2	L1804245	Cilindro pneumatico BTM 200/20 x 65 ISO 6431	-	32,000 kg	2
3	L1808048	Rivetto M 10 x 18 DIN 936 4-UNE-6953	Acciaio	0,566 kg	12
4	L1807170	VETTE M 10 x 20 UNE EN 20207	Acciaio	1,420 kg	12
5	SD44912	GRUPPO mezza molla BA 200/2T/Z	-	74,884 kg	2
6	SD44913	TEAMPFLA D. 60	Acciaio C 43	35,592 kg	2
7	SD44959	ROSETTA D. 22 Dc. 80 L. 12	Acciaio Pe 360	1,740 kg	4
8	L1802132	Rivetto cilindro gomma M 20	Acciaio	0,070 kg	4
9	L1802134	VETTE TE 20 x 30 UNE EN 20207	Acciaio	0,793 kg	4
10	L1802005	Rivetto TIVD 20 x 476 (d.39 - l.89)	Acciaio	3,976 kg	2
11	L1802005	Vite TCZ M 8 x 25 UNE 9553	Acciaio	0,200 kg	12
12	SD44959	GRUPPO camme formazione BA 200/2T/ZT	-	27,314 kg	1
13	L1804247	Cilindro pneumatico ISO 1431/810 serie 280	-	16,000 kg	1
14	SD44950	FERMO D. 50 L. 369 perno cilindro 835x2	Acciaio C 40	2,482 kg	1
15	SD44944	Dado Acc. 8/Espresso Base Fusto 835x2UNI 9559	-	0,088 kg	1
17	L1800053	Vite TCZ M10 x 25 UNE 9553	Acciaio	0,044 kg	6
18	L1801058	Spira/Induca Ø 20 x 35 UNE EN 28734	-	0,061 kg	2
19	SD44901	TUBOLARE S. 2 L. 300 (a. 40 h. 30)	Acciaio Pe 360	0,709 kg	2
20	SD44902	TUBOLARE S. 2 L. 300 (a. 40 h. 40)	Acciaio Pe 360	0,832 kg	1
21	SD44902	GRUPPO elettromagnetico 50°C (20° - 20° - 20)	-	3,866 kg	1
22	SD44904	DISTANZIALE D. 6,5 H. 25 L. 30	Acciaio Pe 360	0,087 kg	2
23	SD44900	BLCCGE E TTC Derivazione 6 vte	Aluminio 315 UNE 95027	0,253 kg	1
24	SD44914	LAMIERA 4 paghi Sp. 8	Acciaio Pe 360	1,085 kg	2

GRUPPO formazione BA 200/2T (std.)					
N. Parte	Nome	Assemblato	Quantità	U.M.	Disegno
1	TELATO Pneumatico BA 200/2T (std)	-	1	1	
2	Cilindro pneumatico BTM 200/20 x 65 ISO 6431	-	2	1	
3	Rivetto M 10 x 18 DIN 936 4-UNE-6953	Acciaio	12	1	
4	VETTE M 10 x 20 UNE EN 20207	Acciaio	12	1	
5	GRUPPO mezza molla BA 200/2T/Z	-	2	1	
6	TEAMPFLA D. 60	Acciaio C 43	2	1	
7	ROSETTA D. 22 Dc. 80 L. 12	Acciaio Pe 360	4	1	
8	Rivetto cilindro gomma M 20	Acciaio	4	1	
9	VETTE TE 20 x 30 UNE EN 20207	Acciaio	4	1	
10	Rivetto TIVD 20 x 476 (d.39 - l.89)	Acciaio	2	1	
11	Vite TCZ M 8 x 25 UNE 9553	Acciaio	12	1	
12	GRUPPO camme formazione BA 200/2T/ZT	-	1	1	
13	Cilindro pneumatico ISO 1431/810 serie 280	-	1	1	
14	FERMO D. 50 L. 369 perno cilindro 835x2	Acciaio C 40	1	1	
15	Dado Acc. 8/Espresso Base Fusto 835x2UNI 9559	-	1	1	
17	Vite TCZ M10 x 25 UNE 9553	Acciaio	6	1	
18	Spira/Induca Ø 20 x 35 UNE EN 28734	-	2	1	
19	TUBOLARE S. 2 L. 300 (a. 40 h. 30)	Acciaio Pe 360	2	1	
20	TUBOLARE S. 2 L. 300 (a. 40 h. 40)	Acciaio Pe 360	1	1	
21	GRUPPO elettromagnetico 50°C (20° - 20° - 20)	-	1	1	
22	DISTANZIALE D. 6,5 H. 25 L. 30	Acciaio Pe 360	2	1	
23	BLCCGE E TTC Derivazione 6 vte	Aluminio 315 UNE 95027	1	1	
24	LAMIERA 4 paghi Sp. 8	Acciaio Pe 360	2	1	

GRUPPO formazione BA 200/2T (std.)					
N. Parte	Nome	Assemblato	Quantità	U.M.	Disegno
1	TELATO Pneumatico BA 200/2T (std)	-	1	1	
2	Cilindro pneumatico BTM 200/20 x 65 ISO 6431	-	2	1	
3	Rivetto M 10 x 18 DIN 936 4-UNE-6953	Acciaio	12	1	
4	VETTE M 10 x 20 UNE EN 20207	Acciaio	12	1	
5	GRUPPO mezza molla BA 200/2T/Z	-	2	1	
6	TEAMPFLA D. 60	Acciaio C 43	2	1	
7	ROSETTA D. 22 Dc. 80 L. 12	Acciaio Pe 360	4	1	
8	Rivetto cilindro gomma M 20	Acciaio	4	1	
9	VETTE TE 20 x 30 UNE EN 20207	Acciaio	4	1	
10	Rivetto TIVD 20 x 476 (d.39 - l.89)	Acciaio	2	1	
11	Vite TCZ M 8 x 25 UNE 9553	Acciaio	12	1	
12	GRUPPO camme formazione BA 200/2T/ZT	-	1	1	
13	Cilindro pneumatico ISO 1431/810 serie 280	-	1	1	
14	FERMO D. 50 L. 369 perno cilindro 835x2	Acciaio C 40	1	1	
15	Dado Acc. 8/Espresso Base Fusto 835x2UNI 9559	-	1	1	
17	Vite TCZ M10 x 25 UNE 9553	Acciaio	6	1	
18	Spira/Induca Ø 20 x 35 UNE EN 28734	-	2	1	
19	TUBOLARE S. 2 L. 300 (a. 40 h. 30)	Acciaio Pe 360	2	1	
20	TUBOLARE S. 2 L. 300 (a. 40 h. 40)	Acciaio Pe 360	1	1	
21	GRUPPO elettromagnetico 50°C (20° - 20° - 20)	-	1	1	
22	DISTANZIALE D. 6,5 H. 25 L. 30	Acciaio Pe 360	2	1	
23	BLCCGE E TTC Derivazione 6 vte	Aluminio 315 UNE 95027	1	1	
24	LAMIERA 4 paghi Sp. 8	Acciaio Pe 360	2	1	

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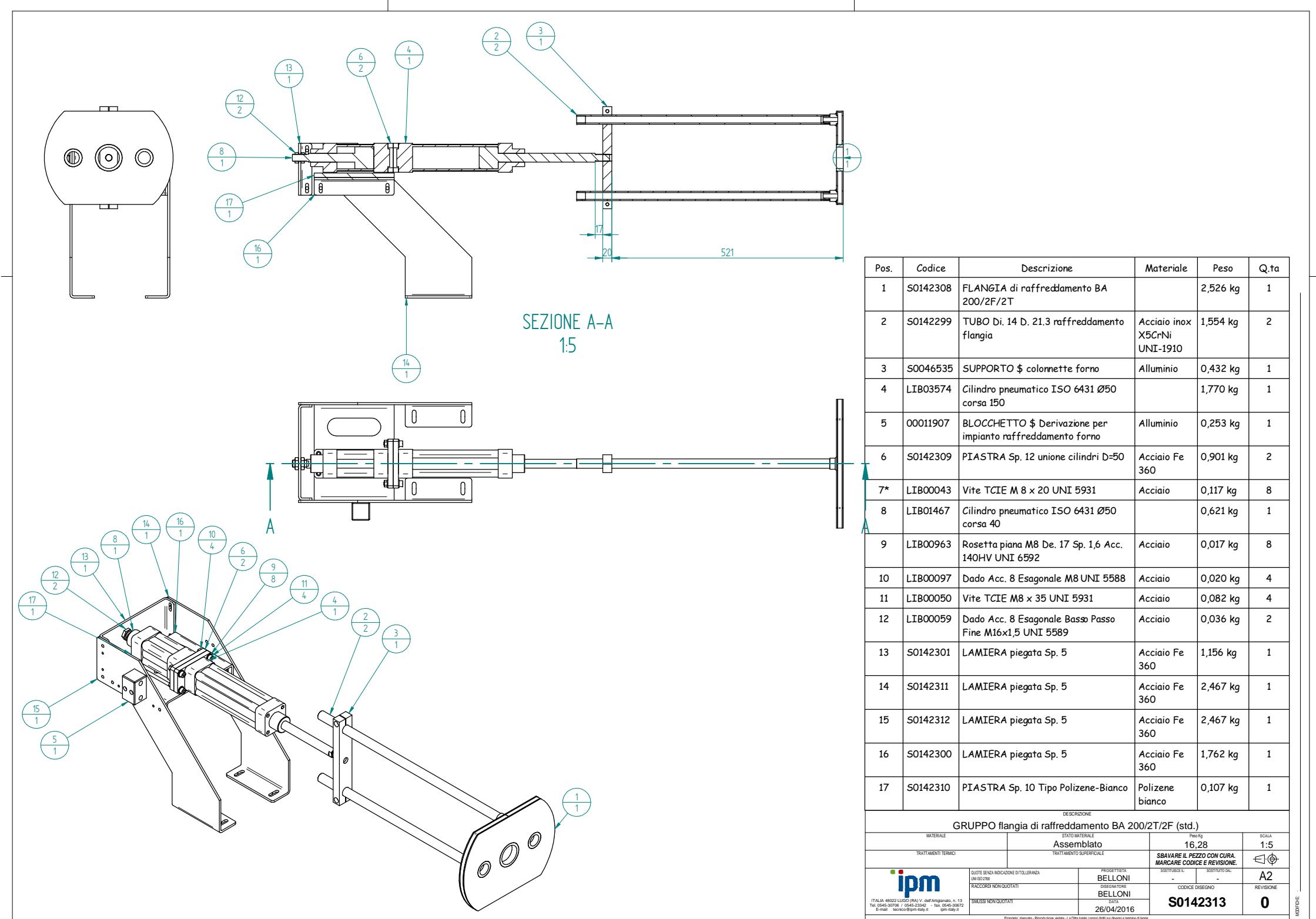
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142296	LAMIERA Sp. 4 Tipo piegata Fotocellule testa	Acciaio Fe 360	0.523 kg	1
2	00014131	STAFFA \$ Per fotocellula E3S-A - E3Z-R81	Fe360	0.086 kg	2
3	LIB00711	Fotocellula a riflessione E3Z-R81 Omron	-	0.017 kg	2
4	LIB01630	Viti TCBIE M 5 x 10	Acciaio	0.004 kg	2
5	LIB00914	VITE TCIE M 5 x 10 UNI 5931	Acciaio	0.007 kg	2

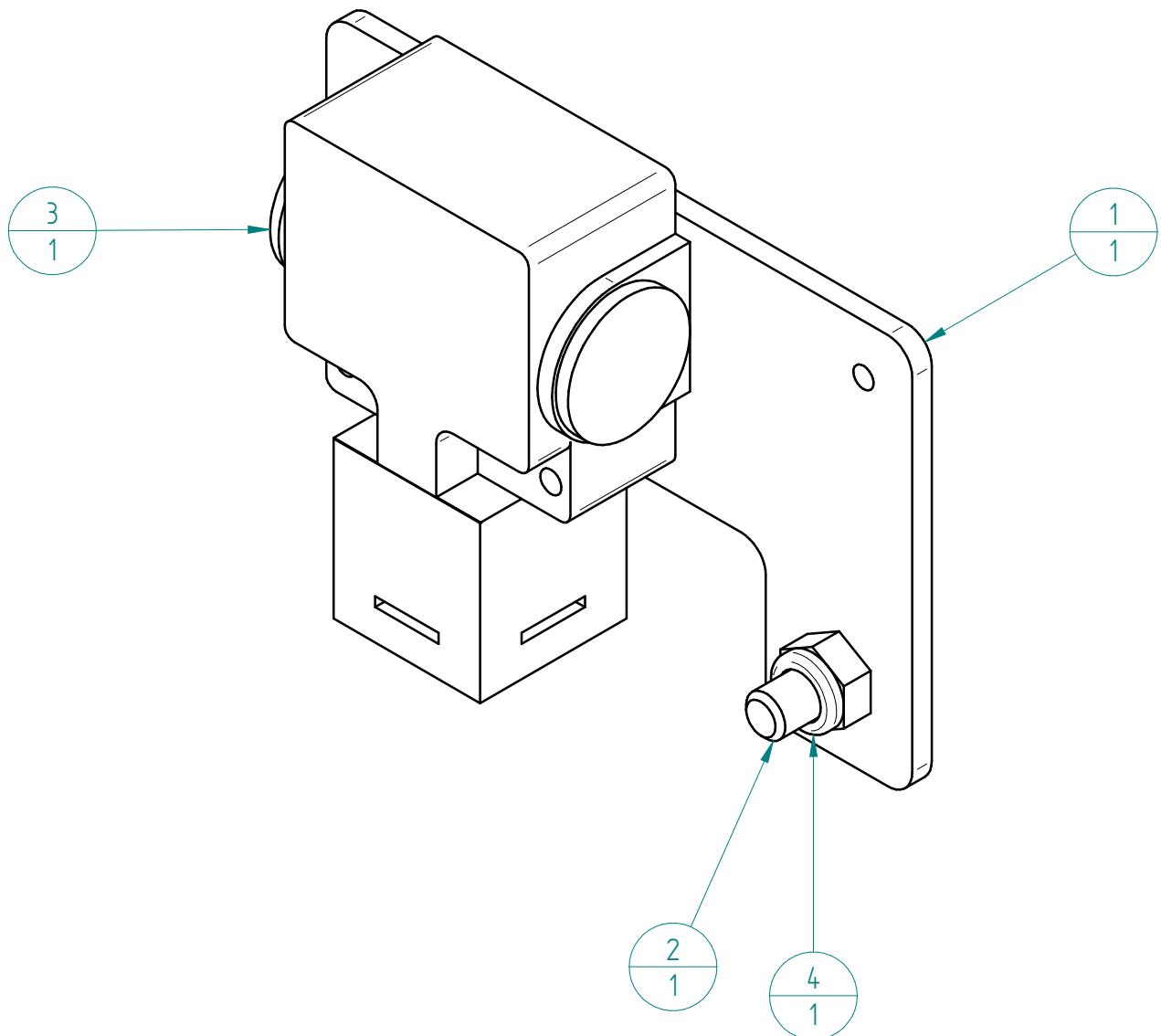
DESCRIZIONE

GRUPPO staffa fotocellule formatura BA 200

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	0.63	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-			
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142297 REVISIONE 0

MODIFICA





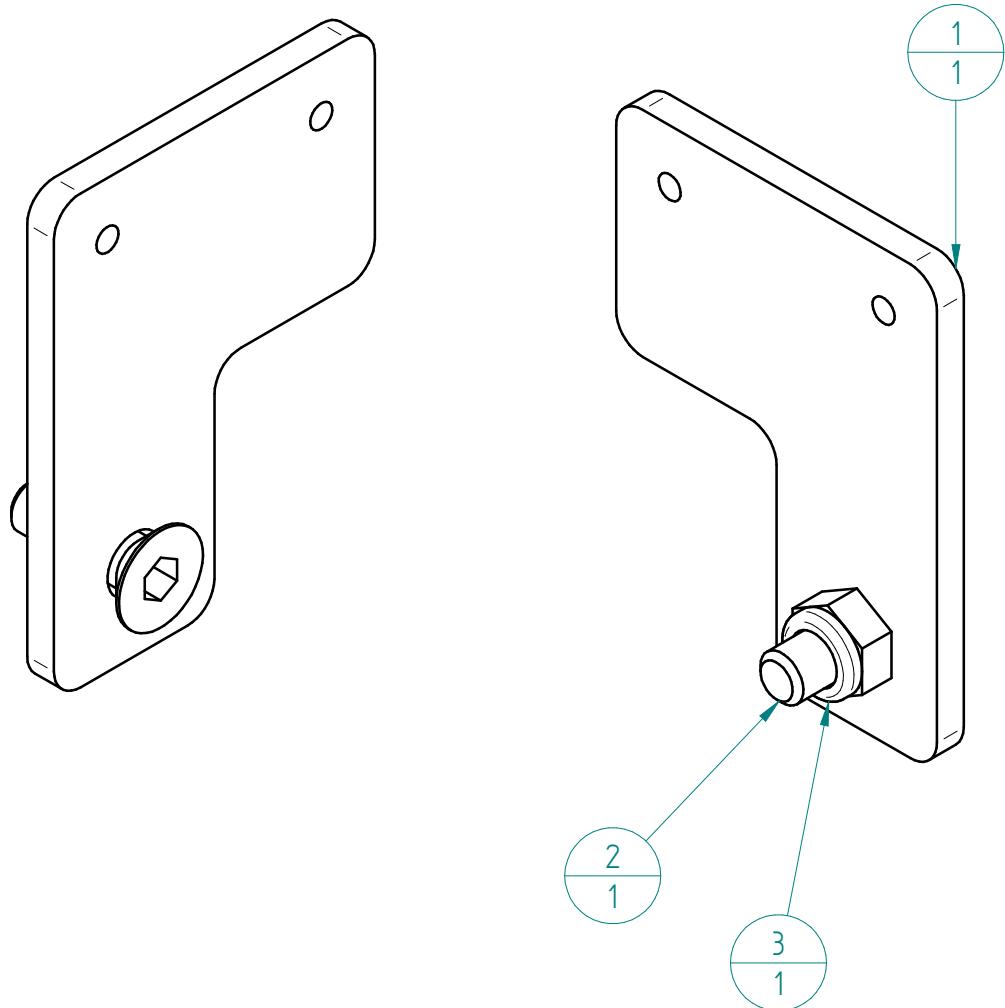
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0058043	LAMIERA Sp. 4 inviolabili e viti x calamite	Acciaio Fe 360	0.212 kg	1
2	LIB00249	Vite TS M8 x 25 UNI 5933	Acciaio	0.011 kg	1
3	LIB01382	Finecorsa sicurezza OMRON D4DS-5AFS-2NC	-	0.042 kg	1
4	LIB00964	Dado Acc. 8 Esagonale Basso Autobloccante M8 UNI 7474	Acciaio	0.005 kg	1

DESCRIZIONE

GRUPPO blocco inviolabili e calamite per pannello sp.4

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	0.27	1:1
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL:
	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL:
	SMUSSI NON QUOTATI	DATA 26/04/2016	CODICE DISEGNO S0142327

MODIFICA



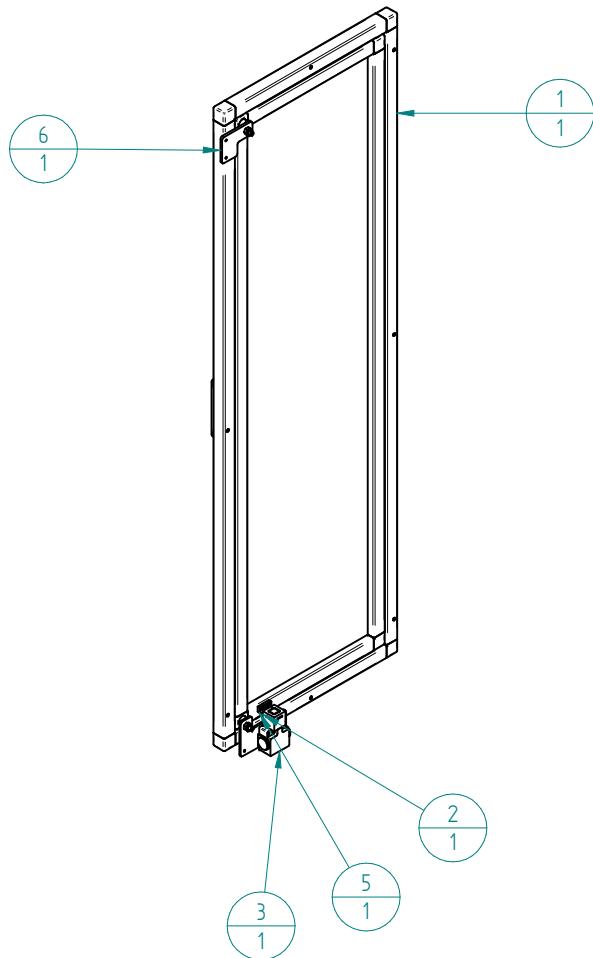
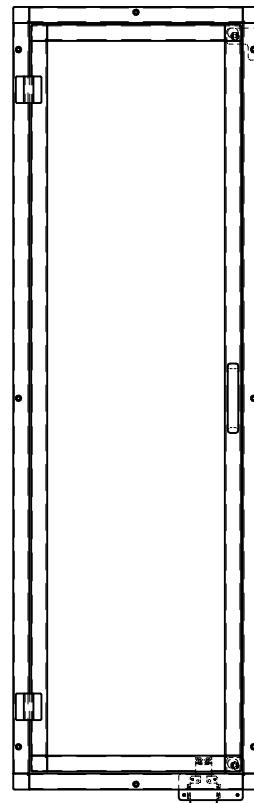
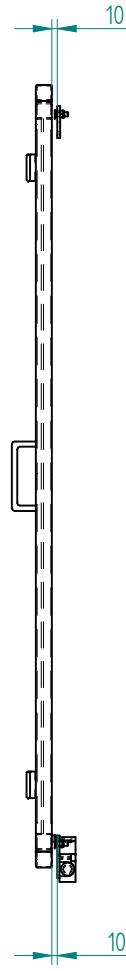
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142329	LAMIERA Sp. 5 viti x calamite pannelli	Acciaio Fe 360	0.136 kg	1
2	LIB00249	Vite TS M8 x 25 UNI 5933	Acciaio	0.011 kg	1
3	LIB00964	Dado Acc. 8 Esagonale Basso Autobloccante M8 UNI 7474	Acciaio	0.005 kg	1

DESCRIZIONE

GRUPPO blocco calamite per pannello

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	0.15	1:1
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142330 REVISIONE 0

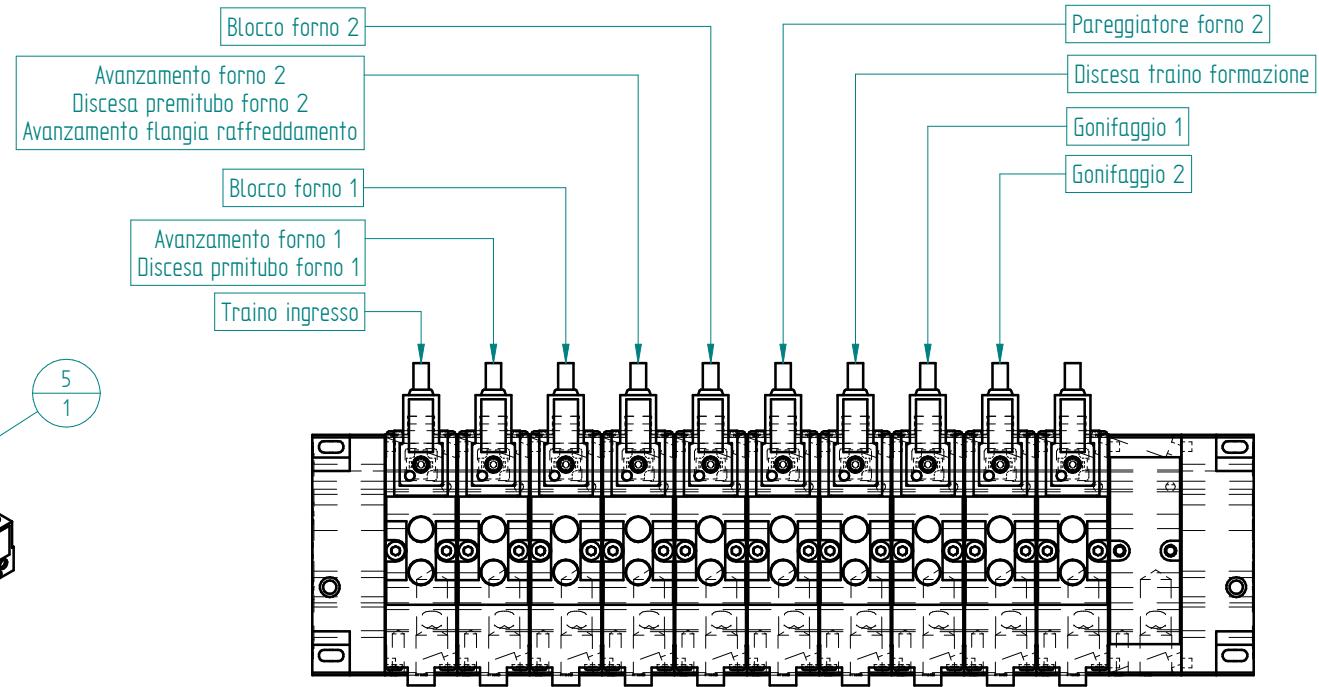
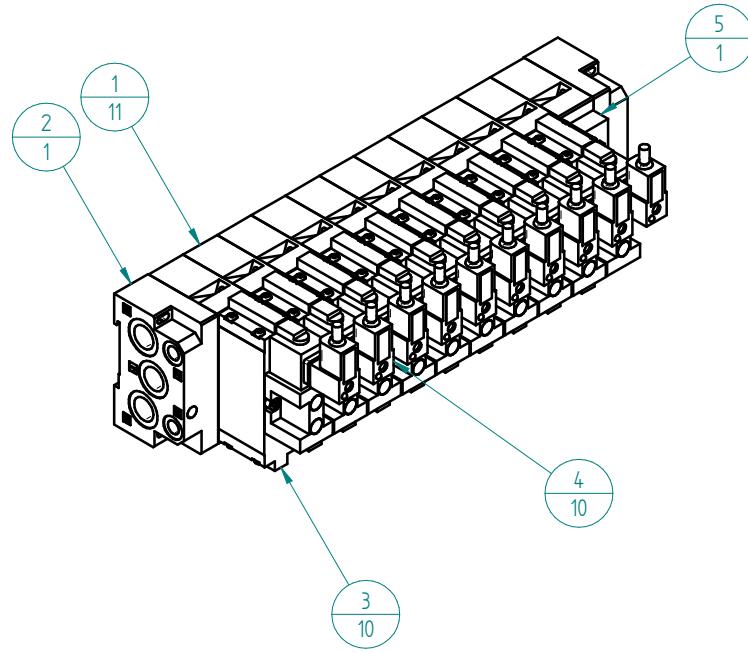
MODIFICA



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142328	PANNELLO Commerciale L. 1465 La. 460 H. 30 portello con controtelaio	Alluminio	9,481 kg	1
2	LIB01383	Chiave Finecorsa di Sicurezza OMRON	Acciaio	0,010 kg	1
3	S0142327	GRUPPO blocco inviolabili e calamite per pannello sp.4		0,270 kg	1
5	S0061363	SAGOMA Laser Sp. 5	Acciaio Fe 360	0,012 kg	1
6	S0142330	GRUPPO blocco calamite per pannello		0,153 kg	1

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
		Assemblato		9,92	1:10
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI	PROGETTISTA BELLONI	SOSTITUISCE IL: -	SOSTITUITO DAL: -	A3
		DISEGNATORE BELLONI			REVISIONE
	SMUSSI NON QUOTATI		DATA 26/04/2016	CODICE DISEGNO S0142331	0

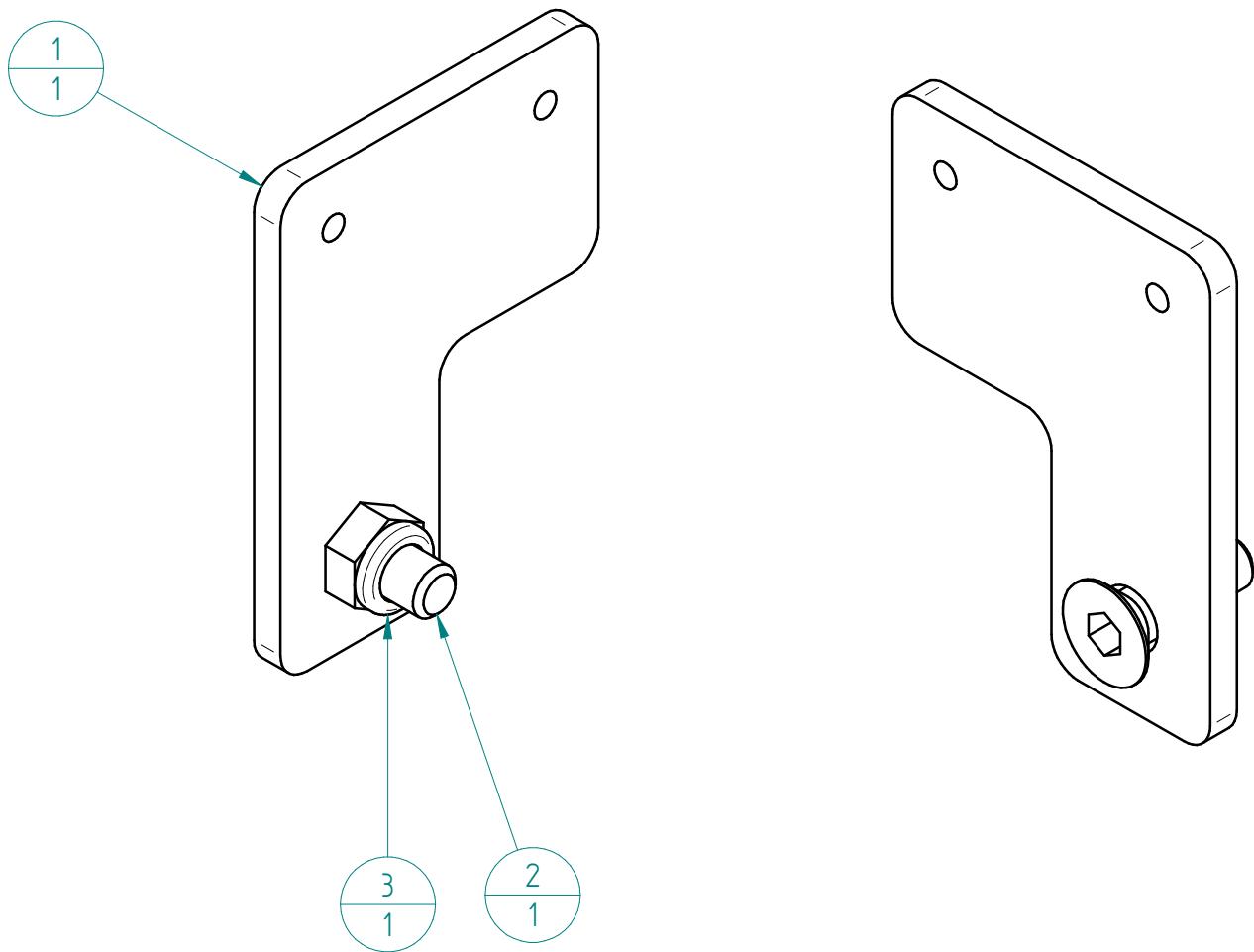
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	LIB05426	Piastra per elettrovalvole Bosch Rexroth ISO 15407-1 26 mm 1825504023 intermedia	Alluminio	3.014 kg	11
2	LIB05427	Piastra per elettrovalvole Bosch Rexroth ISO 15407-1 26 mm 1825504031 Parte regolabile composta da Inizio+fine	Alluminio	0.000 kg	1
3	LIB05424	Elettrovalvola Bosch Rexroth ISO 15407-1 26 mm 5/2 1S 5763510220	Alluminio	3.382 kg	10
4	LIB05451	Connettore E492I2N5001C4H MPM per e.v. tipo C con led e var. 24V costampato a cavo CEI 2022 O.R. lunghezza mt. 5	PE1000 (Polietilene Bianco)	0.105 kg	10
5	LIB05844	Piastra per elettrovalvole Bosch Rexroth ISO 15407-1 26 mm 1825504033 Tappo	Alluminio	0.058 kg	1

DESCRIZIONE					
GRUPPO Elettrovalvole pneumatiche ISO 15407-1 26 mm (11EV 10S 1X)					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
		Assemblato		7.1	1:3
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
				S0142332	
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it		QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI		PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - A3 CODICE DISEGNO S0142332 REVISIONE 0

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

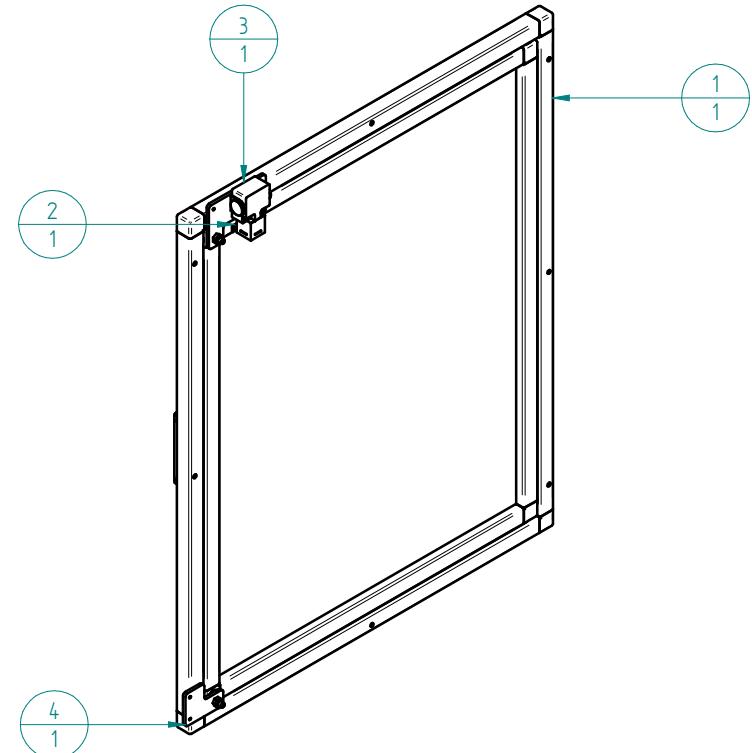
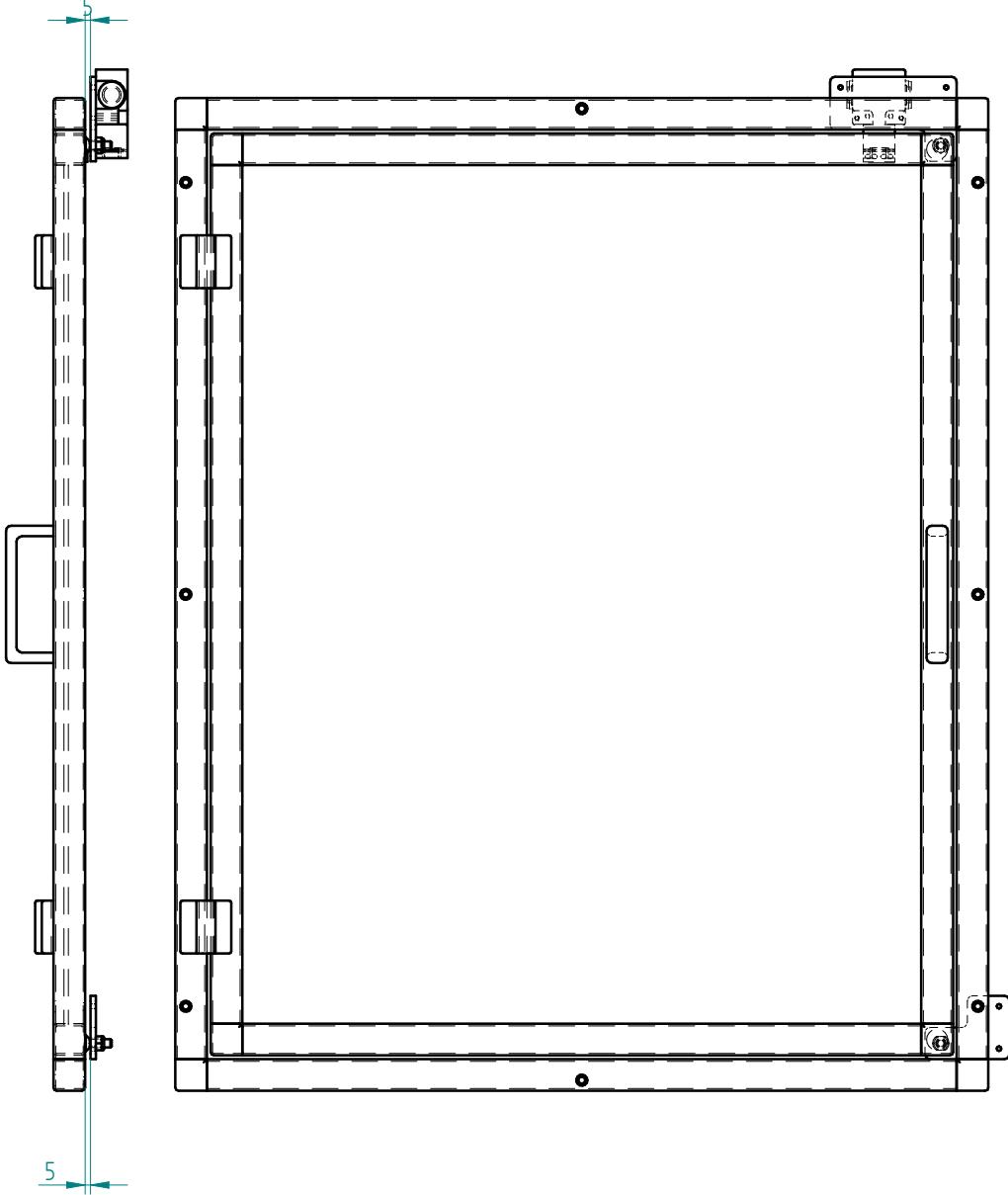


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142329	LAMIERA Sp. 5 viti x calamite pannelli	Acciaio Fe 360	0,136 kg	1
2	LIB00249	Vite TS M8 x 25 UNI 5933	Acciaio	0,011 kg	1
3	LIB00964	Dado Acc. 8 Esagonale Basso Autobloccante M8 UNI 7474	Acciaio	0,005 kg	1

DESCRIZIONE

GRUPPO blocco calamite per pannello

MATERIALE	STATO MATERIALE Assemblato	Peso Kg 0,15	SCALA 1:1
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142333 REVISIONE 0
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it			MODIFICA

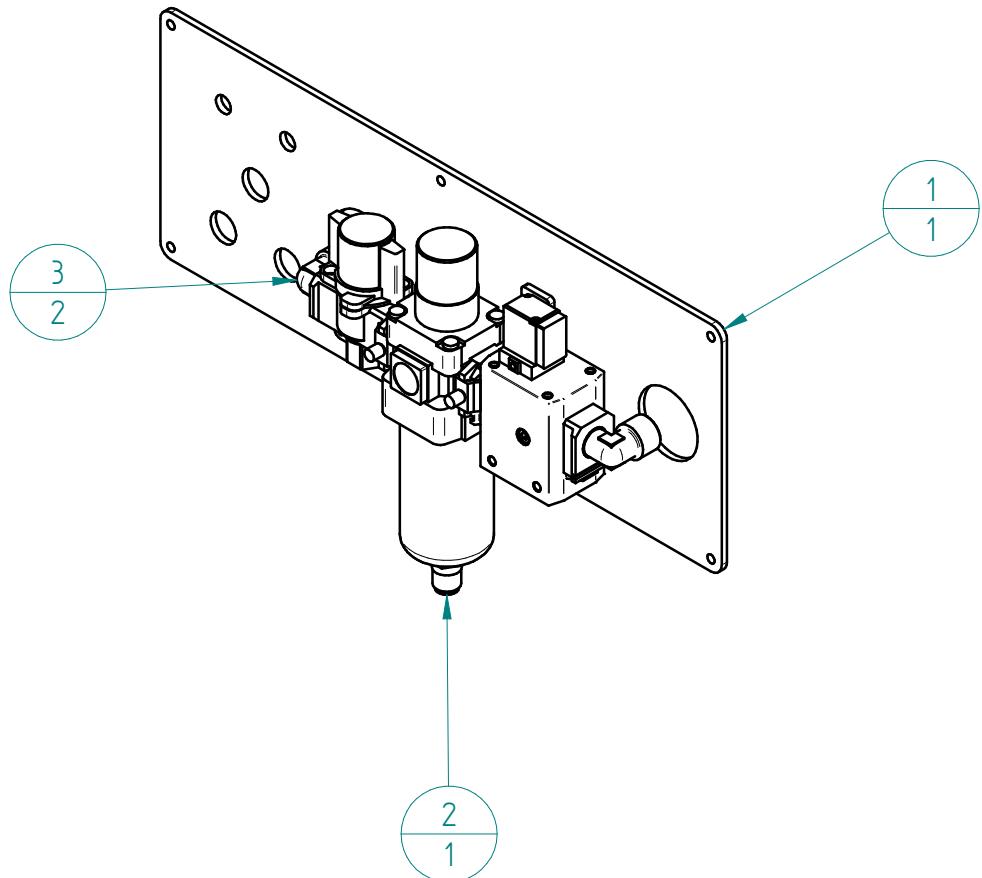


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142334	PANNELLO Commerciale L. 940 La. 770 H. 30	Alluminio	9.812 kg	1
2	LIB01383	Chiave Finecorsa di Sicurezza OMRON	Acciaio	0.010 kg	1
3	S0058042	GRUPPO blocco inviolabili e calamite per pannello		0.323 kg	1
4	S0142333	GRUPPO blocco calamite per pannello		0.153 kg	1

DESCRIZIONE
GRUPPO portello lato quadro BA 200/2F/2T (std.)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	10.29	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142335 REVISIONE A3

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Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

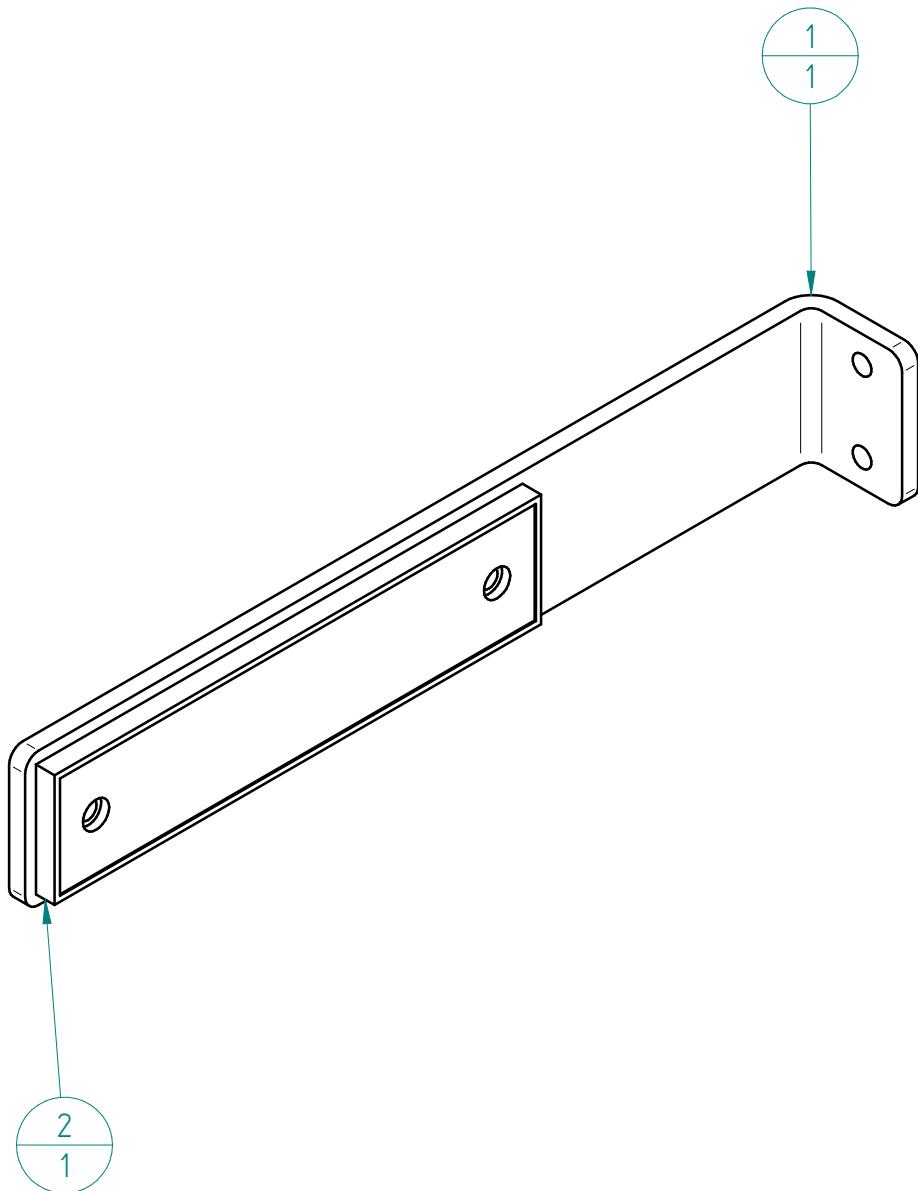


Pos.	Codice	Rev.	Descrizione	Materiale	Peso	Q.ta
1	S0142336	0	SAGOMA Taglio Laser Sp. 5	Acciaio Fe 360	3,851 kg	1
2	LIB09947	0	Gruppo VFRV 1/2" AC40-F04D-I503 SMC	Acciaio	10,006 kg	1
3	LIB01135		Curva 1/2"	Ottone	0,186 kg	2

DESCRIZIONE

GRUPPO FRV SMC 1/2" fissaggio su BA 200/2F/2T

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	14,04	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
-	-		
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142337 REVISIONE 0

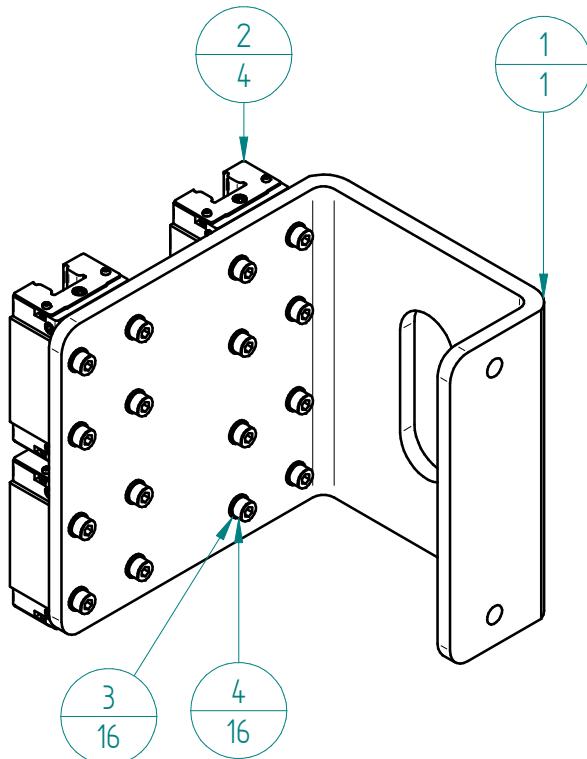
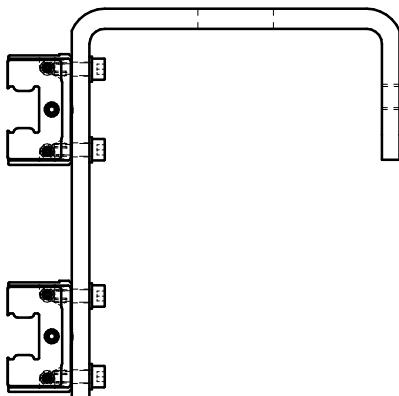
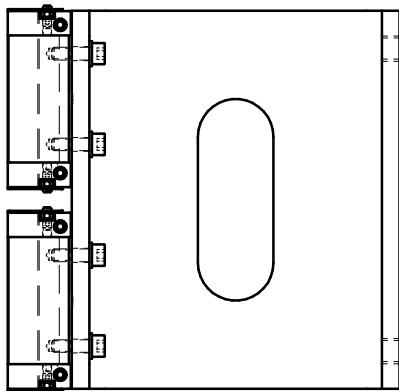


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142338	LAMIERA piegata Sp. 6 Tipo Forata	Acciaio Fe 360	0.768 kg	1
2	LIB02390	Catarinfrangente DLLRL106G	-	0.070 kg	1

DESCRIZIONE

GRUPPO riflettente L=182 La=42

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	0.83	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE		
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	DATA 26/04/2016	CODICE DISEGNO S0142339
			REVISIONE 0

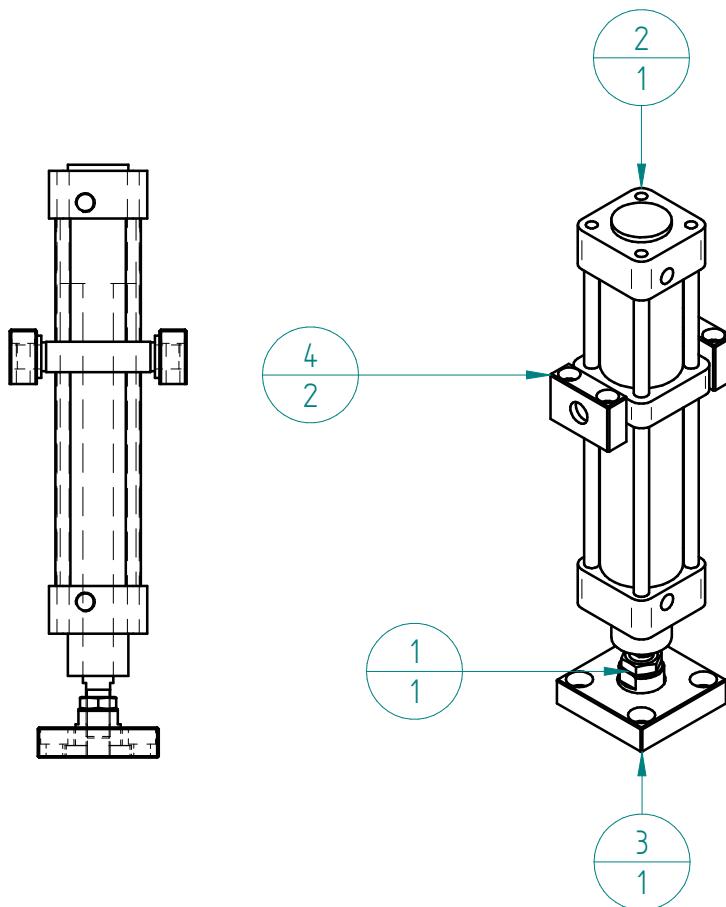


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142343	LAMIERA piegata Sp. 8 lavorata		2.622 kg	1
2	LIB10855	Carrello KWVE 20-B-S (INA)	Alluminio	0.658 kg	4
3	LIB00883	Rosetta piana M5 Di. 5.3 De. 10 L. 1 Acc. 140HV UNI 6592	Acciaio	0.007 kg	16
4	LIB00351	Vite TCIE M5 x 16 UNI 5931	Acciaio	0.069 kg	16

DESCRIZIONE

GRUPPO pattini guida premitubo (4 pattini KWVE 20)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	3,35	1:3
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142344 REVISIONE 0

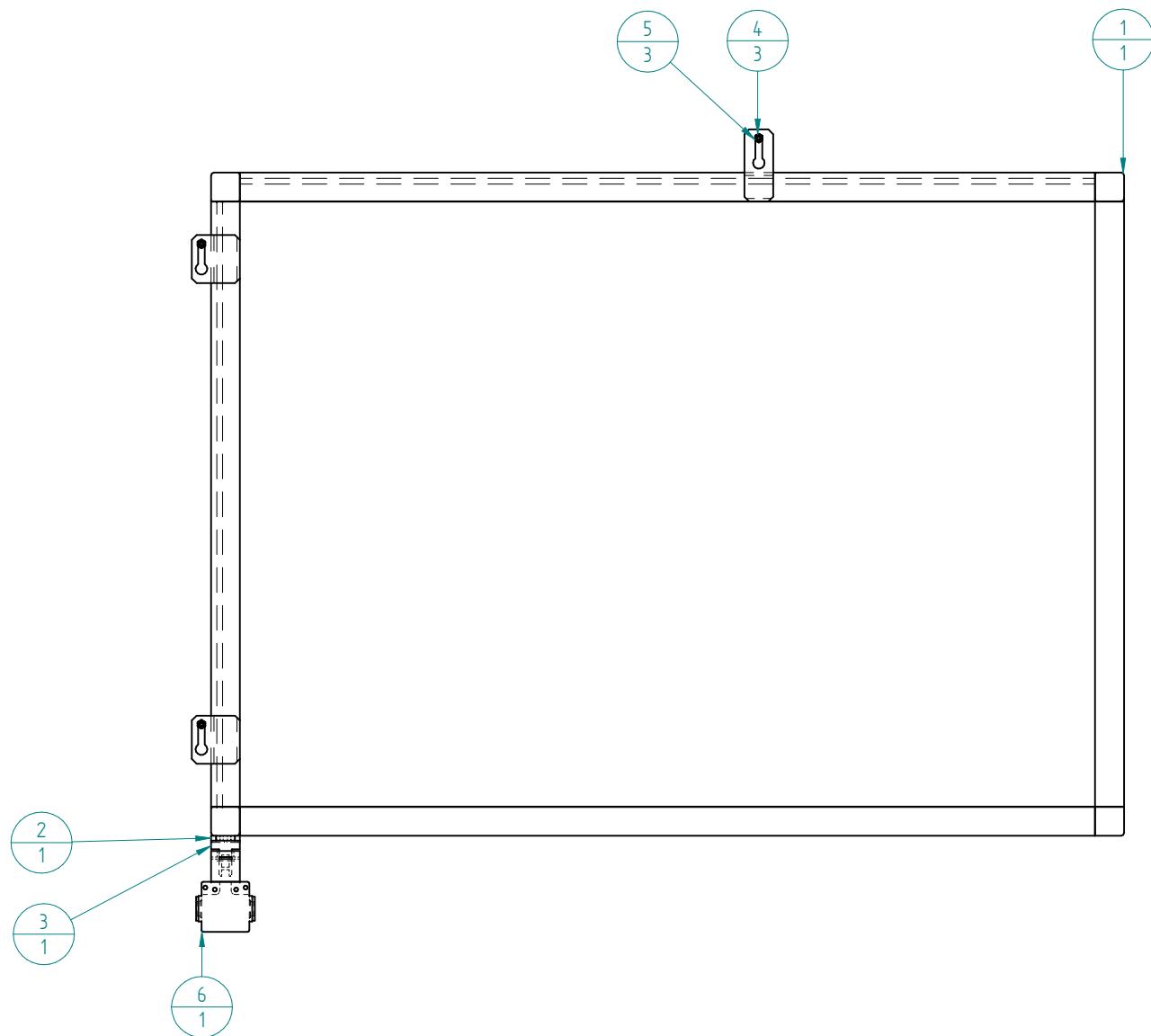
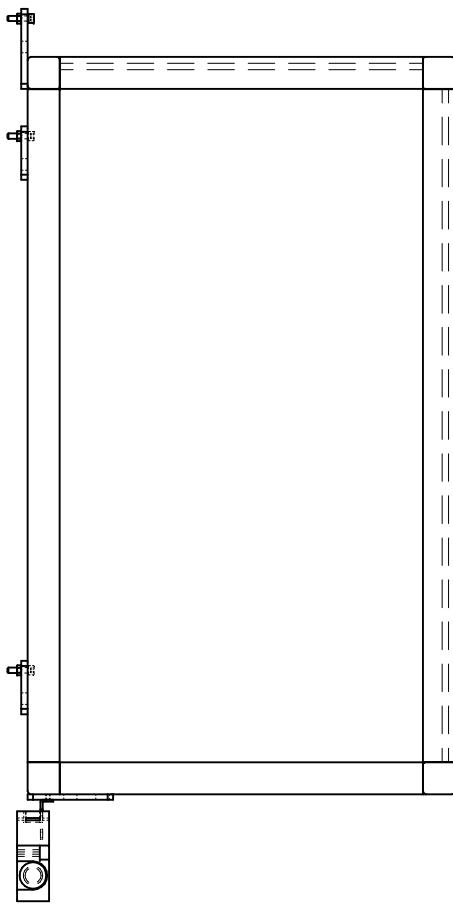


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	LIB00059	Dado Acc. 8 Esagonale Basso Passo Fine M16x1,5 UNI 5589	Acciaio	0.018 kg	1
2	LIB10857	Cilindro Pneumatico BTM cerniera intermedia Ø50 x 200 CIF Xv 220 ISO 6431		2.100 kg	1
3	LIB04986	accessorio Flangia autoallineante FA (M16x1,5)	Acciaio	0.891 kg	1
4	LIB00056	Supporto per cerniere intermedie SC 50	Fe 360	0.416 kg	2

DESCRIZIONE

GRUPPO cilindro D=50 corsa=200 discesa premitubo

MATERIALE	STATO MATERIALE Assemblato	Peso Kg 3.42	SCALA 1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142345 REVISIONE 0
			MODIFICA



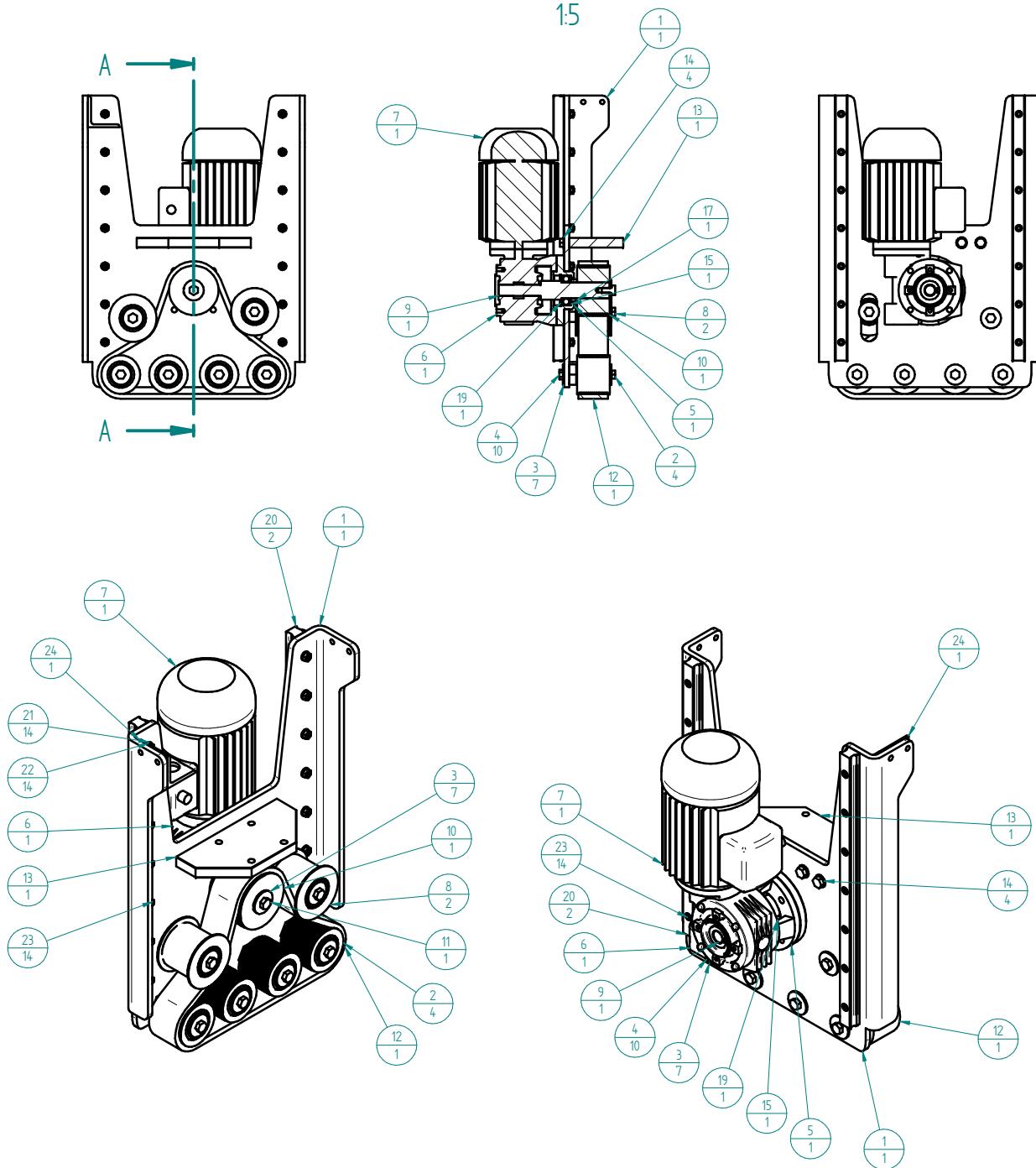
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142347	PANNELLO protezione uscita tubo	Alluminio 11S UNI-9002/5	31,495 kg	1
2	S0058097	PIASTRA Sp. 5 chiavetta inviolabile	Acciaio Fe 360	0,088 kg	1
3	LIB01383	Chiave Finecorsa di Sicurezza OMRON	Acciaio	0,010 kg	1
4	LIB00510	Vite TCIE M5 x 20 UNI 5931	Acciaio	0,015 kg	3
5	LIB00886	Dado Acc. 8 Esagonale M5 UNI 5588	Acciaio	0,003 kg	3
6	LIB01382	Finecorsa sicurezza OMRON D4DS-5AFS-2NC	-	0,042 kg	1

DESCRIZIONE				
MATERIALE		STATO MATERIALE	Peso Kg	SCALA
		Assemblato	31,65	1:5
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	LOUDspeaker icon
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: -	A3
			CODICE DISEGNO S0142348	REVISIONE 0

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

SEZIONE A-A

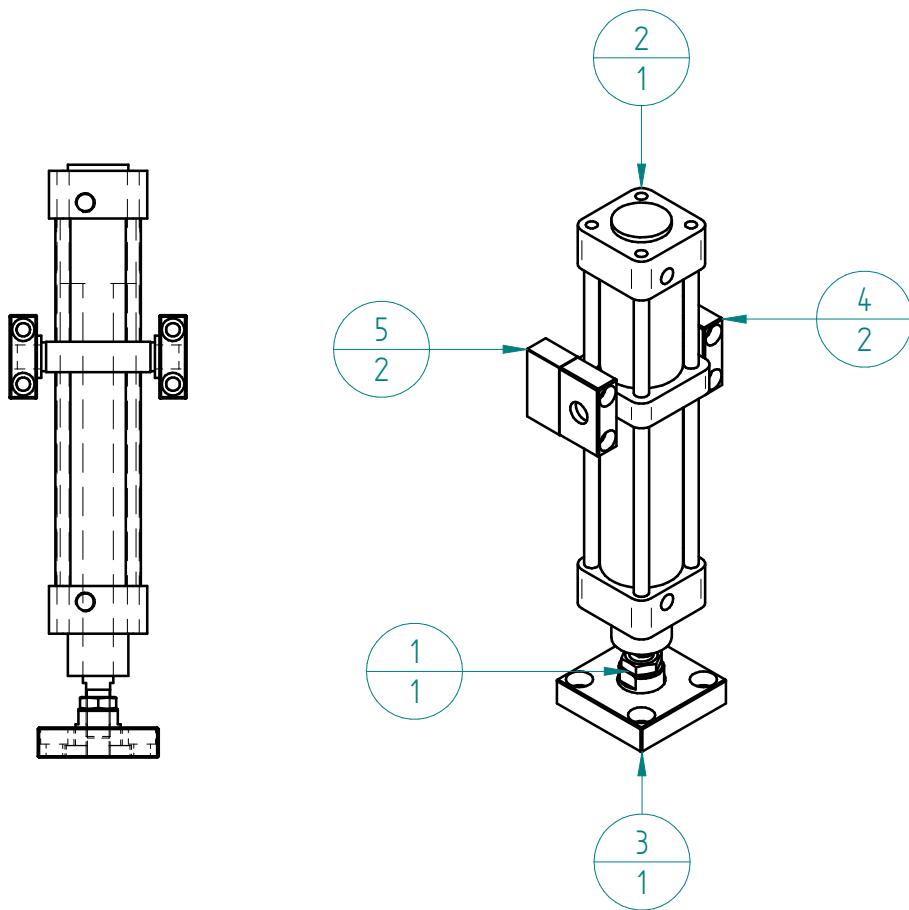
15



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142349	LAMIERA piegata Sp. 8 telaio premitubo	Acciaio Fe 360	8.614 kg	1
2	S0020518	GRUPPO \$ PULEGGIA		2.579 kg	4
3	LIB00209	Rosetta piana M8 De. 32 Sp. 2 Acc. 100HV UNI 6593	Acciaio	0.099 kg	7
4	LIB00141	Vite TE M 8 x 25 UNI 5739	Acciaio	0.160 kg	10
5	S0135809	FLANGIA D. 110 Tipo Lavorata	Alluminio 11S UNI-9002/5	0.316 kg	1
6	LIB02418	Riduttore MVF 44 /F1 70 P63-B14	-	2.495 kg	1
7	LIB00681	Motore Asincrono 4 poli P63-B14 0,18 kW	-	3.900 kg	1
8	S0020517	GRUPPO \$ GALOPPINIO		1.404 kg	2
9	S0135808	ALBERO D. 30 Tipo sede_linguetta	Acciaio C 40	0.586 kg	1
10	S0074560	PULEGGIA Poly-v SYSTEM Dp. 80 Di.25 Passo J-20 Tipo sede_linguetta	Alluminio 11S UNI-9002/5	0.567 kg	1
11	LIB01916	VITE TE M 8 x 16 UNI EN 24017	Acciaio	0.013 kg	1
12	LIB10858	Cinghia Poly-v J20 Sv. 811 + TENAX PIANO 4mm	EPDM	0.446 kg	1
13	S0142341	PIASTRA Sp. 15 L. 180 La. 85 Tipo Forata	Acciaio Fe 360	1.458 kg	1
14	LIB00963	Rosetta piana M8 De. 17 Sp. 1.6 Acc. 140HV UNI 6592	Acciaio	0.009 kg	4
15	LIB01440	Cuscinetto radiale 63005 2RS1 (25-47-16)	-	0.100 kg	1
16*	LIB00079	Linguetta 8 x 7 L 40 UNI 6604-69	Acciaio	0.017 kg	1
17	S0033005	DISTANZIALE D. 35 Di. 25 L. 9	Acciaio Fe 360	0.033 kg	1
18*	LIB01005	LINGUETTA 6x6 L=25 UNI 6604-69	Acciaio	0.007 kg	1
19	LIB05175	Anello elastico per fori Ø 47 UNI 7437	Acciaio	0.009 kg	1
20	LIB10859	Rotaria TKVD 20 418 (dL=29 - dR=29)	Acciaio	1.799 kg	2
21	LIB00558	Rosetta piana M6 De. 12.3 Sp. 1.6 UNI 6592	Acciaio	0.014 kg	14
22	LIB00096	Dado Acc. 8 Esagonale M6 UNI 5588	Acciaio	0.032 kg	14
23	LIB00025	Vite TCIE M6 x 25 UNI 5931	Acciaio	0.119 kg	14
24	S0020523	PROFILO L. 50 La. 50 H. 50 Sp. 5 \$ ANGOLARE	Acciaio Fe 360	0.169 kg	1

DESCRIZIONE GRUPPO premitubo BA 200/2F/2T (std.)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	24.94	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE		
	SBARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.		
			A2
			REVISIONE
			0
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2781 RACCORDI NON QUOTATI SIMMETRIE NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SCOSTRUZIONE I.L. SCOSTRUZIONE DAL CODICE DISEGNO S0142350

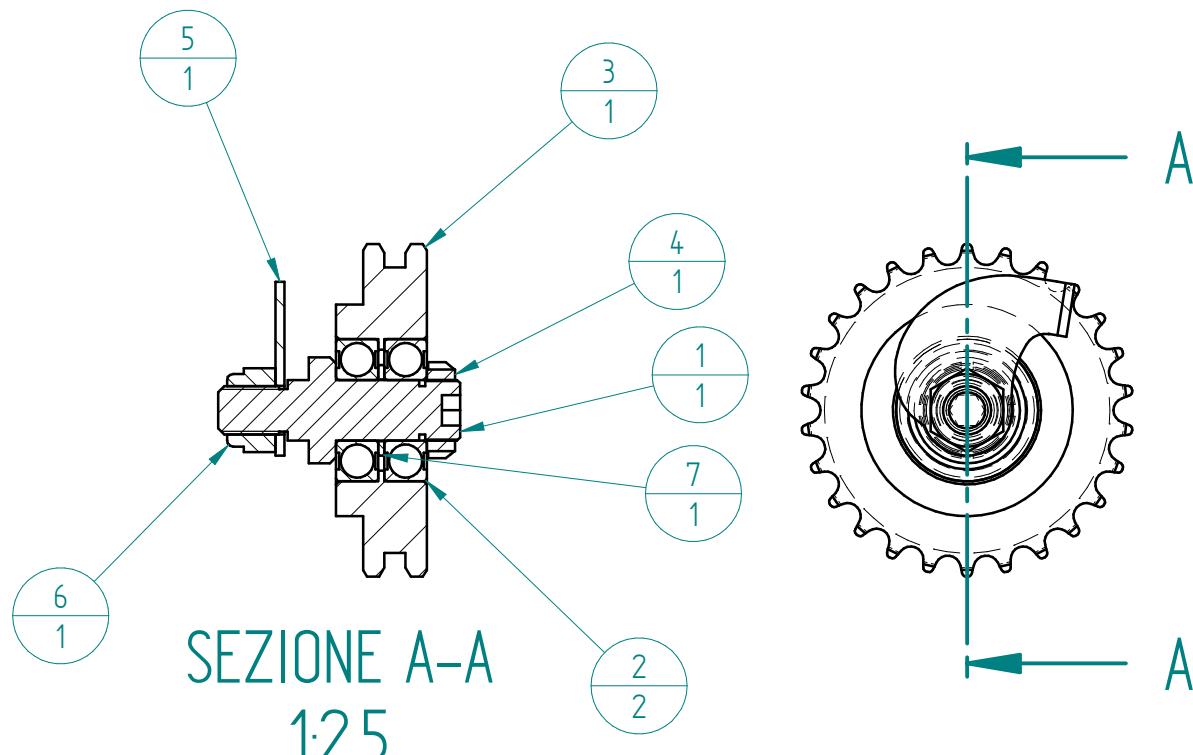


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB00059	Dado Acc. 8 Esagonale Basso Passo Fine M16x1,5 UNI 5589	Acciaio	0,018 kg	1
2	LIB10857	Cilindro Pneumatico BTM cerniera intermedia Ø50 x 200 CIF Xv 220 ISO 6431		2,100 kg	1
3	LIB04986	accessorio Flangia autoallineante FA (M16x1,5)	Acciaio	0,891 kg	1
4	LIB00056	Supporto per cerniere intrermedie SC 50	Fe 360	0,416 kg	2
5	S0142352	BLOCCHETTO	Acciaio Fe 360	0,416 kg	2

DESCRIZIONE

GRUPPO cilindro D=50 corsa=200 discesa traino formazione

MATERIALE	STATO MATERIALE Assemblato	Peso Kg 3,84	SCALA 1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 26/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142353 REVISIONE 0

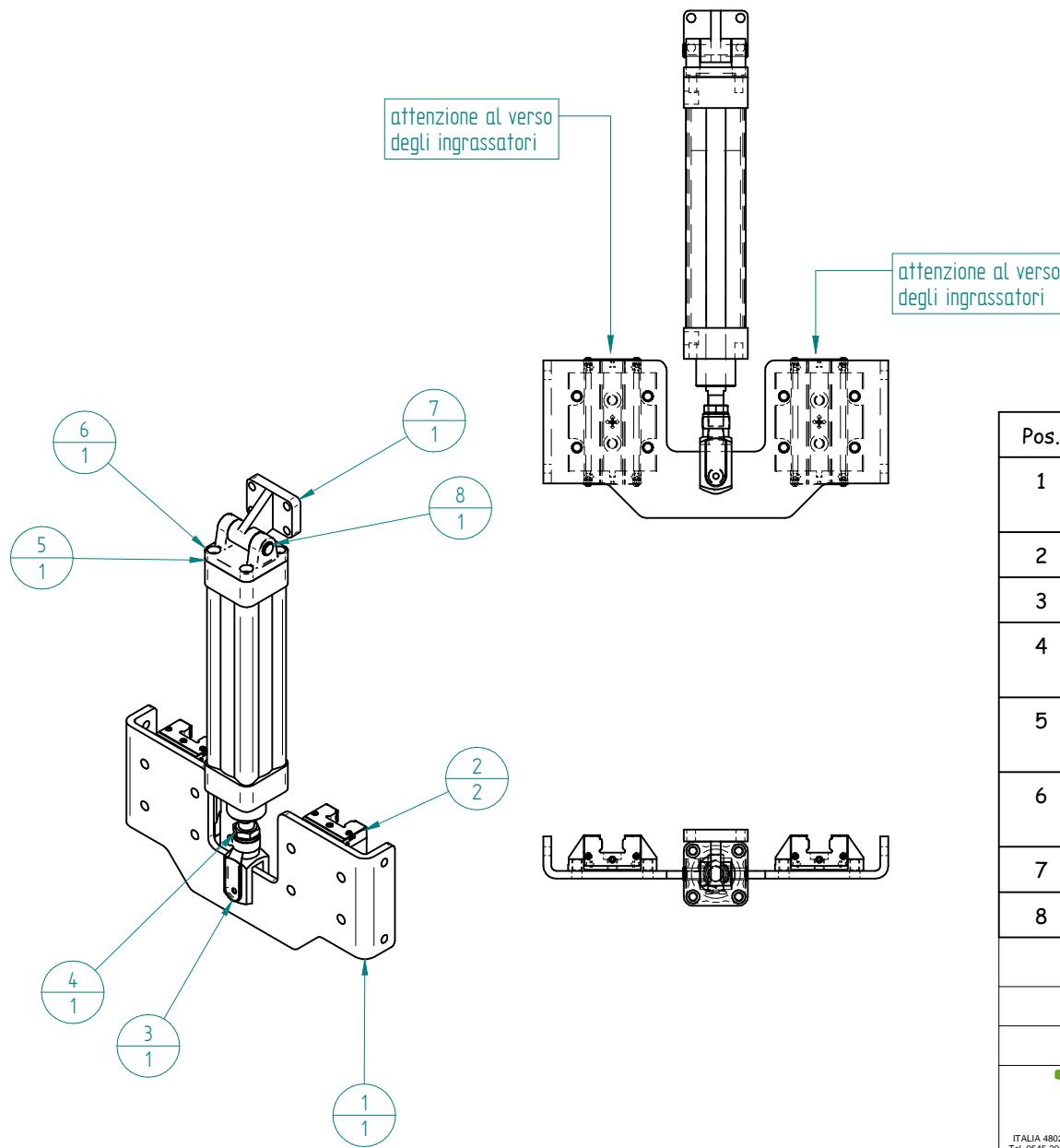


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0039356	PERNO	Acciaio Fe 360	0.213 kg	1
2	LIB00509	Cuscinetto radiale a sfere 6204 2RS (20-47-14)	Acciaio	0.138 kg	2
3	S0142356	PIGNONE Dp. 105.36 P. 1/2" x 5/16"-D Z. 26	Acciaio C 40	1.148 kg	1
4	LIB01166	Ghiera autobloccante normale M20x1	Acciaio	0.030 kg	1
5	S0039364	LINGUETTA	Acciaio Fe 360	0.052 kg	1
6	LIB01235	Dado Acc. 8 Esagonale Basso Autobloccante M16 UNI 7474	Acciaio	0.035 kg	1
7	S0025054	DISTANZIALE D. 30 Di. 20,5 L. 2	Acciaio Fe 360	0.006 kg	1

DESCRIZIONE

GRUPPO pignone tenditore

MATERIALE	STATO MATERIALE Assemblato	Peso Kg 1.62	SCALA 1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142357 REVISIONE 0
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@pm-italy.it ipm-italy.it			MODIFICA



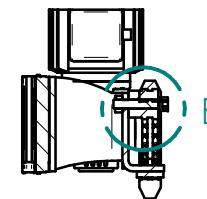
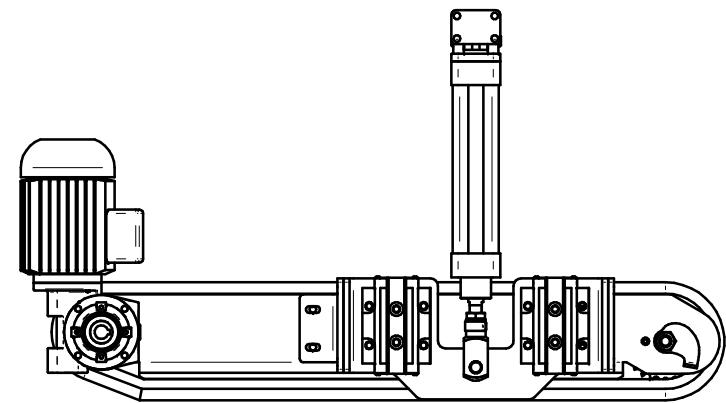
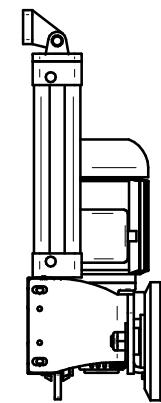
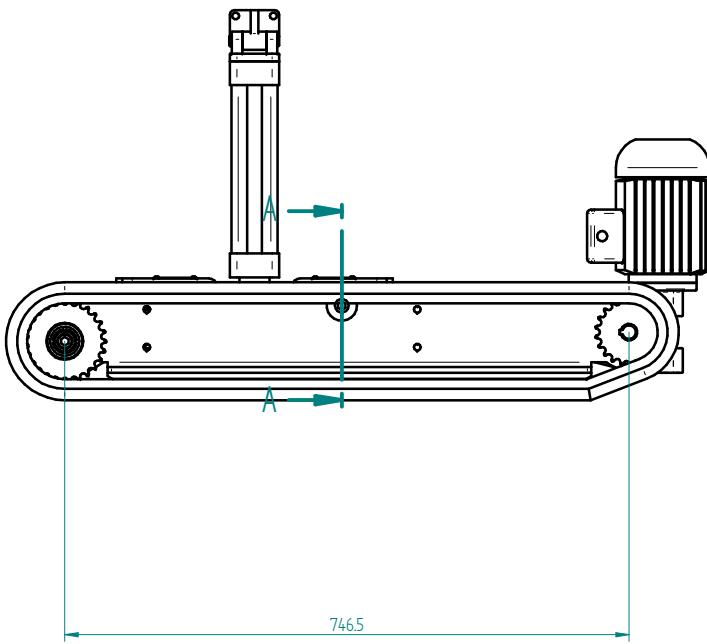
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142360	LAMIERA piegata Sp. 8	Acciaio Fe 360	2,988 kg	1
2	LIB09905	Carrello KWVE 30-BL-G3 V1 (INA)	Acciaio	3,940 kg	2
3	LIB00791	Forcella Femmina FF 16	-	0,170 kg	1
4	LIB00059	Dado Acc. 8 Esagonale Basso Passo Fine M16x1,5 UNI 5589	Acciaio	0,018 kg	1
5	LIB01529	Cilindro pneumatico ISO 6431 Ø50 corsa 180		0,957 kg	1
6	LIB00491	Cerniera femmina posteriore Ø50 ISO MP2	Alluminio	0,133 kg	1
7	LIB01887	Articolazione a squadra AS 50	Alluminio	0,141 kg	1
8	LIB00138	Perno per cerniera PC 50	Fe	0,060 kg	1

DESCRIZIONE GRUPPO carrello traino ingresso BA 200/2F/2T

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	8,4	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	ICONA
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142361 REVISIONE 0

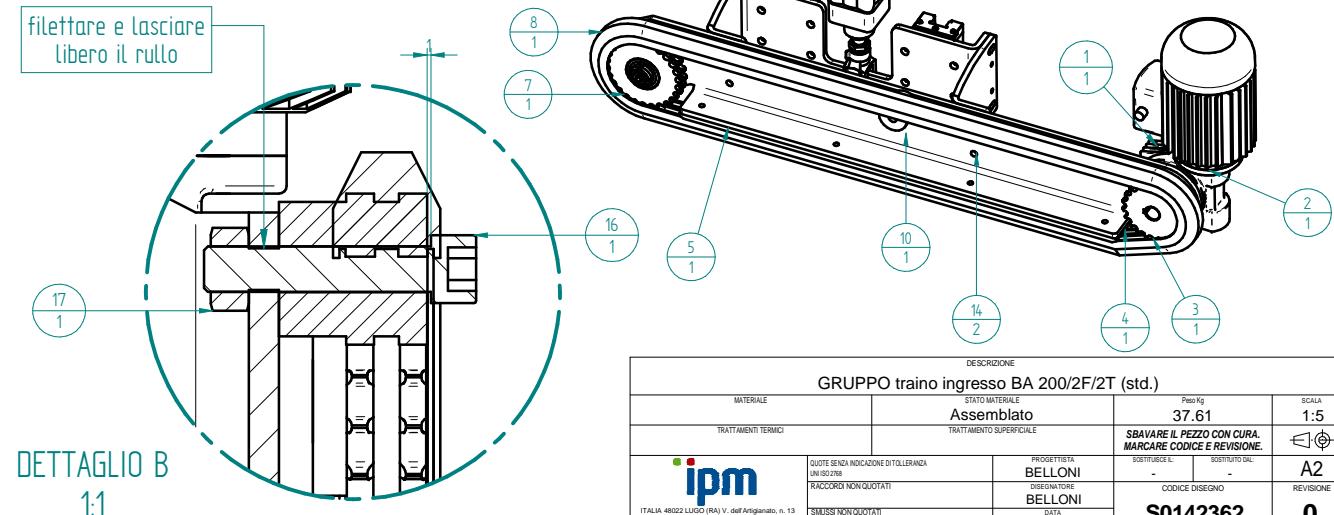
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

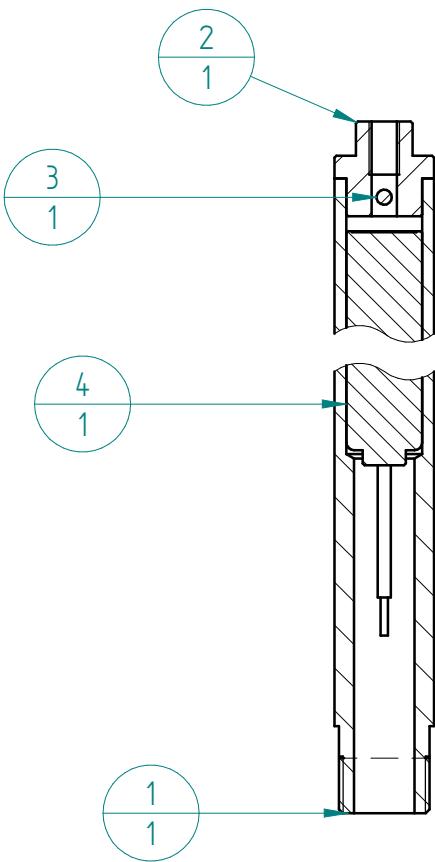


SEZIONE A-A

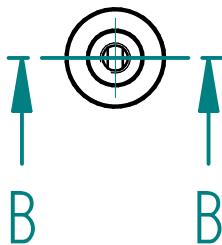
1:5



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	LIB01327	Riduttore VF 44 P R=1/14 P63-B14	-	3.500 kg	1
2	LIB00681	Motore Asincrono 4 poli P63-B14 0,18 kW	-	3.900 kg	1
3	S0039379	PIGNONE Z, 21 P. 1/2"x5/16"-D	Acciaio C 40	0.874 kg	1
4	S0043763	GUIDA \$ polizene	Polizene	0.182 kg	1
5	S0142358	LAMIERA piegata Sp. 8	Acciaio Fe 360	6.938 kg	1
6*	LIB00195	Vite TCIE M6 x 10 UNI 5931	Acciaio	0.005 kg	1
7	S0142357	GRUPPO pignone tenditore		1.622 kg	1
8	LIB10860	Catena doppia P. 1/2"x5/16" Sv. 1803.4 Passi 142 1/2x5/16" (ROSA) C516DGGD1029 (compresa giurzzone)	Acciaio	9.513 kg	1
10	S0039382	TONDO \$ tenditore	Polizene verde	0.036 kg	1
14	S0142359	LAMIERA piegata Sp. 8	Acciaio Fe 360	2.265 kg	2
15	S0142361	GRUPPO carrello traino ingresso BA 200/2F/2T		8.409 kg	1
16	LIB00820	VITE TCIE M 12 x 60 UNI 5931	Acciaio	0.072 kg	1
17	LIB00099	Dado Acc. 8 Esagonale M12 UNI 5588	Acciaio	0.016 kg	1



SEZIONE B-B 1:2



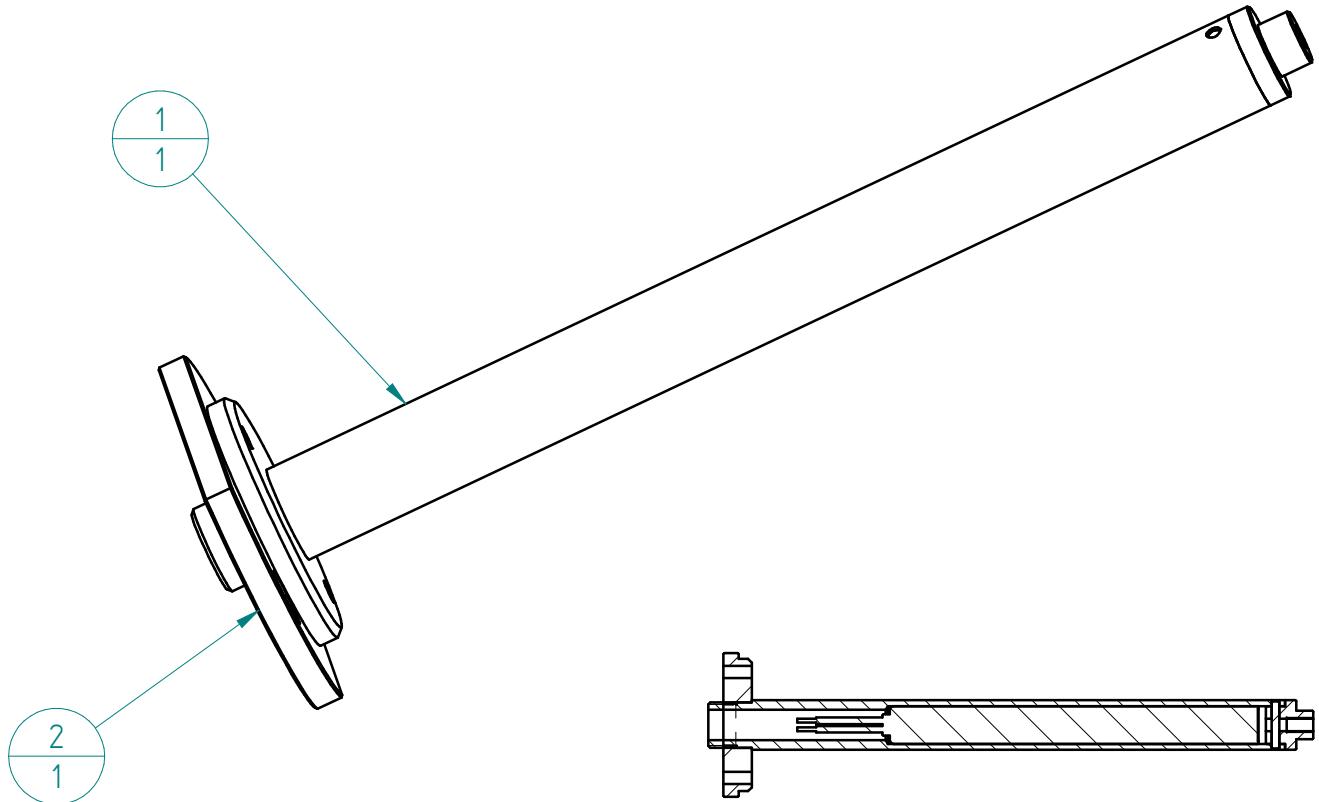
Pos.	Codice	Rev.	Descrizione	Materiale	Peso	Q.tà
1	S0142364	0	ALBERO D. 26 L. 305 portaresistenza 800W	Acciaio inox AISI 304	0.617 kg	1
2	S0122213	0	PUNTALE Albero portaresistenza	Acciaio inox AISI 304	0.055 kg	1
3	LIB09724		Spina cilindrica Cementata Ø4x25 UNI EN 28734	Acciaio	0.002 kg	1
4	LIB09723		Resistenza candela D. 20 L. 195 Pot. 800 W volt 220 Lunghezza cavo = 1300 mm	Acciaio	0.489 kg	1

DESCRIZIONE

GRUPPO resistenza centrale completa 800W

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	1,16	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.
-	-		
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142365 REVISIONE 0

MODIFICA



SEZIONE A-A 1:4

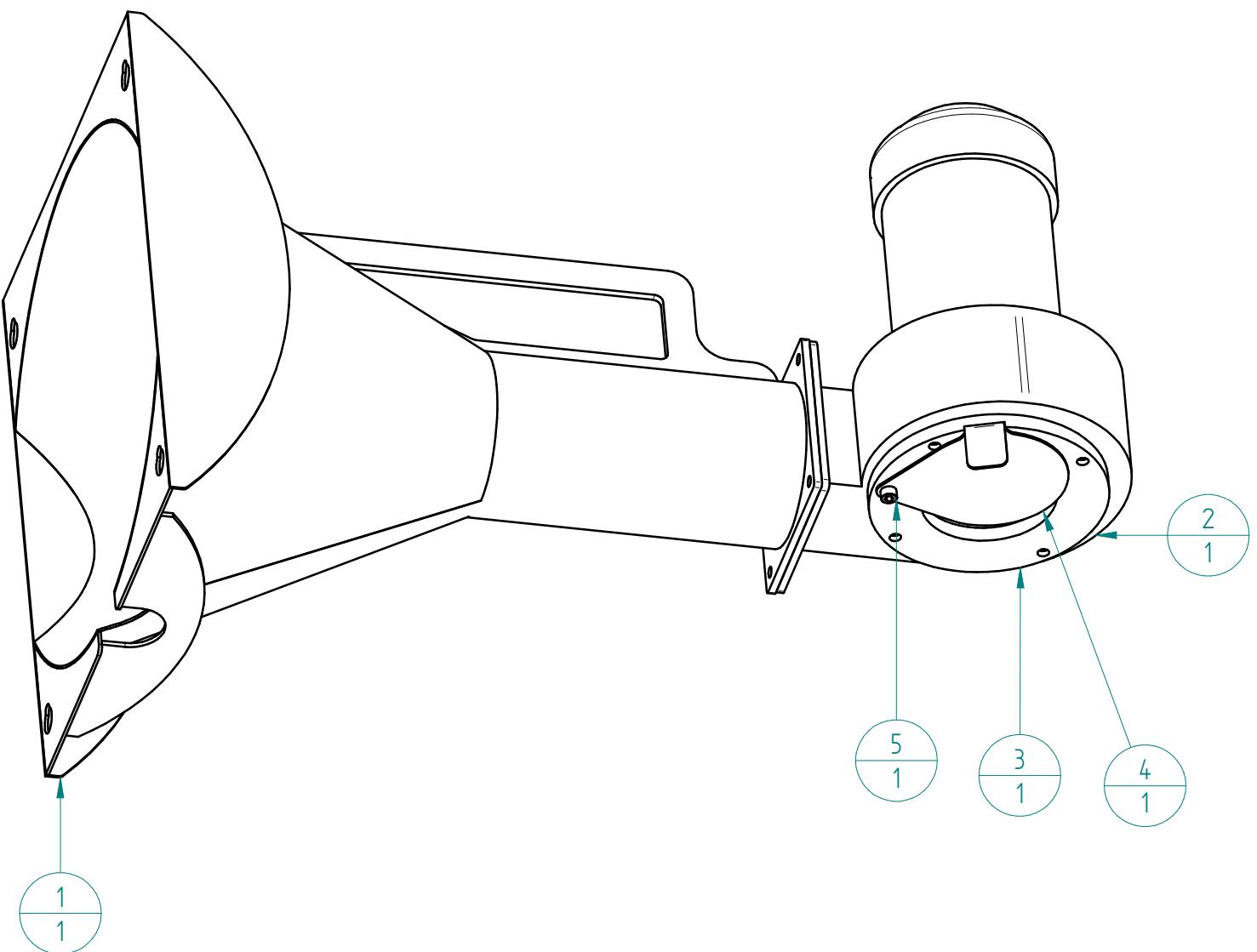


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142365	GRUPPO resistenza centrale completa 800W		1.163 kg	1
2	S0142366	FLANGIA riduzione resistenza interna a candela (BA 200/2F/2T)	Alluminio	0.193 kg	1

DESCRIZIONE

GRUPPO resistenza interna a candela D=26 mm (BA 200/2F/2T)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	1.35	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -
	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	DATA 27/04/2016	CODICE DISEGNO S0142367
			REVISIONE 0

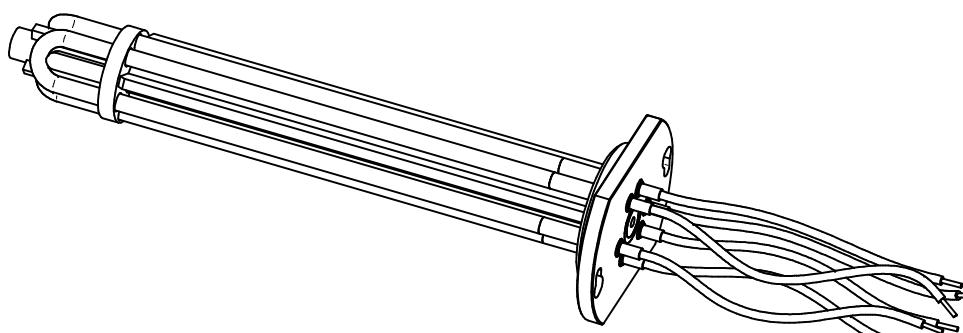
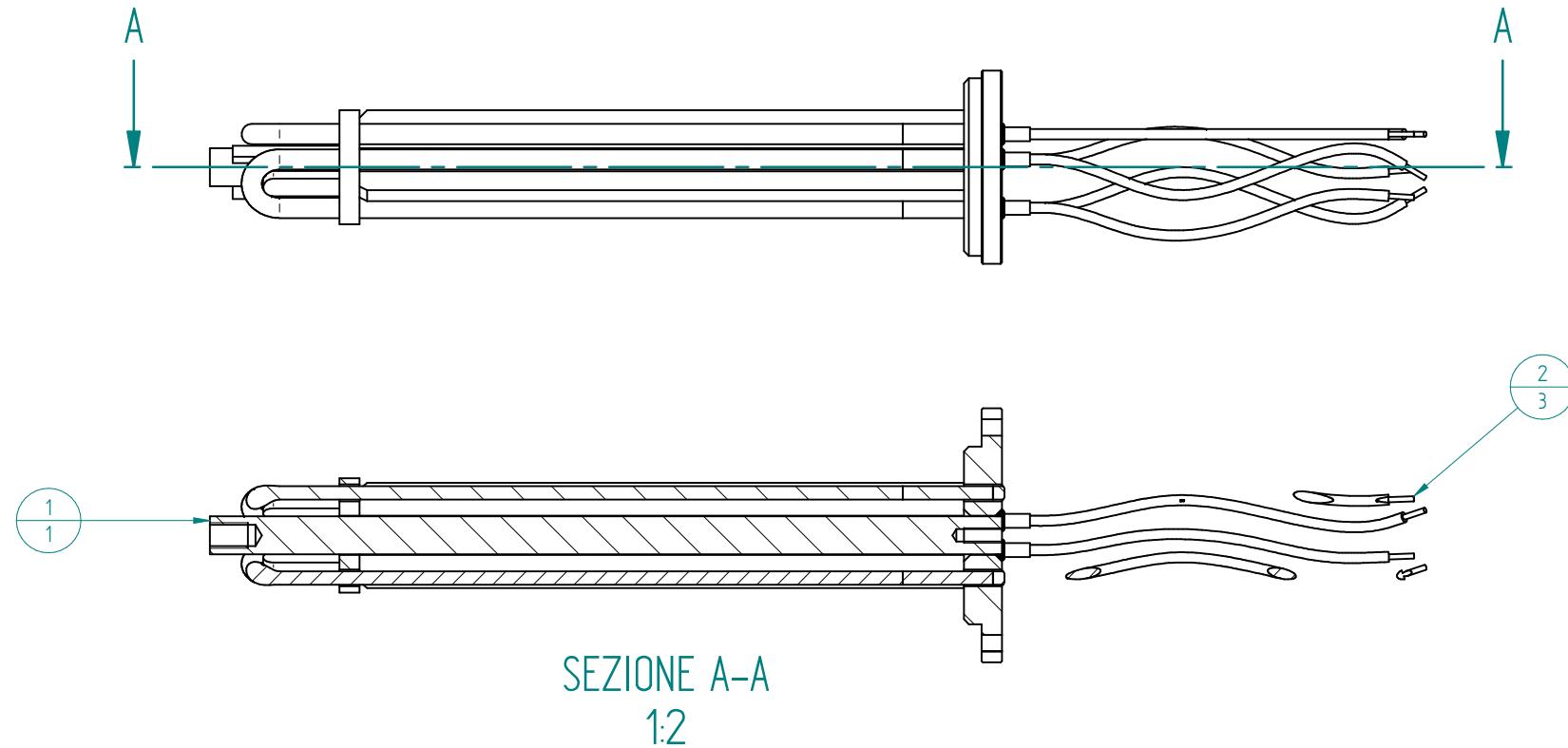


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142375	COLLETTORE ventilatore forno BA 200/2F/2T		5.124 kg	1
2	LIB03082	Ventilatore DCF 22 Pot. 0,09 LG	-	5.643 kg	1
3	S0065993	ANELLO	Acciaio Fe 360	0.932 kg	1
4	S0065994	LAMIERA Sp. 1,5 riduzione flusso aria ventilatore	Acciaio Fe 360	0.106 kg	1
5	LIB00195	Vite TCIE M6 x 10 UNI 5931	Acciaio	0.005 kg	1

DESCRIZIONE

GRUPPO collettore ventilatore

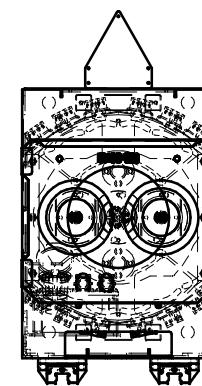
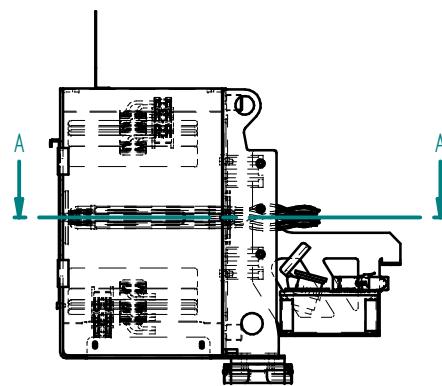
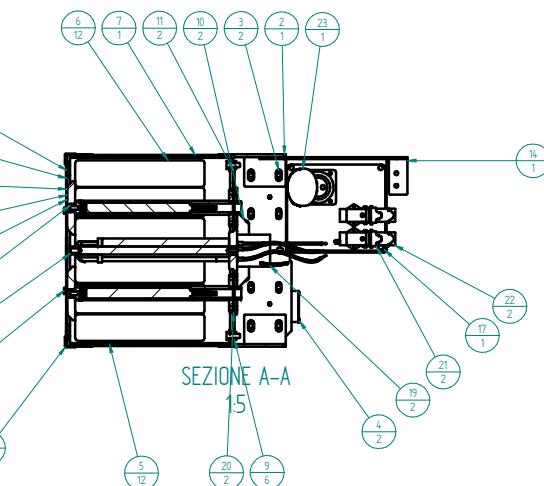
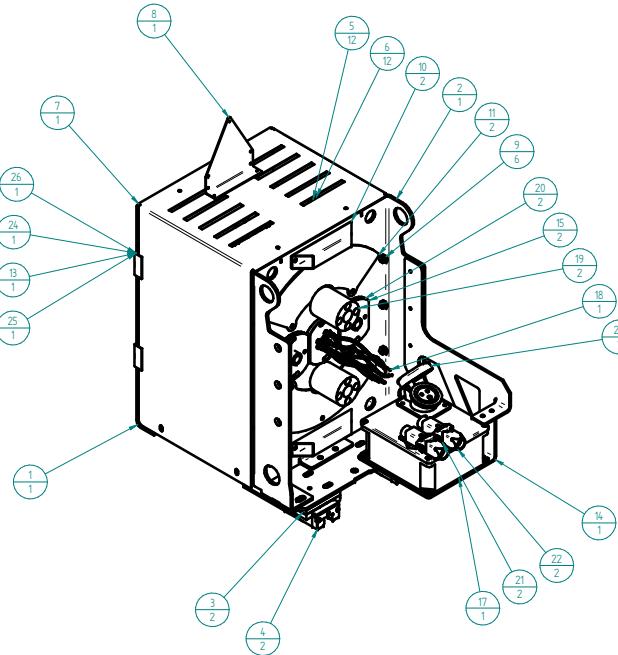
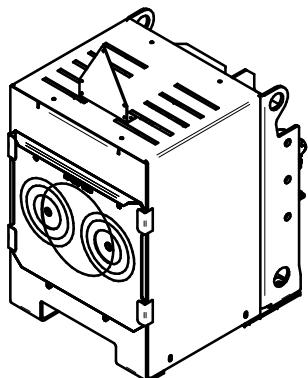
MATERIALE		STATO MATERIALE Assemblato	Peso Kg 11,81	SCALA 1:4
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -	SOSTITUITO DAL: -
	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	CODICE DISEGNO S0142376	
	SMUSSI NON QUOTATI	DATA 27/04/2016	REVISIONE 0	
MODIFICA				



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142403	ALBERO porta portaresistenze corazzate D=45 mm (BA 200/2F/2T)		1,519 kg	1
2	S0122214	RESISTENZA corazzata D. 8 Pot. 400W volt 220 AD "U" IN INOX con filo Sostituisce S0091064	Inox	0,819 kg	3

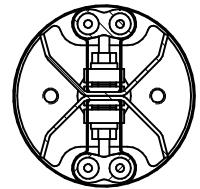
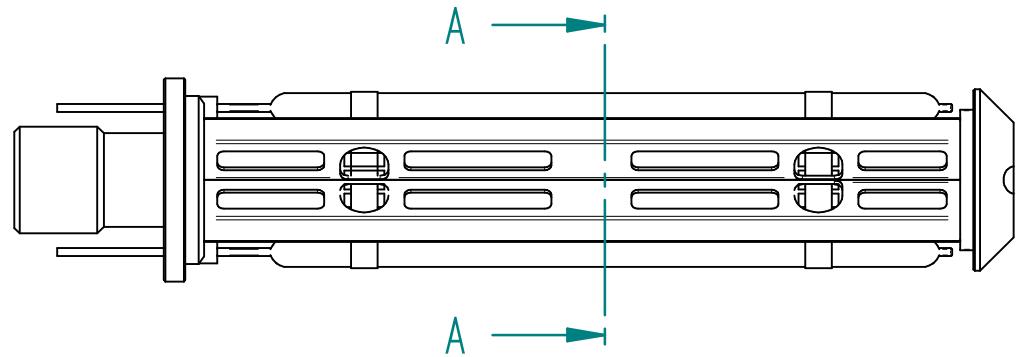
GRUPPO candela centrale corazzata D=45 mm BA 200/2F/2T

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	2,33	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: SOSTITUITO DAL: CODICE DISEGNO S0142405 REVISIONE 0
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it			MODIFICA:

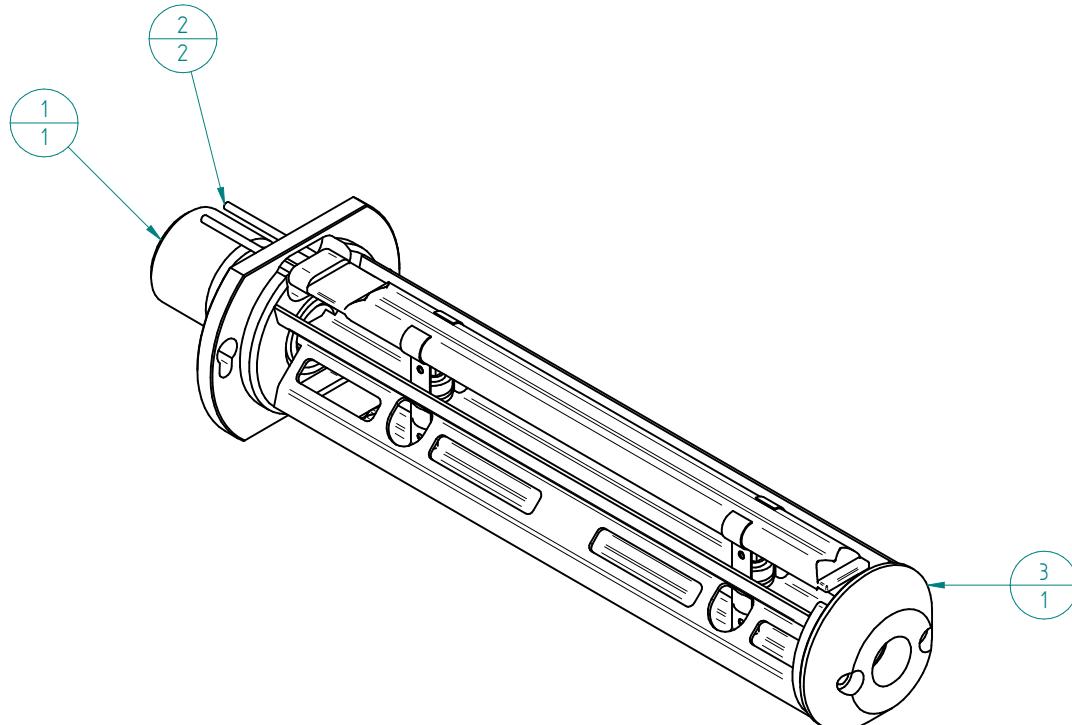


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142398	TELATO forno raggi infrarossi BA 200/2F/2T		13.901 kg	1
2	S0142395	LAMIERA piegata Sp. 5	Acciaio inox AISI 304	8.872 kg	1
3	S0037179	PIASTRA	Bakelite	0.242 kg	2
4	LIB00905	Carrello KWVE 30-BL-63 V1 (INA)	Acciaio	3.940 kg	2
5	LIB00564	Morsetto in ceramica 40 * 30 *	Ceramica	0.533 kg	12
6	LIB00563	Resistenza ceramica L. 245 La. 60 Pot. 650W tensione da definire	Ceramica	3.813 kg	12
7	S0142407	LAMIERA piegata Sp. 1.5	Acciaio inox X5CrNi UNI-1910	4.705 kg	1
8	00002488	TARGHETTE \$ LAMIERA INOX PER TARGHETTA "ALTA TEMPERAT" CON BORDO	Inox	0.170 kg	1
9	LIB00097	Dado Acc. 8 Esagonale M8 UNI 5588	Acciaio	0.029 kg	6
10	S0054197	TUBOLARE	Acciaio Fe 360	0.341 kg	2
11	S0142399	SAGOMA Taglio Laser Sp. 3	Acciaio Fe 360	1.090 kg	2
12	LIB00195	Vite TCIE M6 x 10 UNI 5931	Acciaio	0.010 kg	2
13	S0142363	LAMIERA piegata Sp. 2 riduzione forno D. 125-160	Inox	1.313 kg	1
14	S0078556	LAMIERA Sp. 4 Tipo Piegata	Acciaio Fe 360	1.920 kg	1
15	S0142367	GRUPPO resistenza interna a candela D=26 mm (BA 200/2F/2T)		2.711 kg	2
16	K4140502	SET \$ Puntali albero forno x tubi I D 50-200	Alluminio	0.542 kg	2
17	LIB00927	Cassetta di derivazione ILME APV 14 182x159 Prof.80 Silumin	Alluminio	1.232 kg	1
18	S0142405	GRUPPO candela centrale corazzata D=45 mm BA 200/2F/2T		2.338 kg	1
19	K4170308	BOCCOLA per colonnette	Bronzo	0.253 kg	2
20	S0142410	SAGOMA Taglio Laser Sp. 3	Acciaio Fe 360	0.290 kg	2
21	LIB02223	Custodia Ilme da Parete 1 Leva MKA IAP20 (M20)	Alluminio	0.053 kg	2
22	LIB02463	Custodia Ilme MKA V20 (2 Piolini 1 Uscita M20)	Alluminio	0.045 kg	2
23	LIB00569	Presa da incasso (16 A - 2 P + T) PEW 1663 PI		0.232 kg	1
24	S0142406	LAMIERA piegata Sp. 2 riduzione forno D. 32 - 50 doppia	Inox	1.639 kg	1
25	S0142408	LAMIERA piegata Sp. 2 riduzione forno D. 63 - 80 doppia	Inox	1.461 kg	1
26	S0142409	LAMIERA piegata Sp. 2 riduzione forno D. 90 - 110 doppia	Inox	1.276 kg	1

DESCRIZIONE			
GRUPPO forno raggi infrarossi BA 200/2F/2T (std.)			
MATERIALE	ESTERNA/INTERNA	Assemblato	SCALA
		52.96	1:5
TREATMENT TERMICO	TREATMENT SUPERFICE		
QUOTI SENSI/INDICAZIONE DI TOLERANZA AR 40/276 VALORI NON CERTIFICATI			
PROGETTORE BELLONI			
DISEGNATORE BELLONI			
SCALDARE/SCARICO BELLONI			
REVISORE			
A1			
ipm			
ITALIA MILANO LUOGO S.p.A. - Via Padova, 5 Tel. 02/26000000 - Fax 02/26000001 SOCIETÀ MATERIALE ELETTRICO S.p.A. Viale Monza 100 - 20090 Segrate (MI) - Italy			
SERVIZIO NIENTE QUOTATI			
26/04/2016			
S0142411			
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SEZIONE A-A
1:2



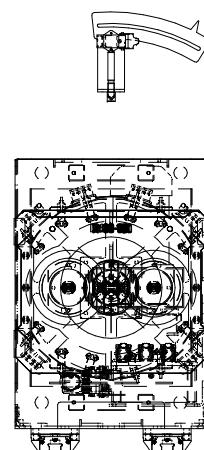
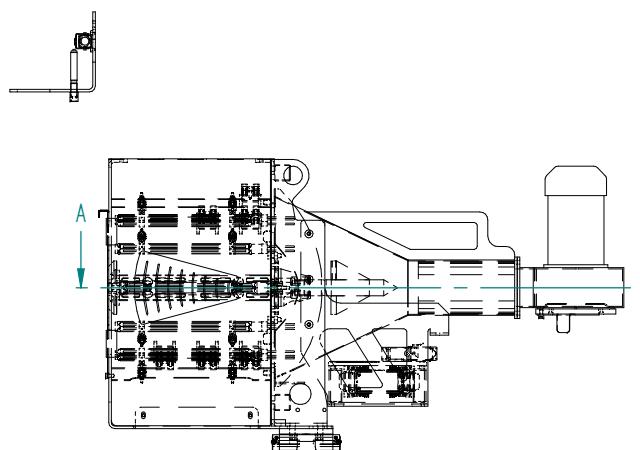
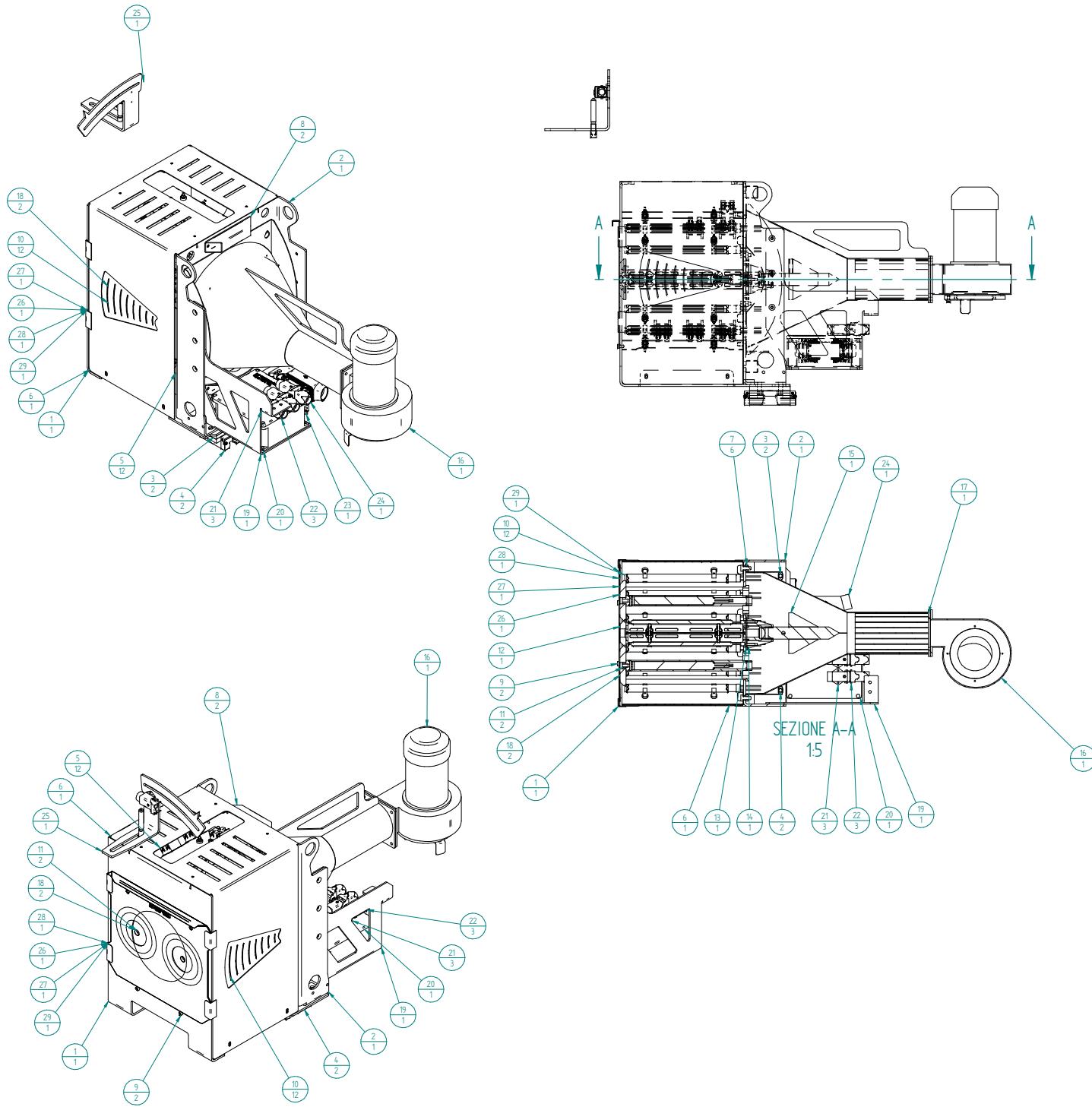
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142417	ALBERO porta portaresistenze onde corte D=65 mm (BA 200/2F/2T)		1,224 kg	1
2	S0025415	COMPLESSIVO \$ LAMPADA Lr=220		0,200 kg	2
3	S0142412	PUNTALE candela centrale onde corte d.68 mm	Alluminio 11S UNI-9002/5	0,089 kg	1

GRUPPO candela centrale onde corte D=68 mm

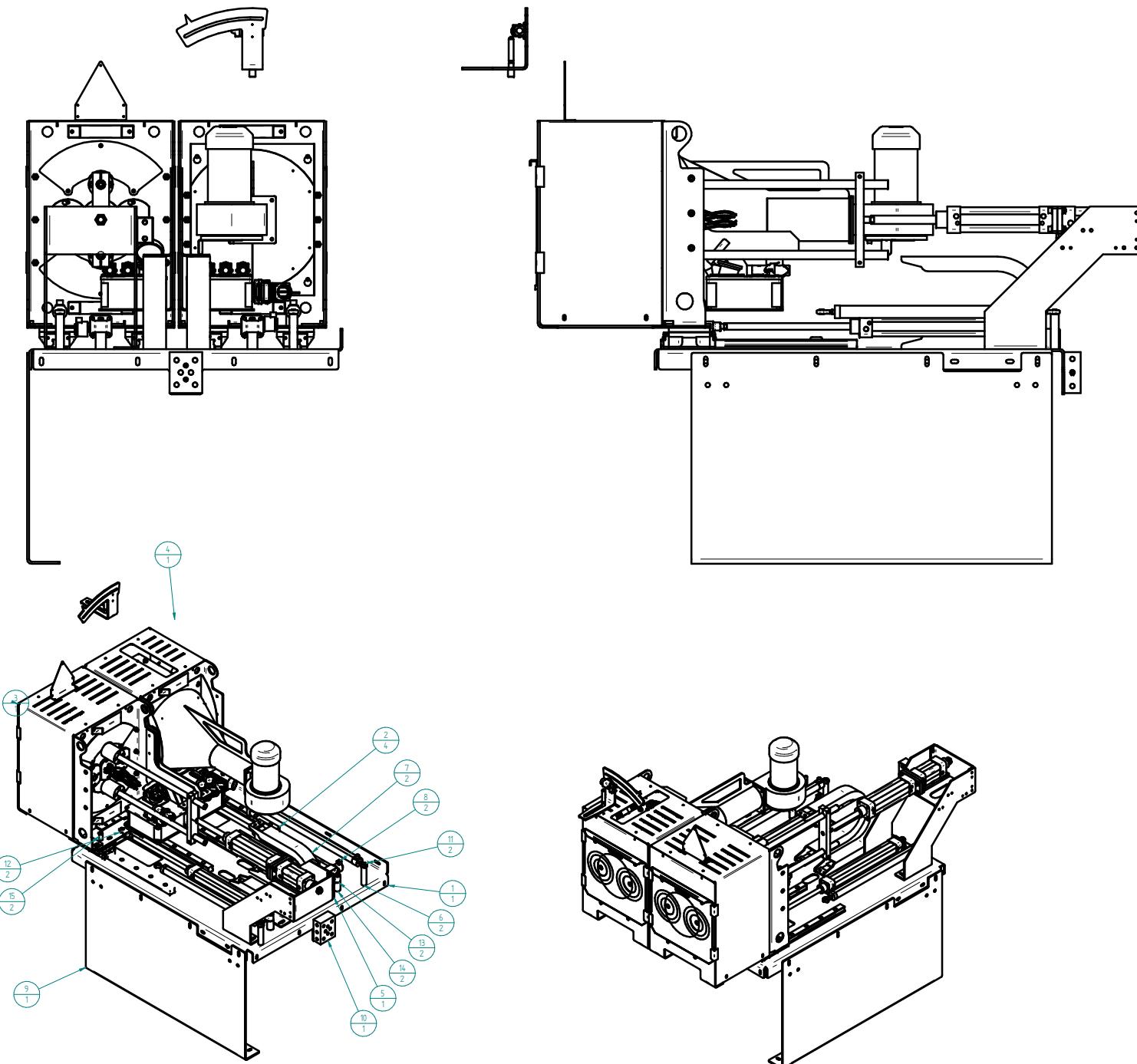
MATERIALE	STATO MATERIALE Assemblato	Peso Kg 1,51	SCALA 1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142418 REVISIONE 0

ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

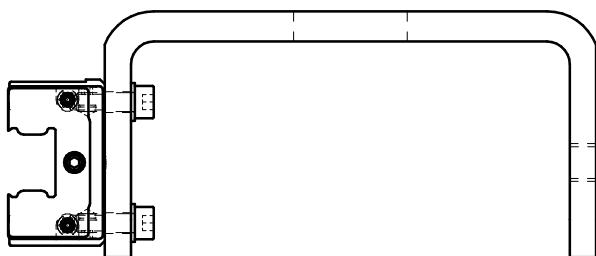
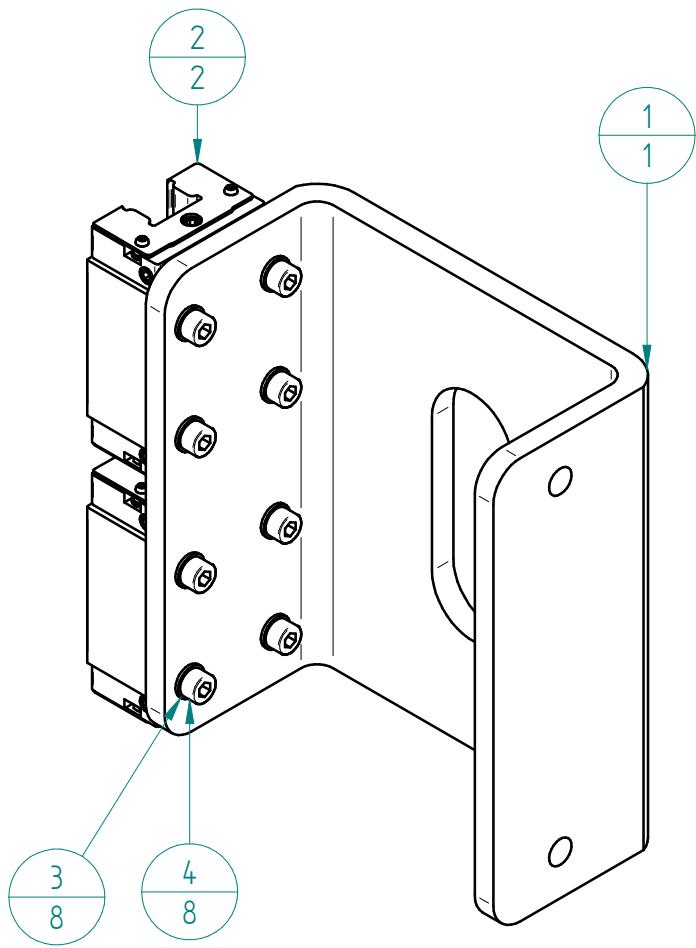
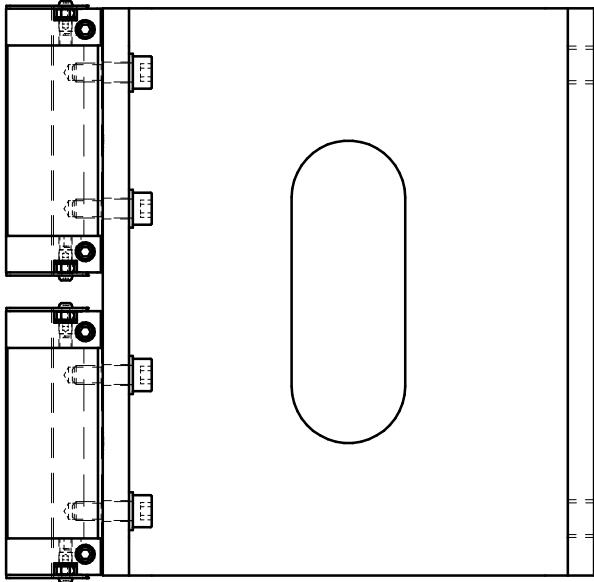


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	SO142380	TELAILO forno BA 200/2F/2T		13,467 kg	1
2	SO142377	LAMIERA piegata Sp. 5	Acciaio inox AISI 304	8,524 kg	1
3	S0037179	PIASTRA	Bakelite	0,242 kg	2
4	LIB09905	Carrello KWVE 30-BL-63 V1 (DNA)	Acciaio	3,940 kg	2
5	LIB00564	Morsetto in ceramica e inox 40° 30° 20°	Ceramica	0,533 kg	12
6	SO142381	LAMIERA piegata Sp. 1.5	Acciaio inox X5CrNi 18-10 UNI-1910	4,102 kg	1
7	LIB00097	Dado Acc. 8 Esagonale M8 UNI 5588	Acciaio	0,029 kg	6
8	S0054197	TUBOLARE	Acciaio Fe 360	0,341 kg	2
9	LIB00195	Vite TCIE M6 x 10 UNI 5931	Acciaio	0,010 kg	2
10	S0025415	COMPLESSIVO 5 LAMPIADA L=220		1,200 kg	12
11	SO142367	GRUPPO resistenza inferiore a cedola D=26 mm (BA 200/2F/2T)		2,711 kg	2
12	SO142418	GRUPPO condensatore onde corte D=68 mm		1,513 kg	1
13	SO142410	SAGOMA Taglio Laser Sp. 3	Acciaio Fe 360	0,145 kg	1
14	S0078549	COLLETTORE per cedola centrale BA 200	Alluminio 11S UNI-9002/5	0,300 kg	1
15	S0078560	COMPLESSIVO deflettore cedola centrale BA 200		1,697 kg	1
16	SO142376	GRUPPO collettore ventilatore		11,810 kg	1
17	SO142387	COLLETTORE forno onde corte raddrizzatore di flusso		1,775 kg	1
18	K4140502	SET 4 Puntali albero forno e tubi I D 50-200	Alluminio	0,542 kg	2
19	S0078555	COLLETTORE forno e tubo Piegato	Acciaio Fe 360	0,190 kg	1
20	LIB00097	Cassetta di derivazione ILME APV 14 18x215 Prof.80 Silumin	Alluminio	1,232 kg	1
21	LIB02223	Custodia Ilme da Parete 1 Leva MKA TAP20 (M20)	Alluminio	0,079 kg	3
22	LIB02463	Custodia Ilme MKA V20 (2 Polini 1 Uscita M20)	Alluminio	0,047 kg	3
23	LIB05602	Custodia Ilme Incasso 2 Leve O-H26	Alluminio	0,143 kg	1
24	LIB05444	Custodia Ilme MHD 16 32 L (4 Polini 1 Uscita M32)	Alluminio	0,201 kg	1
25	SO146064	COMPLESSIVO pirometro per forno S.W.		0,898 kg	1
26	SO142363	LAMIERA piegata Sp. 2 riduzione forno D. 125-160	Inox	1,313 kg	1
27	SO142406	LAMIERA piegata Sp. 2 riduzione forno D. 32 - 50 doppia	Inox	1,639 kg	1
28	SO142408	LAMIERA piegata Sp. 2 riduzione forno D. 63 - 80 doppia	Inox	1,461 kg	1
29	SO142409	LAMIERA piegata Sp. 2 riduzione forno D. 90 - 110 doppia	Inox	1,276 kg	1
DESCRIZIONE GRUPPO forno onde corte BA 200/2F/2T (std.)					
MATERIALE	ESTERNA/BASE	Assemblato	Peso Kg	62,97	SCALA 1:5
TITRIMENTO TERMICO	TITRIMENTO SUPERFICIE		SI HA VISTO IL PEZZO CON GARA MARCARE CONCE E FERIRE CON UN MARKER		
QUOTI SENSO INDISSONE DI TOLERANZA IN MM 0/20	PROGETTO DA BELLONI		A1		
MATERIALI NON CERTIFICATI	-		-		
SO1424191	GODERE DELLA REVISIO		0		
ipm	DATA: 27/04/2016		SO1424191		
ITALIA: MILANO LUOGO: MILANO DRAFTING: SO1424191 TE: 02 33380000 - FAX: 02 33380022 www.ipmsoft.it	SERVIZI NON QUOTATI		Proprietà riservata - Applicazione riservata - La copia non è consentita		



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142314	LAMIERA Sp. 5 Tipo piegata	Acciaio Fe 360	33.852 kg	1
2	LIBI0092	Rotaia TKVD 30 478 (aL=39 - aR=39)	Acciaio	7.952 kg	4
3	S0142411	GRUPPO forno raggi infrarossi BA 200/2F/2T (std.)		52.963 kg	1
4	S0142419	GRUPPO forno onde corte BA 200/2F/2T (std.)		62.976 kg	1
5	S0142313	GRUPPO flangia di raffreddamento BA 200/2T/2F (std.)		16.289 kg	1
6	S0043795	PERNO	Acciaio Fe 360	0.397 kg	2
7	LIB04376	Catena passacavi 0455.030-038-052-1274 FA MA lunghezza 14 maglie	PVC	1.612 kg	2
8	LIB01999	Valvola di Blocco unidirezionale DN 1/4- 1/4- 1/8	-	0.242 kg	2
9	S0142298	LAMIERA Sp. 5 Tipo piegata	Acciaio Fe 360	19.714 kg	1
10	00011906	BLOCCHETTO \$ Derivazioni pneumatiche per gruppi forno	Alluminio	0.779 kg	1
11	LIB04029	Potenziometro Lineare Gefran PCM 375	-	1.300 kg	2
12	S0006198	DISTANZIALE Di. 16 D. 22 L. 4	Fe 360	0.011 kg	2
13	S0037388	COMPLESSIVO \$ CILINDRO AVANZAMENTO FORNO		3.846 kg	2
14	S0037180	PERNO	Acciaio Fe 360	0.349 kg	2
15	S0054213	DISTANZIALE Di. 8 D. 15 L. 28	Acciaio Fe 360	0.056 kg	2

DESCRIZIONE					
GRUPPO forni BA 200/2F/2T (1oc - 1ri) std.					
MATERIALE	ESTERNA/INTERNA	Peso Kg		SCALA	
LIB 40 276	Assemblato	202.3		1:5	
TRATTAMENTI TERMICI		TRATTAMENTI SUPERFICIE		SII MARE IL PEZZO CON QURA MARCARE CONCE E RISVOLARE	
GUIT SENSI RIDUZIONE DI TOLERANZA LIB 40 276		PROGETTORE BELLONI		COPPIA DI GOMMA A1	
MATERIALE NON CERTIFICATO		MATERIALE CERTIFICATO BELLONI		REVISIONE 0	
SERIE NON QUOTATA		SERIE QUOTATA		DATA PROGETTO 26/04/2016	
ipm		ipm		S0142420	
Progetto fornito a propulsione elettrica - La Ditta non ha alcuna responsabilità per le modifiche apportate al progetto					

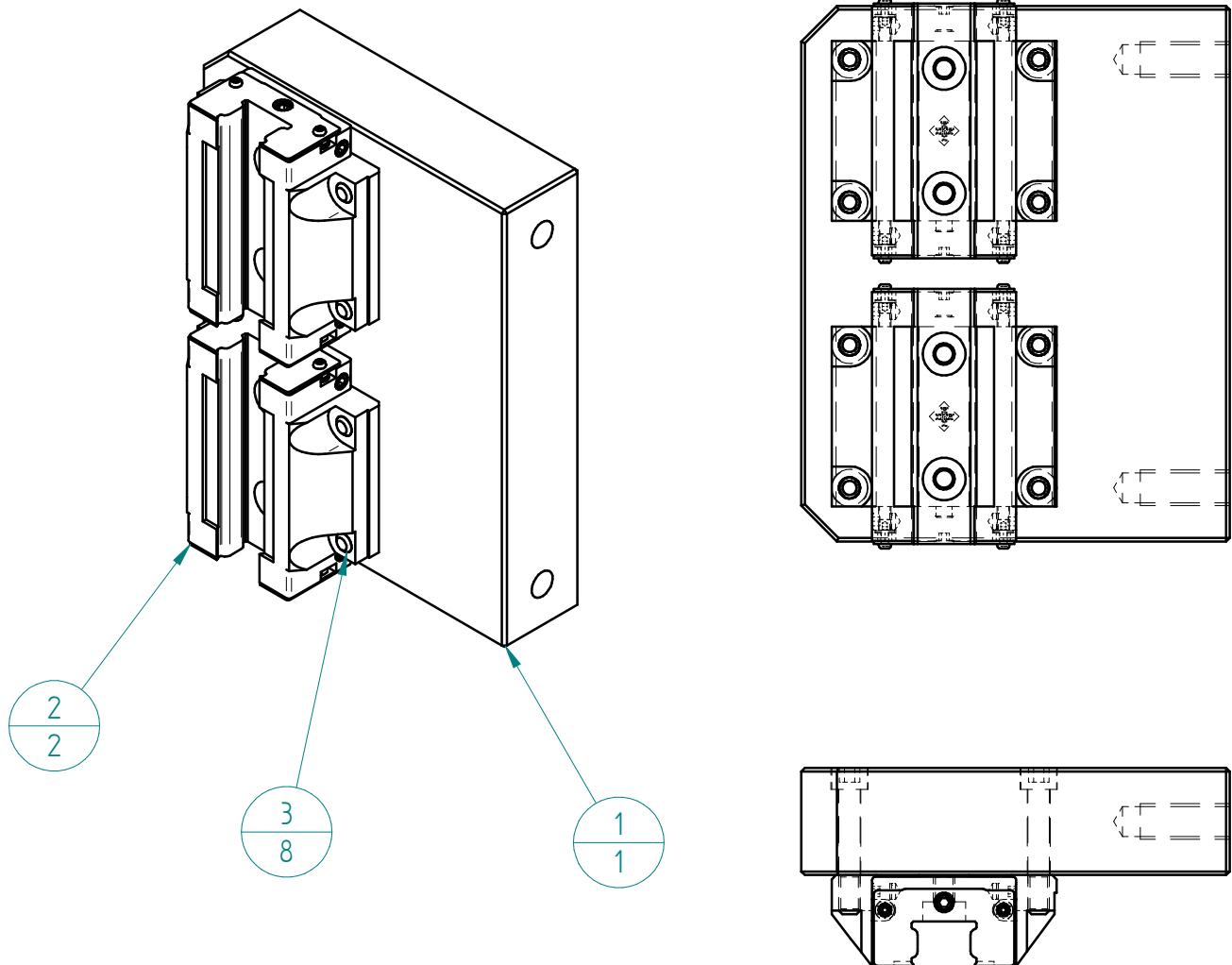


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142422	LAMIERA piegata Sp. 8 lavorata		1.936 kg	1
2	LIB10855	Carrello KWVE 20-B-S (INA)	Alluminio	0.329 kg	2
3	LIB00883	Rosetta piana M5 Di. 5.3 De. 10 L. 1 Acc. 140HV UNI 6592	Acciaio	0.004 kg	8
4	LIB00351	Vite TCIE M5 x 16 UNI 5931	Acciaio	0.034 kg	8

DESCRIZIONE

GRUPPO pattini guida premitubo (2 pattini KWVE 20)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	2,3	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -
	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	DATA 27/04/2016	CODICE DISEGNO S0142423
			REVISIONE 0
			MODIFICA



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142424	PIASTRA Sp. 30 L. 150 La. 120 Tipo Forata supporto traino formazione	Alluminio 11S UNI-9002/5	1.464 kg	1
2	LIB09861	Carrello KWVE 20-B-G3 V1 (INA)	-	0.880 kg	2
3	LIB00192	Vite TCIE M6 x 35 UNI 5931	Acciaio	0.086 kg	8

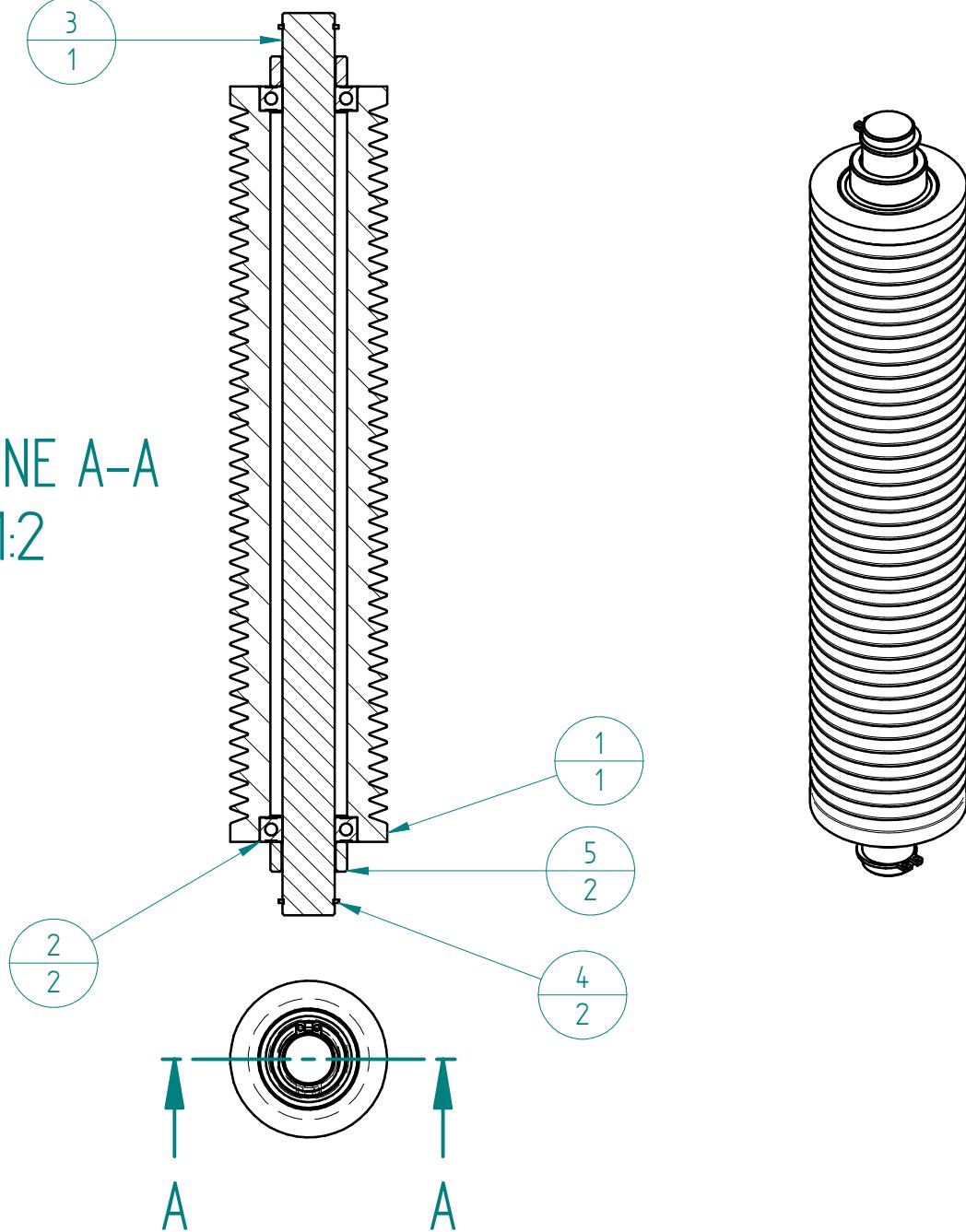
DESCRIZIONE

GRUPPO pattini guida traino formazione (2 pattini KWVE 20)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	2.43	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE		
-	-	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm <small>ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it</small>	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL:
	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL:
	SMUSSI NON QUOTATI	DATA 27/04/2016	CODICE DISEGNO S0142425

SEZIONE A-A

1:2

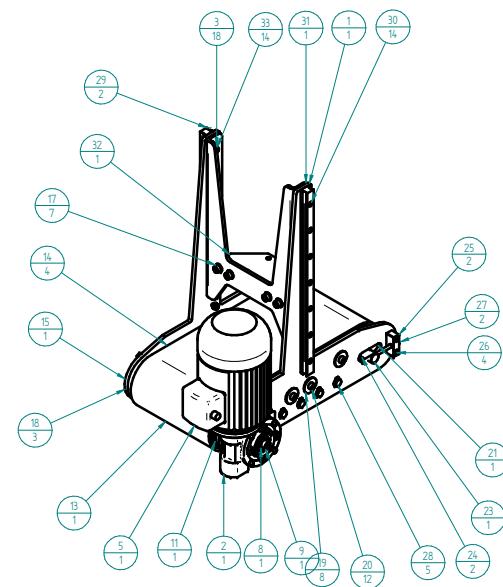
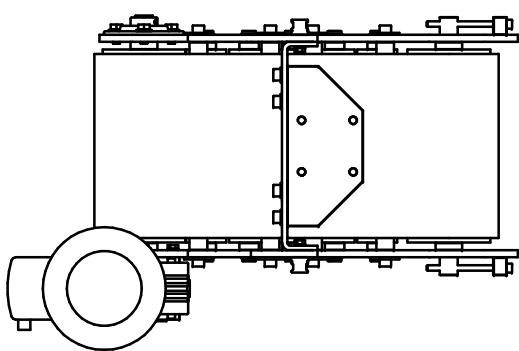
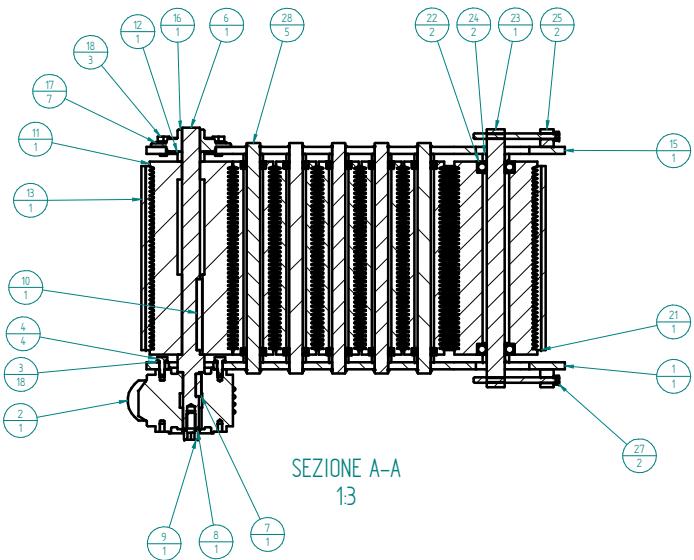
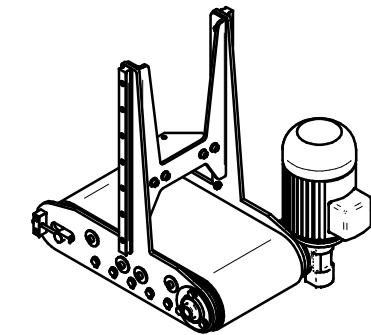
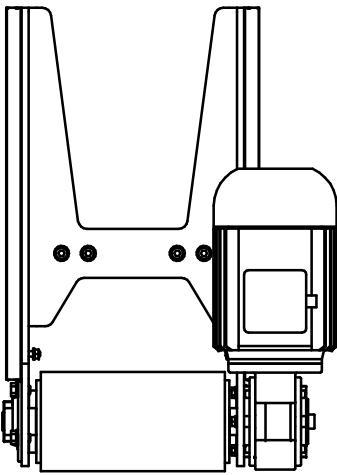
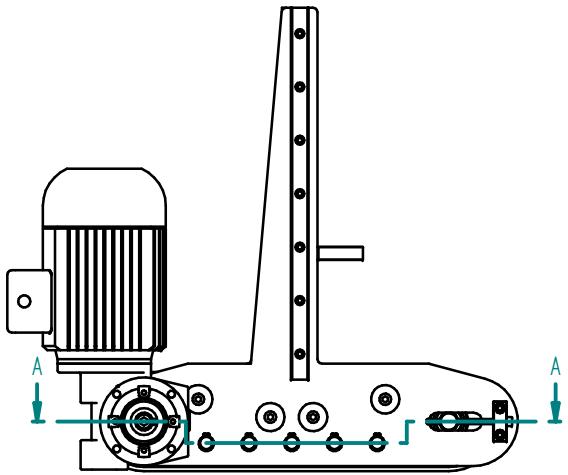


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142455	RULLO Folle D. 45 L. 216.8 cinghia Poly-v L44	Alluminio 11S UNI-9002/5	0,539 kg	1
2	LIB03592	Cuscinetto radiale a sfere 61902 2Z (15-28-7)	Acciaio 16CrNi4	0,036 kg	2
3	S0142454	PERNO D. 15 L. 259 Tipo 2_seeger	Acciaio C 40	0,359 kg	1
4	LIB00019	Anello elastico per alberi Ø 15 UNI 7435	Fe	0,001 kg	2
5	S0142453	DISTANZIALE Di. 15.5 D. 22 L. 8.6	Acciaio Fe 360	0,025 kg	2

DESCRIZIONE

GRUPPO rullo folle D=40 cinghia Poly-v J90

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	0,85	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	DATA 27/04/2016	CODICE DISEGNO S0142456
			REVISIONE 0
			MODIFICA



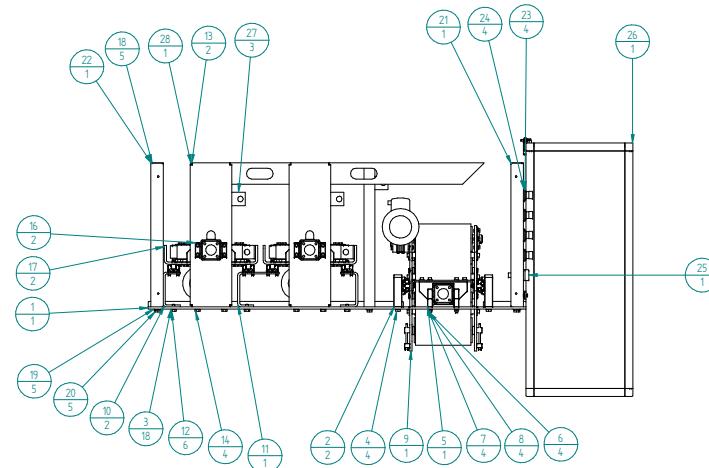
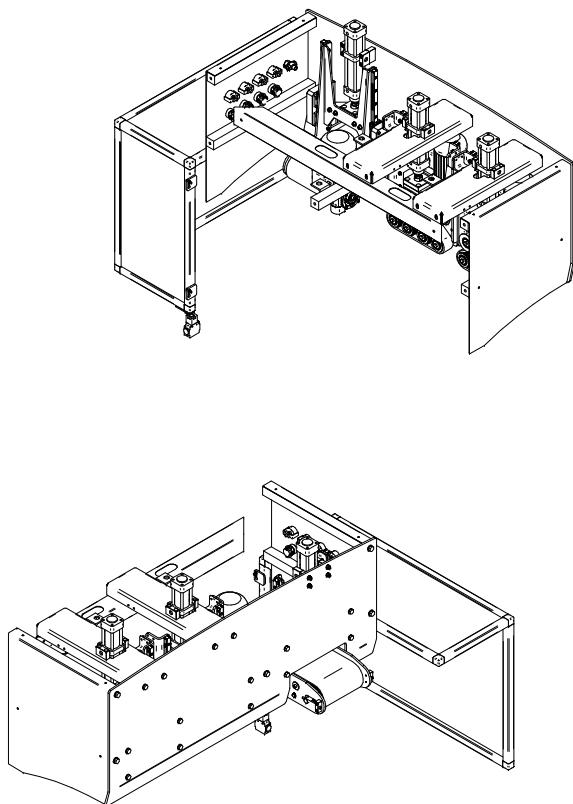
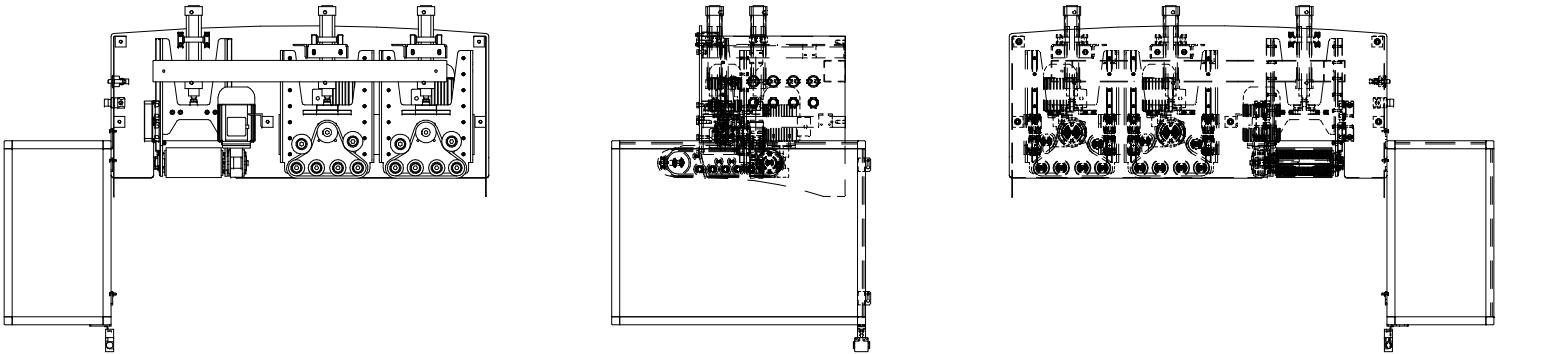
Pos.	Codice	descrizione	Materiale	Peso	Q.tà
1	SO142460	SAGOMA Taglio Laser Sp. 8	Acciaio Fe 360	4.224 kg	1
2	LIB01324	Riduttore AVF 44 P 71 BIH i=14	-	3.900 kg	1
3	LIB00058	Rosetto piano M6 De 12.3 Sp. 1.6 UNI 6592	Acciaio	0.038 kg	18
4	LIB01395	VITTE TE M 6 x 16 UNI EN 24017	Acciaio	0.025 kg	4
5	LIB00005	Motore Asincrono 4 poli P71-B14 0.37 kW	-	5.192 kg	1
6	SO142450	ALBERO ruota motrice cinghia Poly-v L44	Acciaio Fe 510	0.837 kg	1
7	LIB01005	LINGUETTA 6x6 L=25 UNI 6604-69	Acciaio	0.007 kg	1
8	LIB00136	Rosetto piano M10 Dc. 20 Sp. 2 Acciaio UNI 6592	Acciaio	0.004 kg	1
9	LIB00161	Vite TCIE M10 x 20 UNI 5931	Acciaio	0.024 kg	1
10	LIB09138	Linguetta L. 80 Lz. 6 H. 6 norme UNI 6604	Acciaio	0.022 kg	1
11	SO142459	RULLO Motorizzato Di. 20 D. 93 L. 216.8 cinghia Poly-v L44	Alluminio IIS UNI-9002/5	3.408 kg	1
12	SO142451	DISTANZIALE Di. 20.5 D. 30 L. 111	Acciaio Fe 360	0.033 kg	1
13	SO142447	CINGHIA Poly-v L44 Sv. 990.8 + TENAX PIANO sp. 5mm	Gomma	3.530 kg	1
14	SO142426	BARRA D. 20	Acciaio C 40	2.329 kg	4
15	SO142452	SAGOMA Taglio Laser Sp. 8	Acciaio Fe 360	4.195 kg	1
16	LIB07423	Supporto con cuscinetto ASPF 204 Di. 20	Acciaio	0.382 kg	1
17	LIB00963	Rosetto piano M8 De. 17 Sp. 1.6 Acc. 140HV UNI 6592	Acciaio	0.005 kg	7
18	LIB00116	VITTE TE M 8 x 16 UNI EN 24017	Acciaio	0.038 kg	3
19	LIB00029	Rosetto piano M8 De. 32 Sp. 2 Acc. 100HV UNI 6593	Acciaio	0.113 kg	8
20	LIB00150	Vite TCIE M8 x 25 UNI 5931	Acciaio	0.200 kg	12
21	SO142448	RULLO Folle D. 93 L. 216.8 cinghia Poly-v L44	Alluminio IIS UNI-9002/5	3.245 kg	1
22	LIB00346	Cuscinetto radiale 6004 2Z (20-42-12)	Acciaio	0.090 kg	2
23	SO142449	PERNO D. 15 L. 290 Rullo Folle	Acciaio C 40	0.709 kg	1
24	SO143812	DISTANZIALE Di. 20.5 D. 30 L. 8.6	Acciaio Fe 360	0.050 kg	2
25	SO142427	BLOCCO-ETTO tenditore	Acciaio Fe 360	0.169 kg	2
26	LIB00012	Vite TCIE M 6 x 20 UNI 5931	Acciaio	0.030 kg	4
27	LIB00200	Vite TCIE M 6 x 30 UNI 5931	Acciaio	0.046 kg	2
28	SO142456	GRUPPO ruolo folle Di.40 cinghia Poly-v J90	-	4.294 kg	5
29	LIB10859	Rotella TKVD 20 418 (d=29 - a=29)	Acciaio	1.799 kg	2
30	LIB00193	Vite TCIE M 6 x 16 UNI 5931	Acciaio	0.135 kg	14
31	SO142458	LAMIERA piegata Sp. 6 lavorata	-	2.599 kg	1
32	SO142341	PIASTRA Sp. 15 L. 180 La. 85 Tipo Forata	Acciaio Fe 360	1.458 kg	1
33	LIB00096	Dado Acc. 8 Esagonale M6 UNI 5588	Acciaio	0.032 kg	14

DESCRIZIONE GRUPPO traino formazione BA 200/2F/2T (std.)

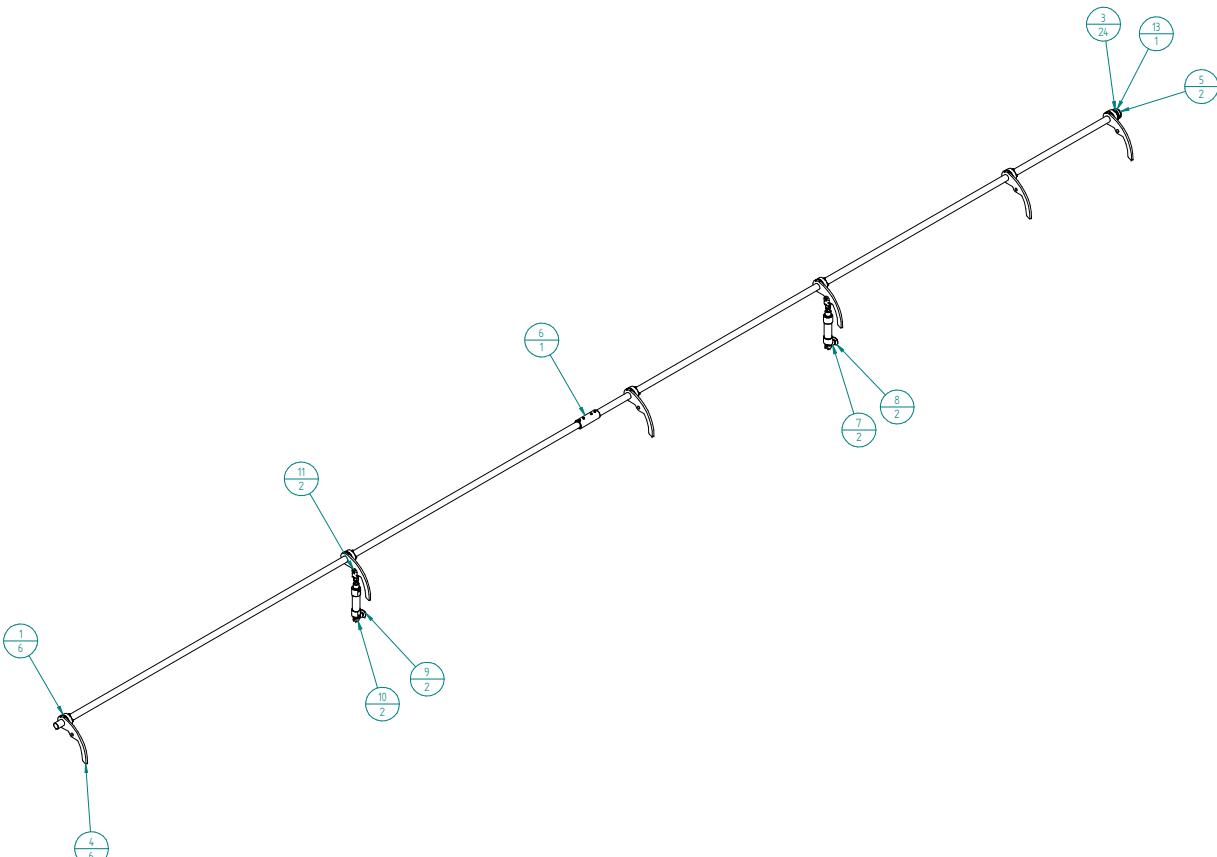
MATERIALE	DESCRIZIONE	Peso Kg	SCALA
	Assemblato	43.14	1:3
TUTTI I PEZZI SONO IN DISEGNO DI TOLERANZA IN MM CON UNA TOLERANZA DI +/- 0.25 MM			
MATERIALE NON CERTIFICATO			
	PROGETTORE BELLONI		
	DISegnatore BELLONI		
	REVISORE BELLONI		
	DATA PROGETTO 27/04/2016		
	DATA REVISIONE -		
	SCARICA 0		

ipm Italia - Modelli Lavoro S.p.A. - Via Paganini, 5 - 20090 Gorgonzola (MI) - Italy - Tel. 02/365000 - Fax 02/3650022

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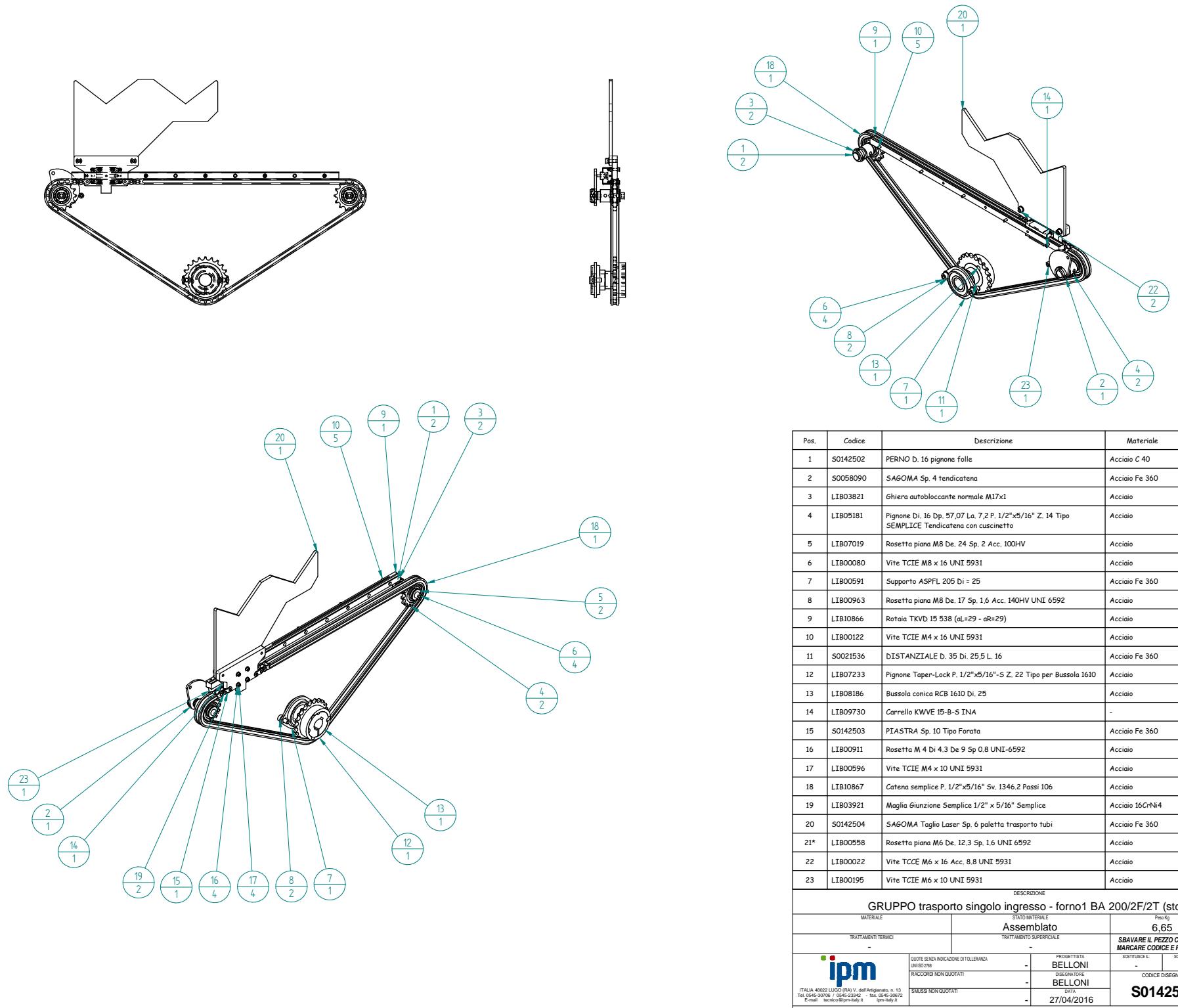
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà		
1	SO142462	LAMIERA piegata Sp. 2 supporto premibubi e traino formazione BA 200/2F/2T (std.)	Acciaio Fe 360	46,788 kg	1		
2	SO142425	GRUPPO pattini guida traino formazione (2 pattini KWVE 20)		4,859 kg	2		
3	LIB00136	Rossetto piano M10 Dc. 20 Sp. 2 Acciaio UNI 6592	Acciaio	0,064 kg	18		
4	LIB00176	Vite TE M 10 x 35 UNI 5739	Acciaio	0,140 kg	4		
5	SO142353	GRUPPO cilindro D=50 corsa=200 discessa traino formazione		3,842 kg	1		
6	LIB00153	Vite TCIE M8 x 80 UNI 5931	Acciaio	0,153 kg	4		
7	LIB00963	Rossetto piano M8 Dc. 17 Sp. 140HV UNI 6592	Acciaio	0,009 kg	4		
8	LIB00097	Dado Acc. 8 Esagonale M8 UNI 5588		0,020 kg	4		
9	SO142461	GRUPPO traino formazione BA 200/2F/2T (std.)		43,149 kg	1		
10	SO142423	GRUPPO pattini guida premibubi (2 pattini KWVE 20)		4,606 kg	2		
11	SO142344	GRUPPO pattini guida premibubo (4 pattini KWVE 20)		3,355 kg	1		
12	LIB00178	Vite TE M 10 x 20 UNI 5739	Acciaio	0,155 kg	6		
13	SO142463	LAMIERA piegata Sp. 5	Acciaio Fe 360	10,420 kg	2		
14	LIB00180	Vite TE M 10 x 30 UNI 5739	Acciaio	0,128 kg	4		
15*	LIB00098	Dado Acc. 8 Esagonale M10 UNI 5588	Acciaio Fe 360	0,043 kg	4		
16	SO142345	GRUPPO cilindro D=50 corsa=200 discessa premibubo		6,851 kg	2		
17	SO142350	GRUPPO premibubo BA 200/2F/2T (std.)		49,885 kg	2		
18	SO142346	QUADRATO L. 40 H. 40	Alluminio 115 UNI-9002/5	11,564 kg	5		
19	LIB00264	Rossetto piano M12 Di. 13 Dc. 24 L. 25 UNI 6592	Acciaio	0,032 kg	5		
20	LIB00265	VITE TE M 12 x 30 UNI EN 24017	Acciaio	0,223 kg	5		
21	SO142354	LAMIERA piegata Sp. 1,5	Acciaio Fe 360	3,719 kg	1		
22	SO142355	LAMIERA piegata Sp. 1,5	Acciaio Fe 360	3,815 kg	1		
23	LIB00124	Regolatore di pressione da pannello NI204 R00 1/4		0,001 kg	4		
24	LIB00125	Manometro Wilk acciaio da cruscotto Bar 0/6 d 40 Att. Part.	-	0,400 kg	4		
25	LIB02415	Valvola 3 vie da pannello 5710 1/4	Ottone	0,301 kg	1		
26	SO142348	GRUPPO pannello protezione uscite tubo BA 200/2F/2T (std.)		31,653 kg	1		
27	S0020523	PROFILATO L. 50 L. 50 H. 50 Sp. 5,5 ANSOLARE	Acciaio Fe 360	0,507 kg	3		
28	SO142351	TUBOLARE Sp. 2 L. 80 H. 80	Acciaio Fe 360	4,693 kg	1		
DESCRIZIONE							
GRUPPO premibubi formi + traino formaziori BA 200/2F/2T (std.)							
MATERIALE		ESTENSIONE		PIANO	SCALA		
		Assemblato		231,3	1:10		
TRATTAMENTO TERMICO							
TRATTAMENTO SUPERFICIE							
SI HA VISTO IL PEZZO CON OCA MARCARE CONCEZIONE E RISERVE							
GUIT SINCO INDICAZIONE DI TOLERANZA							
-0/+0,20							
MATERIALE NON CERTIFICATO							
PROGETTORE							
BELLONI							
MATERIALE CERTIFICATO							
BELLONI							
CONCEZIONE							
REVISIONE							
A1							
SO142464							
0							
26/04/2016							
Progetto inviato a Progettazione - L'utente ha la responsabilità di verificare le specifiche							

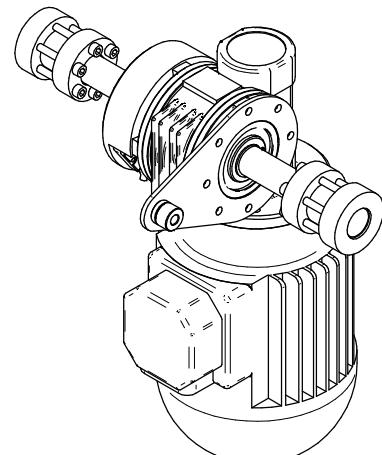
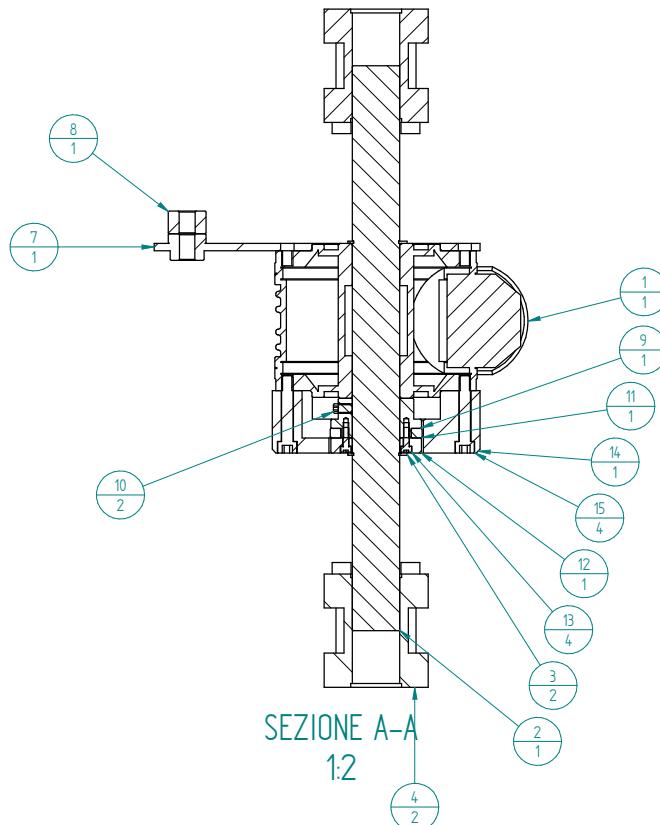
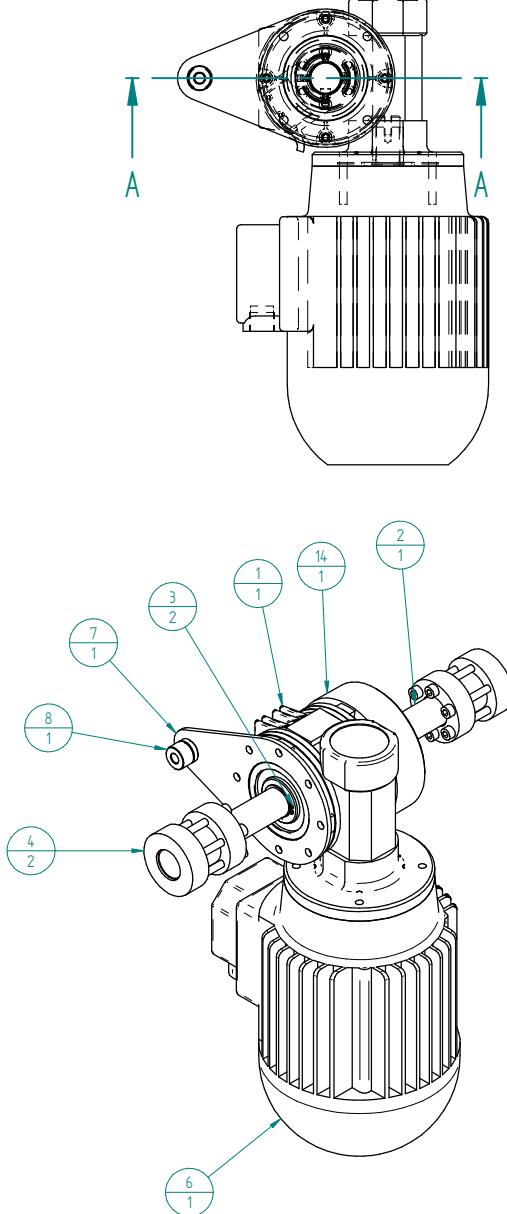


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	50060290	GUIDA barra in polizene	Polizene verde	0,119 kg	6
2*	00008709	DISTANZIALE D. 35 Di. 25 L. 5	Fe 360	0,109 kg	6
3	LIB00012	Vite TCIE M6 x 20 UNE 5931	Acciaio	0,177 kg	24
4	S0142467	PIASTRA Sp. 8 Tipo Forata leva scarico tubo	Acciaio Fe 360	2,237 kg	6
5	S0142466	TRAFILA D. 25 L. 2815	Acciaio C 43	21,694 kg	2
6	500602633	TUBO Di. 25 D. 35 L. 100 Tipo Trafilato	Acciaio Fe 360	0,364 kg	1
7	S0060264	PERNO	Acciaio C 40	0,097 kg	2
8	LIB00209	Rosetta piana M8 Dt. 32 Sp. 2 Acc. 100HV UNI 6593	Acciaio	0,028 kg	2
9	LIB00150	Vite TCIE M8 x 25 UNE 5931	Acciaio	0,033 kg	2
10	LIB04678	Cilindro pneumatico BAM Ø25 corsa 60	Acciaio	0,640 kg	2
11	LIB00069	Forcella Femmina FF 32		0,194 kg	2
12*	LIB05769	Boccola PAP 1008 P10	Acciaio	0,004 kg	2
13	S0063715	DISTANZIALE Di. 25 D. 40 L. 10 Tipo Bronzo	Bronzo comune	0,062 kg	1

DESCRIZIONE
GRUPPO leva scarico tubo su linea attesa BA 200/2F/2T (std.)

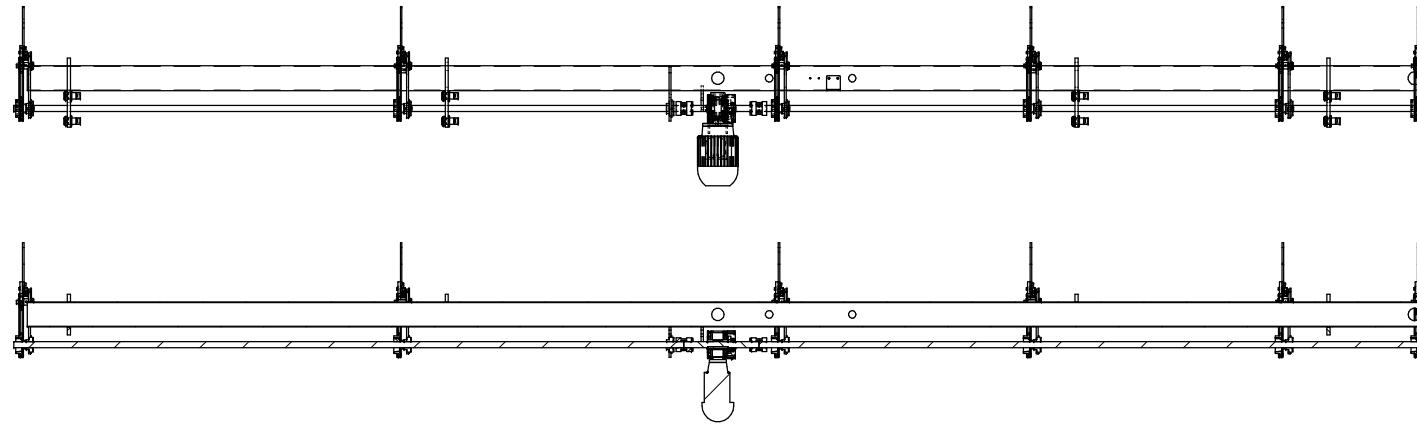
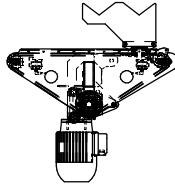
MATERIALE	DIMENSIONE	Peso kg
Assemblato		25,75
TRATTAMENTO TERMICO		SCALA 1:10
TRATTAMENTO SUPERFICIE		
SIA VARI IL PEZZO CON CURA MARCARE CONCE E RISERVE		
IPM		
GLOTT SENSI-INDICAZIONE DI TOLERANZA		
MATERIALE NON CERTIFICATO		
PROGETTORE BELLONI		
SALVAGUARDIA		
BELLONI		
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A1		
DATA		
27/04/2016		
SO142480		
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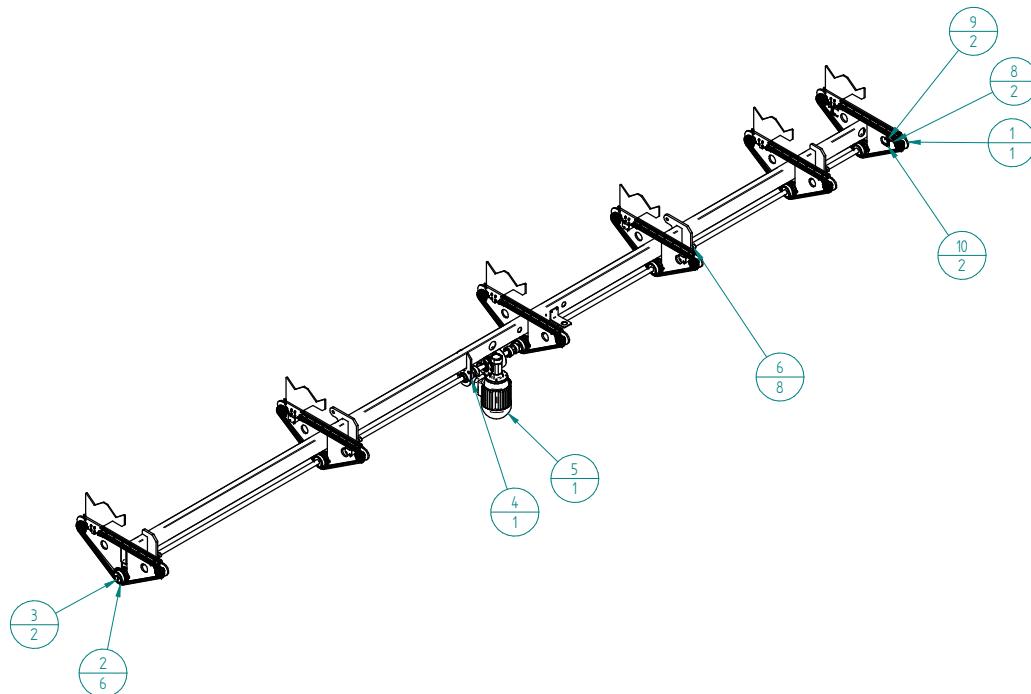
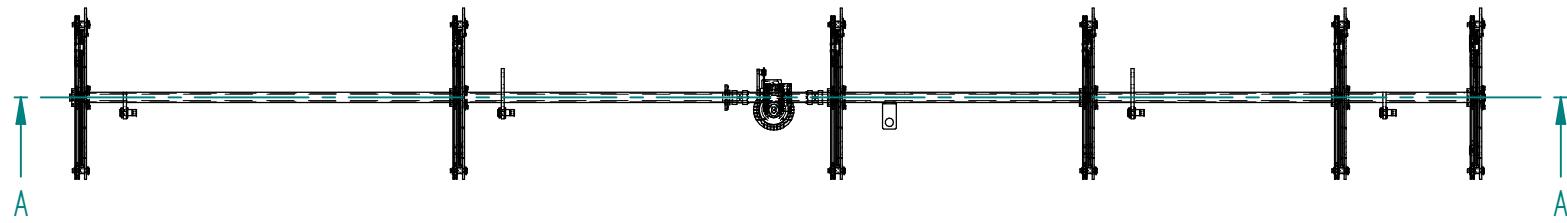


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	L1B10870	Riduttore VF 49 P R=1/18 P80-B14	-	3,000 kg	1
2	S0142543	ALBERO D. 25 L.299 Tipo sede_linguetta trasmissione	Acciaio C 43	1,133 kg	1
3	LIB00010	Anello elastico per alberi Ø 25 UNI 7435	Fe 360	0,003 kg	2
4	LIB03572	Calettatore RCK 95 - 25x55	Acciaio	1,316 kg	2
5*	LIB03146	LINGUETTA 8x7 L=80 UNI 6604-69	Acciaio C 40	0,034 kg	1
6	LIB01742	Motore Asincrono 4 poli P80-B14 0,75 kW	Nylon	9,900 kg	1
7	LIB10868	Accessorio Braccio di reazione VF 49 Bonfiglioli	Acciaio	0,301 kg	1
8	S0142539	DISTANZIALE Di. 8.5 D. 20 L. 12	Acciaio Fe 360	0,024 kg	1
9	S0142542	FLANGIA Per magnete ad anello Di 37.1 mm	Alluminio 11S UNI-9002/5	0,047 kg	1
10	LIB01557	Grano estr. Conica M5 x 10 Acc. 45H UNI 5927	Acciaio	0,003 kg	2
11	LIB07654	Accessorio Balluff Anello magnetico BML002M (Diam. 48.7) 1600 impulsi	Alluminio	0,010 kg	1
12	S0142540	DISTANZIALE Di. 25 D. 48 L. 8	Alluminio 11S UNI-9002/5	0,028 kg	1
13	LIB07638	Vite TCCE M3 x 10 Acc. 8,8	Acciaio	0,004 kg	4
14	S0142541	FLANGIA Encoder magnetico per riduttori VF49 Bonfiglioli	Alluminio 11S UNI-9002/5	0,502 kg	1
15	LIB00192	Vite TCIE M6 x 35 UNI 5931	Acciaio	0,043 kg	4
16*	LIB06322	Sensore Magnetico BML S1C0-Q53L-M400-MO-KA02 uscita 24V (Balluff) +/- 0.1 mm	PE	0,008 kg	1

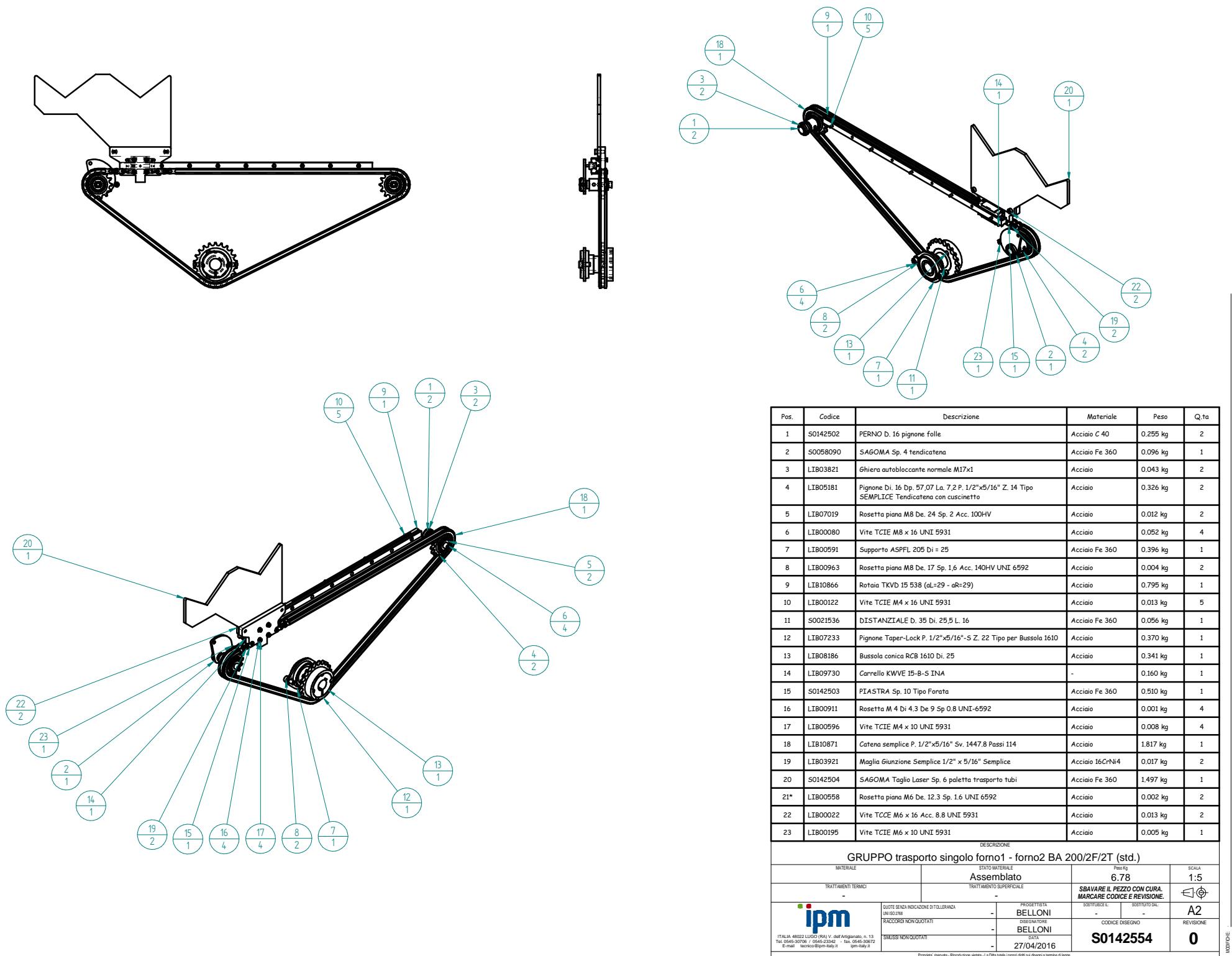
DESCRIZIONE			
GRUPPO motoriduttore avanzamento trasporto con encoder BA 200/2F/2T (std.)			
MATERIALE	STATO MATERIALE	Prezzo	
	Assemblato	16,35	
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE COIDCE E REVISIONE.	
-	-	SOSTITUZIONE:	SOSTITUITO DAL:
	QUOTE SENZA INDICAZIONE DITTORELANZA SM05202	PROGETTO DA:	BELLONI
	RACCORDI NON QUOTATI	DATA:	
	SMUSSI NON QUOTATI	DATA:	
		CODICE DISEGNO	S0142546

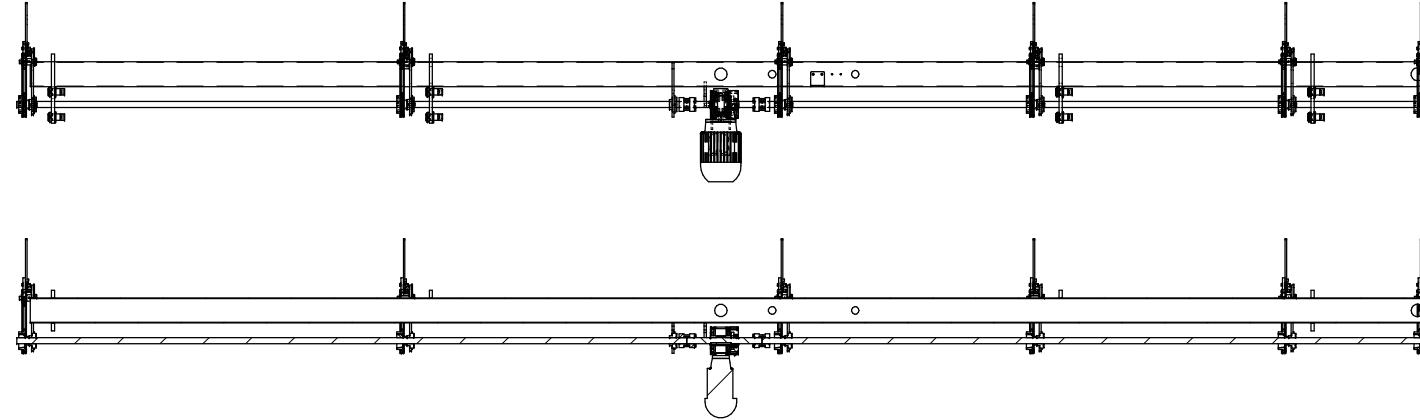
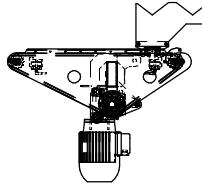


SEZIONE A-A
1:15



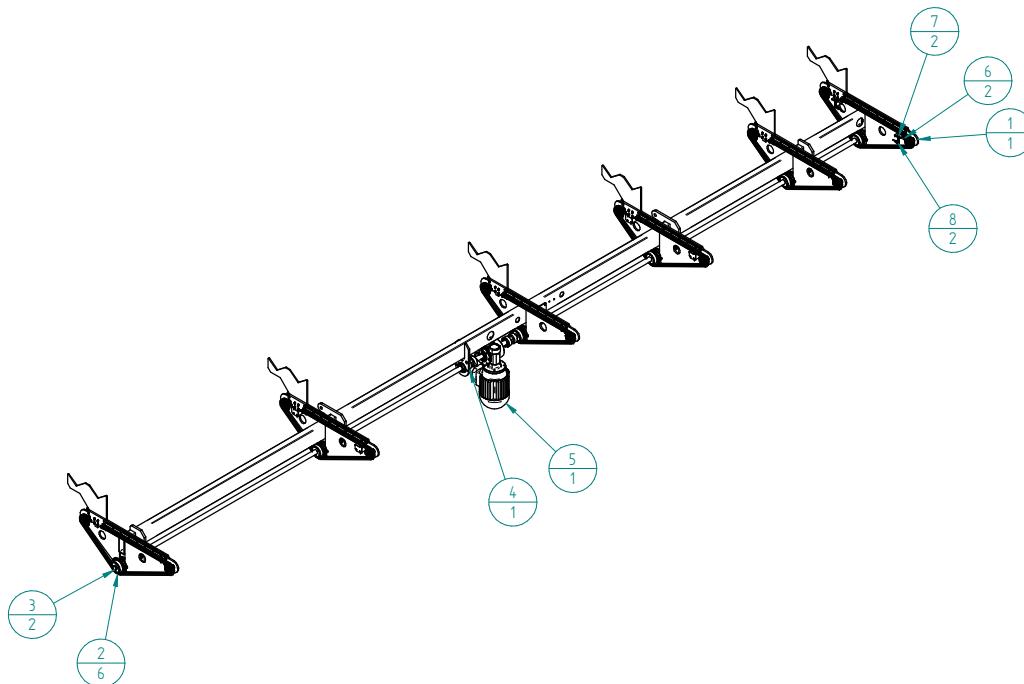
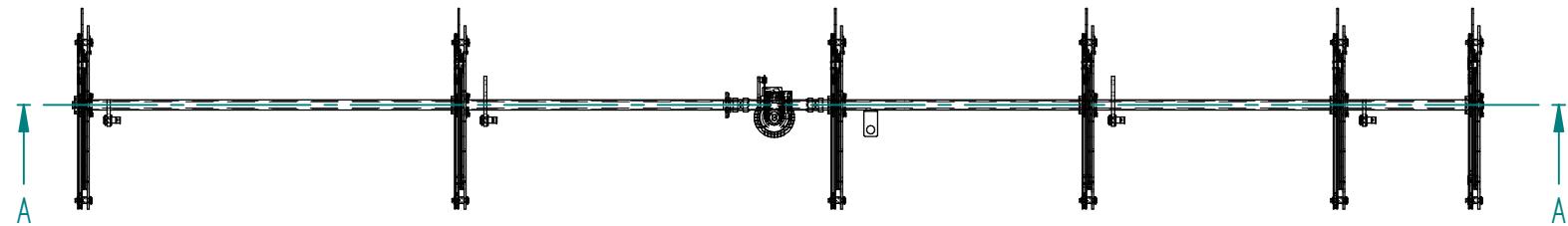
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142490	TRAVE trasporto ingresso - forno1 BA 200/2F/2T (std.)		80,065 kg	1
2	S0142505	GRUPPO trasporto singolo ingresso - forno1 BA 200/2F/2T (std.)		39,955 kg	6
3	S0142545	TRAFILEA D. 25 L. 2660	Acciaio C 43	20,500 kg	2
4	L1B00591	Supporto ASPFL 205 Di = 25	Acciaio Fe 360	0,396 kg	1
5	S0142546	GRUPPO motoriduttore avanzamento trasporto con encoder BA 200/2F/2T (std.)		16,356 kg	1
6	S0142547	PERNO D. 25	Acciaio C 40	2,086 kg	8
7*	L1B01308	Ghiera autobloccante normale M25x1,5	Acciaio	0,353 kg	8
8	S0142548	LAMIERA piegata Sp. 3	Acciaio Fe 360	0,112 kg	2
9	L1B06934	Proximity Con connettore M 8x1 DN M8x1	Acciaio	0,027 kg	2
10	L1B06949	Connettore M8x1 90° Con cavo 10 mt	PVC	0,007 kg	2
11*	S0146736	LAMIERA piegata Sp. 5	DESCRIZIONE Acciaio Fe 360	0,301 kg	1
12*	S0146786	BLOCCETTO riscontro carrelli trasporto MATRAST	DESCRIZIONE Acciaio Fe 360	1,984 kg	1
13*	S0147554	VENTEROLLO D. 18 Tipo Delrin guida catena inox/babols	Assemblato	162,1	1,15
DEBARARE IL PEZZO CON CURA! MARCARE CODICE E REVISIONE!					
ipm <small>ITALIA: 46022 LUOGO (RA) V. dell'Angelino, n. 13 Tel. 0545-30796 / 0545-23342 - fax: 0545-30672 E-mail: tecnicos@ipm-italy.it ipm-italy.it</small>					
QUOTE SENZA INDICAZIONE DI TOLLERANZA		PROGETTISTA BELLONI	SOSTITUIRE IL - - -	SOSTITUITO DAL - - -	A2
RACCORDI NON QUOTATI		DISEGNATORE BELLONI	-	-	
SIMUSSI NON QUOTATI		DATI 27/04/2016	CODICE DISEGNO S0142549	REVISIONE 0	



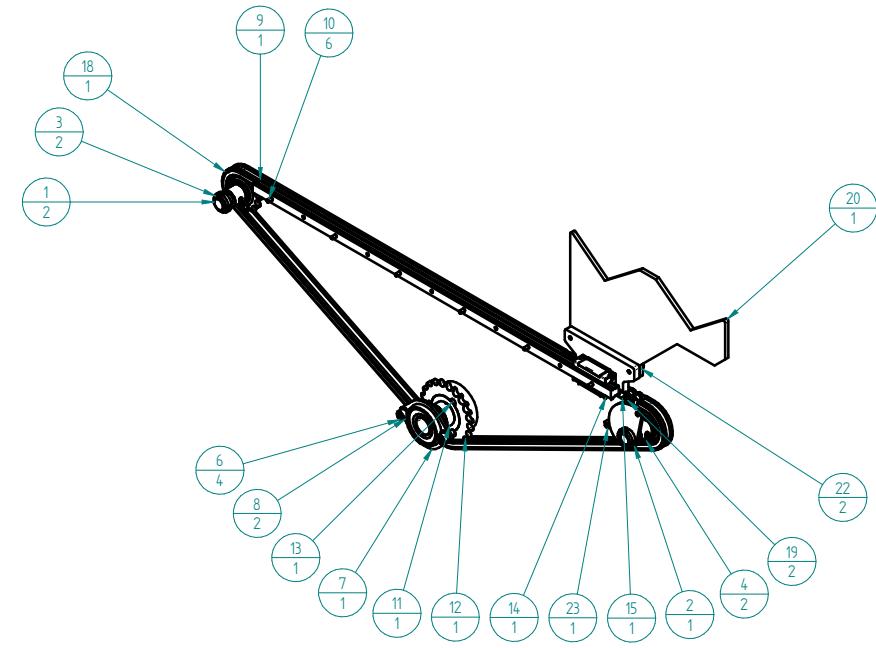
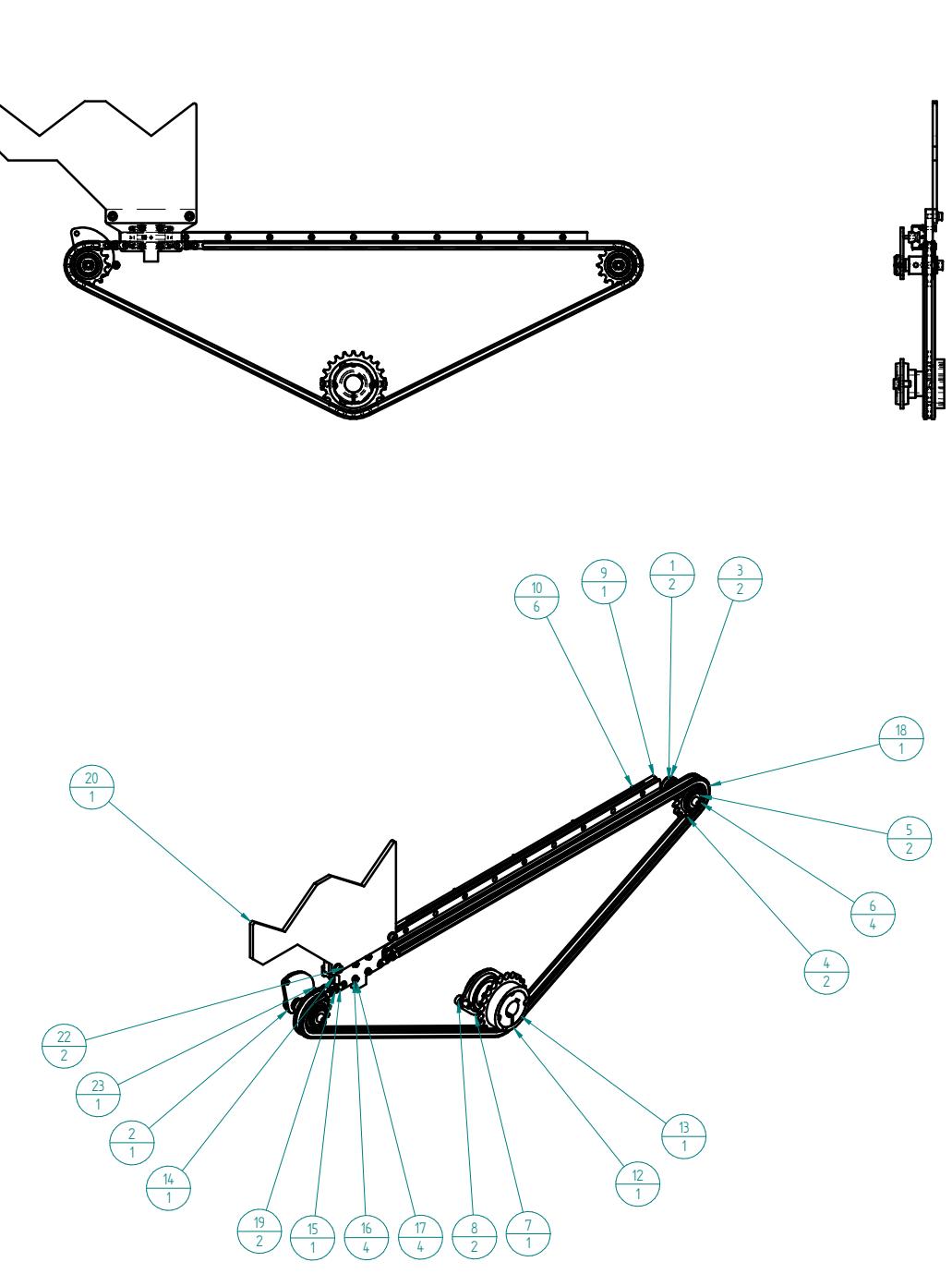


SEZIONE A-A

1:15



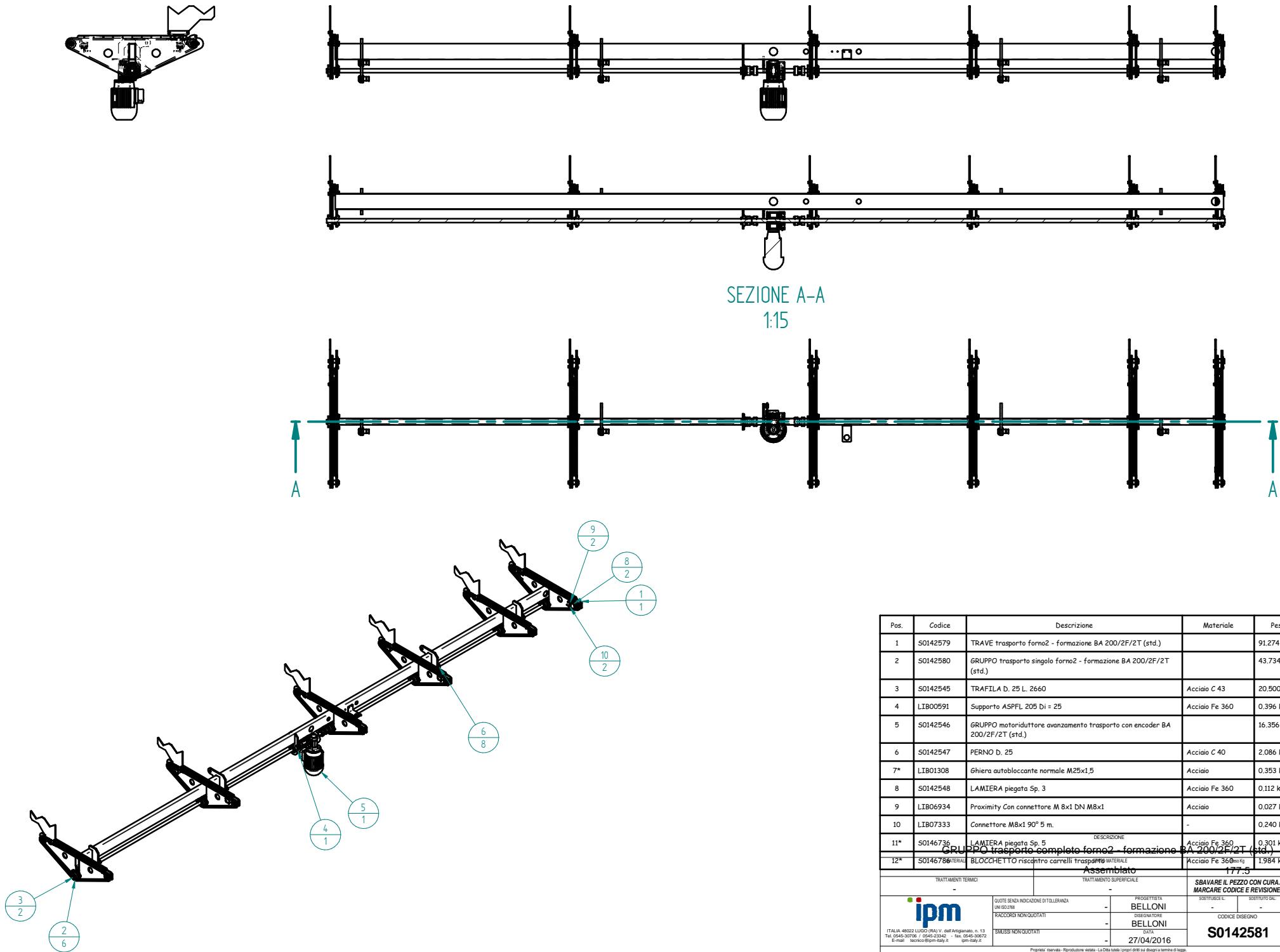
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142553	TRAVE trasporto forno1 - forno2 BA 200/2F/2T (std.)		83,027 kg	1
2	S0142554	GRUPPO trasporto singolo forno1 - forno2 BA 200/2F/2T (std.)		40,695 kg	6
3	S0142545	TRAFILEA D. 25 L. 2660	Acciaio C 43	20,500 kg	2
4	L1B00591	Supporto ASPFL 205 Di = 25	Acciaio Fe 360	0,396 kg	1
5	S0142546	GRUPPO motoriduttore avanzamento trasporto con encoder BA 200/2F/2T (std.)		16,356 kg	1
6	S0142548	LAMIERA piegata Sp. 3	Acciaio Fe 360	0,112 kg	2
7	L1B06934	Proximity Con connettore M 8x1 DN M8x1	Acciaio	0,027 kg	2
8	L1B06949	Connettore M8x1 90° Con cavo 10 mt	PVC	0,007 kg	2
9*	S0142547	PERNO D. 25	Acciaio C 40	2,086 kg	8
10*	L1B01308	Ghiera autobloccante normale M25x1,5	Acciaio	0,353 kg	8
11*	S0146736	LAMIERA piegata Sp. 5	DESCRIZIONE Acciaio Fe 360	0,301 kg	1
12*	S0146786	BLOCCHETTO riscontro carrelli trasporto	DESCRIZIONE MATERIALE Acciaio Fe 360	1,984 kg	1
GRUPPO trasporto completo forno1 - forno2 BA 200/2F/2T (std.)					
Assemblato					
165,9					
1.15					
TRATTAMENTI TERMICI					
- TRATTAMENTO SUPERFICIE					
- SBAVARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.					
- A2					
- SBARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.					
- A2					
- PROGETTISTA BELLONI					
- DISEGNATORE BELLONI					
- DATA 27/04/2016					
- CODICE DISEGNO S0142555					
- REVISIONE 0					



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142502	PERNO D. 16 pignone folle	Acciaio C 40	0.255 kg	2
2	S0058090	SAGOMA Sp. 4 tendicatena	Acciaio Fe 360	0.096 kg	1
3	LIBO3821	Ghiera autobloccante normale M17x1	Acciaio	0.043 kg	2
4	LIBO5181	Pignone Di. 16 Dp. 57.07 La. 7.2 P. 1/2"x5/16" Z. 14 Tipo SEMPLICE Tendicatena con cuscinetto	Acciaio	0.326 kg	2
5	LIBO7019	Rosettina piana M8 de. 24 Sp. 2 Acc. 100HV	Acciaio	0.012 kg	2
6	LIBO0080	Vite TCIE M8 x 16 UNI 5931	Acciaio	0.052 kg	4
7	LIBO0591	Supporto ASPFL 205 Di = 25	Acciaio Fe 360	0.396 kg	1
8	LIBO0963	Rosettina piana M8 de. 17 Sp. 1.6 Acc. 140HV UNI 6592	Acciaio	0.004 kg	2
9	LIBI0873	Rotaia TKVD 15 670 (dL=35 - aR=35)	Acciaio	0.991 kg	1
10	LIBO0122	Vite TCIE M4 x 16 UNI 5931	Acciaio	0.015 kg	6
11	S0021536	DISTANZIALE D. 35 Di. 25,5 L. 16	Acciaio Fe 360	0.056 kg	1
12	LIBO7233	Pignone Taper-Lock P. 1/2"x5/16"-S Z. 22 Tipo per Bussola 1610	Acciaio	0.370 kg	1
13	LIBO8186	Bussola conica RCB 1610 Di. 25	Acciaio	0.341 kg	1
14	LIBO9730	Carrello KWVE 15-B-S INA	-	0.160 kg	1
15	S0142503	PIASTRA Sp. 10 Tipo Forata	Acciaio Fe 360	0.510 kg	1
16	LIBO0911	Rosettina M 4 Di 4.3 De 9 Sp 0.8 UNI-6592	Acciaio	0.001 kg	4
17	LIBO0596	Vite TCIE M4 x 10 UNI 5931	Acciaio	0.008 kg	4
18	LIBI0872	Catena semplice P. 1/2"x5/16" Sv. 1676.4 Passi 132	Acciaio	2.126 kg	1
19	LIBO3921	Maglia Giunzione Semplice 1/2" x 5/16" Semplice	Acciaio 16CrNi4	0.017 kg	2
20	S0142504	SAGOMA Taglio Laser Sp. 6 paletta trasporto tubi	Acciaio Fe 360	1.497 kg	1
21*	LIBO0558	Rosettina piana M6 De. 12.3 Sp. 16 UNI 6592	Acciaio	0.002 kg	2
22	LIBO0022	Vite TCCE M6 x 16 Acc. 8.8 UNI 5931	Acciaio	0.013 kg	2
23	LIBO0195	Vite TCIE M6 x 10 UNI 5931	Acciaio	0.005 kg	1

GRIIPPO trasporto singolo forno2 - formazione BA 200/2E/2T (std)

GRUPPO trasporto singolo fornoz - formazione BA 200/ZP/21 (st.)				
MATERIALE	STATO MATERIALE		PESO Kg	SCALA
-	Assemblato		7.28	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE			
-	-			
	QUOTE SENZA INDICAZIONE DI TOLLERANZA: UNI 1022/98	PROGETTISTA BELLONI	SOSTITUISCE IL - - -	A2
RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL - - -	CODICE DISEGNO - - -	REVISIONE
SMOSI NON QUOTATI	DATA 27/04/2016			0
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0546-30798 - 0546-23442 - fax 0546-30672 E-mail: tecnico@ipm-lugo.it - www.ipm-lugo.it	S0142580			

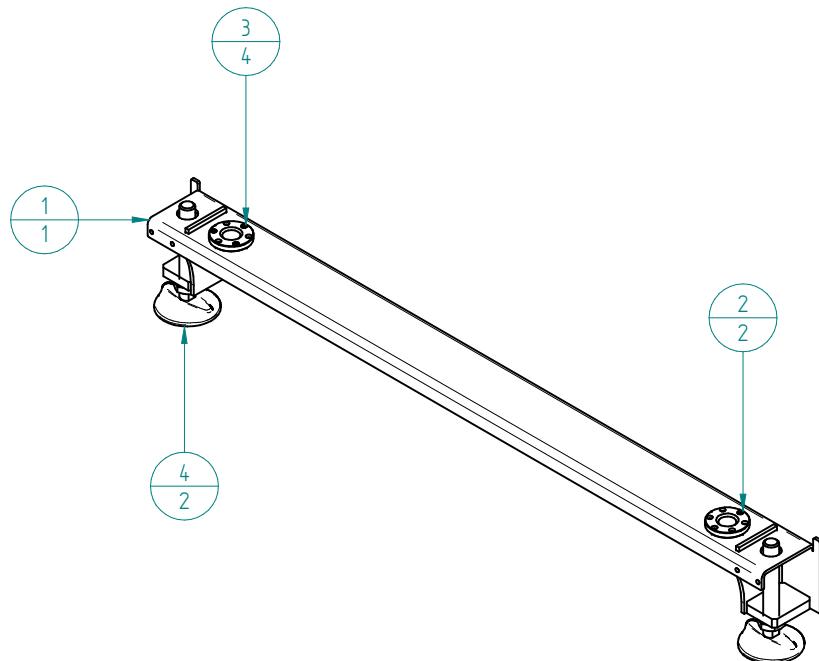
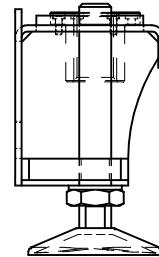
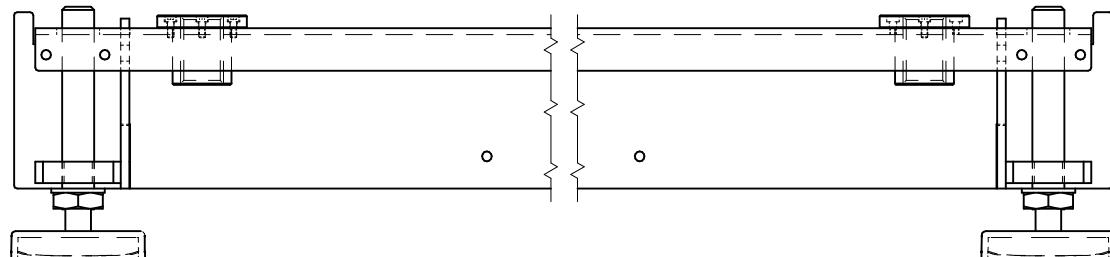


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142579	TRAVE trasporto forno2 - formazione BA 200/2F/2T (std.)		91.274 kg	1
2	S0142580	GRUPPO trasporto singolo forno2 - formazione BA 200/2F/2T (std.)		43.734 kg	6
3	S0142545	TRAFILEA D. 25 L. 2660	Acciaio C 43	20.500 kg	2
4	L1B00591	Supporto ASPFL 205 Di = 25	Acciaio Fe 360	0.396 kg	1
5	S0142546	GRUPPO motoriduttore avanzamento trasporto con encoder BA 200/2F/2T (std.)		16.356 kg	1
6	S0142547	PERNO D. 25	Acciaio C 40	2.086 kg	8
7*	L1B01308	Ghiera autobloccante normale M25x1,5	Acciaio	0.353 kg	8
8	S0142548	LAMIERA piegata Sp. 3	Acciaio Fe 360	0.112 kg	2
9	L1B06934	Proximity Con connettore M 8x1 DN M8x1	Acciaio	0.027 kg	2
10	L1B07333	Connettore M8x1 90° 5 m.	-	0.240 kg	2
11*	S0146736	LAMIERA piegata Sp. 5	DESCRIZIONE	Acciaio Fe 360	0.301 kg
11*	S0146736	GRUPPO trasporto completo forno2 - formazione BA 200/2F/2T (std.)			
12*	S0146736	BLOCCHETTI riscontro carrelli trasporto	MATERIALE	Acciaio Fe 360	1.984 kg
		Assemblato		177.5	1.15
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIE		SBARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
				A2	
				REVISIONE	
				CODICE DISEGNO	
				S0142581	
				0	

ipm
ITALIA: 46022 LUOGO (RA) V. dell'Angelato, n. 13
Tel. 0545-30708 / 0545-23342 - fax: 0545-30672
E-mail: tecnicos@ipm-italy.it

QUOTE SENZA INDICAZIONE DI TOLLERANZA - PROGETTISTA: BELLONI
RACCORDI NON QUOTATI - DISEGNATORE: BELLONI
SIMUSSI NON QUOTATI - DATA: 27/04/2016

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni ai termini di legge.



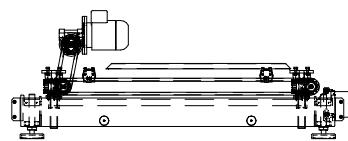
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142614	TELAILO piedi piano mobile BA 200/2F/2T		28,089 kg	1
2	LIB00021	CHIOCCIOLA flangiata Trapezoidale Bronzo TPN 40x7	Bronzo B14	2,218 kg	2
3	LIB00022	Vite TCCE M6 x 16 Acc. 8.8 UNI 5931	Acciaio	0,025 kg	4
4	LIB00114	Piede di sostegno in poliammide M30 L= 235		4,043 kg	2

**DESCRIZIONE
GRUPPO piede piano mobile BA 200/2F/2T**

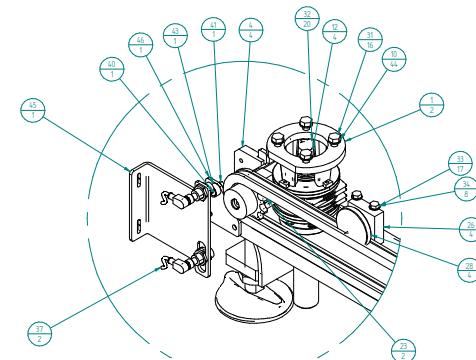
MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	34,36	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142615 REVISIONE 0

ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

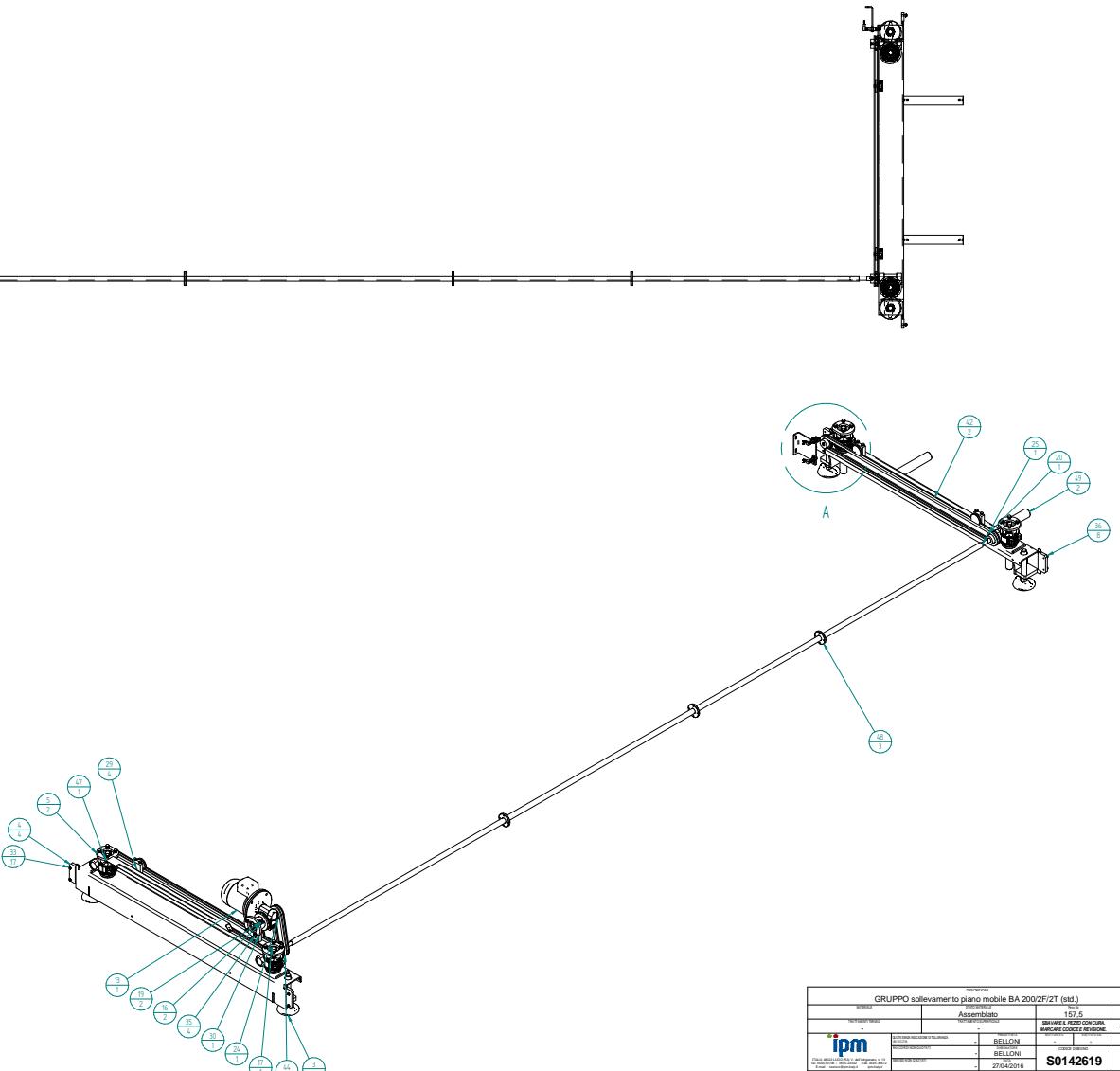
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



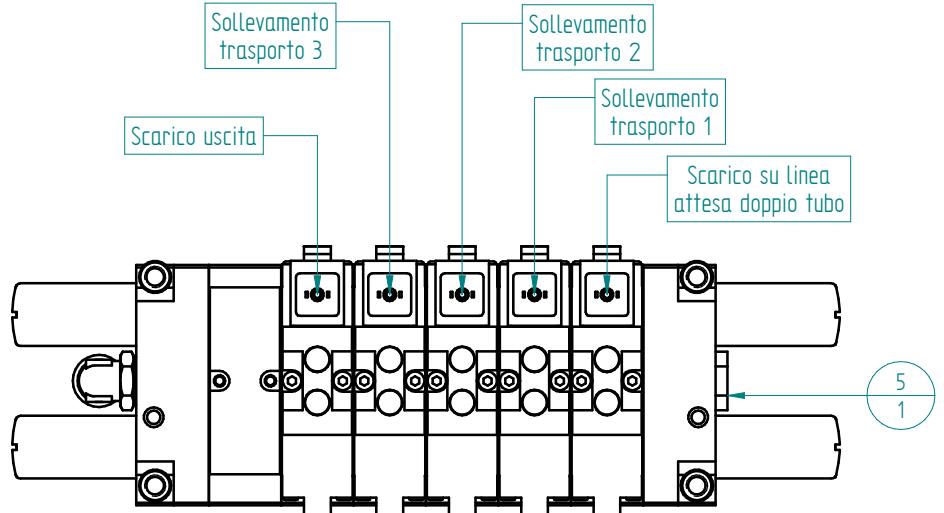
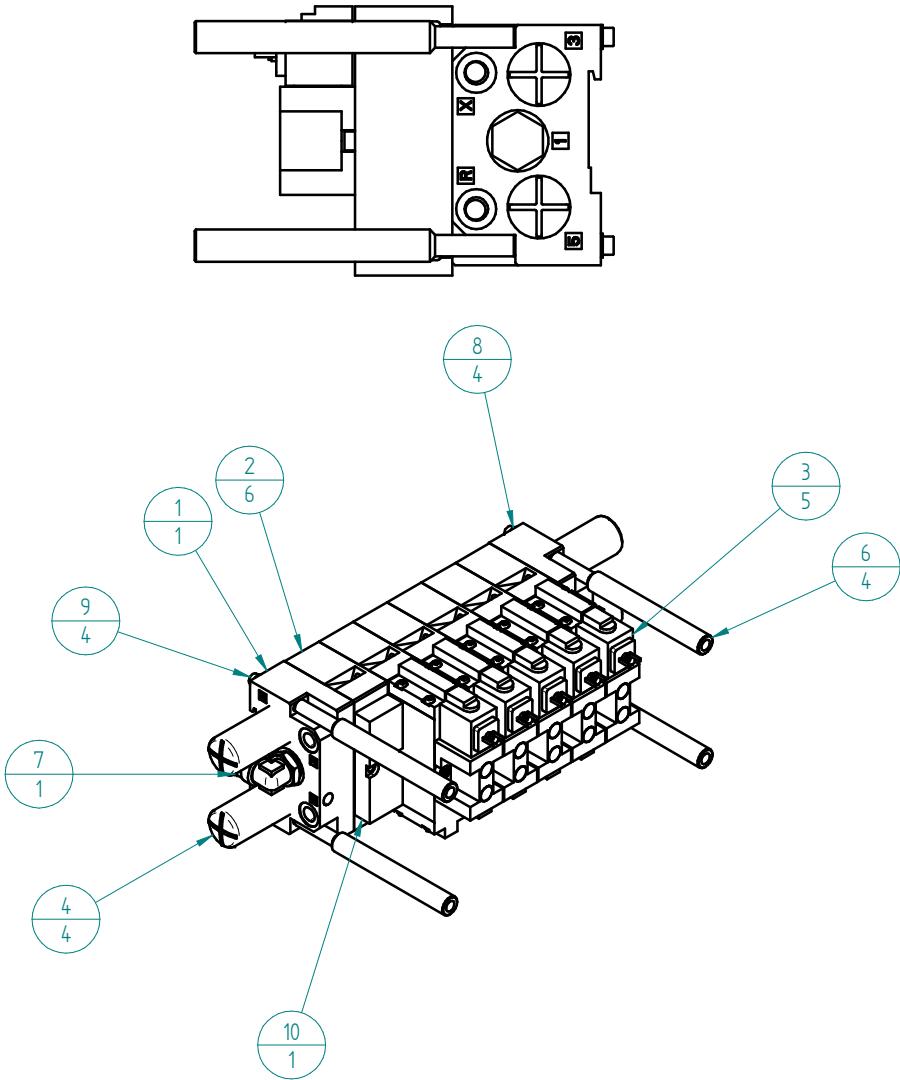
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	L1B001012	Riduttore VF 49 F1 R-1/10 HS	-	6,078 kg	2
3	S0142615	GRUPPO piede piano mobile BA 200/2F	-	68,749 kg	2
4	S0142611	PIASTRA guida piedi	Acciaio Fe 360	2,803 kg	4
5	L1B001015	Riduttore VF 49 F2 10 HS	-	6,000 kg	2
10	L1B00136	Roseta piano M10 Dc. 20 Sp. 2 Acciaio UNI 6592	Acciaio	0,157 kg	44
12	S0142616	VITE peso: TPA_40x7 SOLLEVAMENTO	Acciaio Fe 360	8,988 kg	4
13	L1B000530	Motore 4 poli - 85 - Pm 80 - 0,75 Kw -	-	8,031 kg	1
15*	00017277	DISTANZIALE D. 35 Di. 25 L. 11	Acciaio Fe 360	0,040 kg	1
16	L1B00495	Vite TE M 8 x 20 UNI 5739	Acciaio	0,028 kg	2
50	S0015018	PIGNONE ° CONDOTTO	-	1,344 kg	1
18*	S0015121	ALBERO D. 25 L. 25 Tipo sede, linguetta	Acciaio C 40	0,451 kg	1
19	L1B00209	Roseta piano M10 Dc. 32 Sp. 2 Acciaio UNI 6593	Acciaio	0,028 kg	2
20	S0015109	PIGNONE ° CONDOTTO	-	1,013 kg	1
21*	00016467	DISTANZIALE D. 25 L. 25 L. 10	Fe360	0,045 kg	2
50	S0015111	PIGNONE Dp. 73 61 Hi. 16 Lz. 35 Z. 12 P. 3/4" x 17/16"-S	Fe 360	1,330 kg	1
24	K0402243	PIGNONE Dp. 73 61 Hi. 25 Lz. 35 Z. 12 P. 3/4" x 17/16"-S 5° S. sede linguetta	Fe 360	0,581 kg	1
50	S0142610	TUBO Acciaio D. 20 D. 30. L. 5460	Acciaio C 43	16,831 kg	1
50	00016338	PTASTRA L. 60 L. 60 Sp. 20 SUPPORTO TENDICATENA	Acciaio Fe 360	2,170 kg	4
28	00016339	TENDITORE D. 70 Dl. 70 Hi. 15 Lz. 20 \$ catena	Polizzena	0,246 kg	4
29	L1B00181	Vite TE M 10 x 40 UNI 5739	Acciaio	0,153 kg	4
30	L1B02396	Riduttore M49 VF/F1A10	-	3,000 kg	1
31	L1B00176	Vite TE M 10 x 35 UNI 5739	Acciaio	0,051 kg	6
32	L1B00098	Dado Acc. 8 Espanole M10 UNI 5588	Acciaio Fe 360	0,215 kg	20
33	L1B00963	Roseta piano M8 Dc. 17 Sp. 16 Acciaio 140 UNI 6592	Acciaio	0,037 kg	17
34	L1B00546	Vite TE M 8 x 30 UNI 5739	Acciaio	0,144 kg	8
35	L1B01829	Viti TCBE M 10 x 30	Acciaio	0,092 kg	4
36	L1B03209	TCBE M8 B 25 Acc. 10.9 ISO 7388	Acciaio	0,101 kg	8
37	L1B05499	Proximity DM 18 x 1 con connettore avvitato	Acciaio	0,289 kg	2
40	L1B00249	Vite TX M 8 x 25 UNI 5933	Acciaio	0,011 kg	1
41	L1B00097	Dado Acc. 8 Espanole MALE UNI 5588	Acciaio	0,005 kg	1
42	L1B01875	Ctenza semplice P. 3/4" x 7/16" Sv. 685/75 Passi 36	Acciaio	14,299 kg	2
43	S0130278	TONDO D. 20. L. 10	Acciaio Fe 360	0,018 kg	1
44	L1B01874	Ctenza semplice P. 3/4" x 7/16" Sv. 685/75 Passi 36	Acciaio	1,716 kg	1
45	S0142618	LAMIERA piegata Sp. 5	Acciaio Fe 360	0,916 kg	1
46	S0130280	SAGOMA Taglio Laser Sp. 5	Acciaio Fe 360	0,181 kg	1
47	S0074646	TUBOLARE	Alluminio 11S UNI-9002/5	0,561 kg	1
48	S0060267	GUIDA barra sollevamento piano mobile	Polizzena verde	0,117 kg	3
49	S0142617	TONDO D. 50L. 332,5	Acciaio C 43	10,221 kg	2



DETtaglio A
13



DESCRIZIONE		GRUPPO sollevamento piano mobile BA 200/2F/2T (std.)	
ARTICOLO	Assemblato	157,5	1:10
ARTICOLO SERIA	SEMPLICE E PREZZO CONSUMO MARCATO CONCEDE REVISIONE		
IPM	BELLONI	A0	
Carica massima: 200 kg - Dimensioni: 1200x1000 mm - 100% di carico sulle quattro ruote.	BELLONI	REVISONE	
Modello: BA 200/2F/2T	27/04/2020	SO142619	
		0	



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB05427	Piastra per elettrovalvole Bosch Rexroth ISO 15407-1 26 mm 1825504031 Parte regolabile composta da Inizio+fine	Alluminio	0.000 kg	1
2	LIB05426	Piastra per elettrovalvole Bosch Rexroth ISO 15407-1 26 mm 1825504023 intermedia	Alluminio	1.644 kg	6
3	LIB05424	Elettrovalvola Bosch Rexroth ISO 15407-1 26 mm 5/2 1S 5763510220	Alluminio	1.691 kg	5
4	LIB01901	Silenziatore 3SPL 3/8"	-	0.160 kg	4
5	LIB00905	Raccordo Tappo Esagonale 3/8" Ottone 2611 Camozzi	Ottone cromato	0.019 kg	1
6	S0060440	TONDO L. 120 distanziatore per Elettrovalvole pne ISO 15407-1	Acciaio Fe 360	0.338 kg	4
7	LIB04097	Raccordo gomito grevole rapido 3/8" Ø12 Ottone nichelato	Ottone	0.053 kg	1
8	LIB00911	Rosetta M 4 Di 4.3 De 9 Sp0.8 UNI-6592	Acciaio	0.001 kg	4
9	LIB00269	Vite TCIE M4 x 40 UNI 5931	Acciaio	0.020 kg	4
10	LIB05844	Piastra per elettrovalvole Bosch Rexroth ISO 15407-1 26 mm 1825504033 Tappo	Alluminio	0.058 kg	1

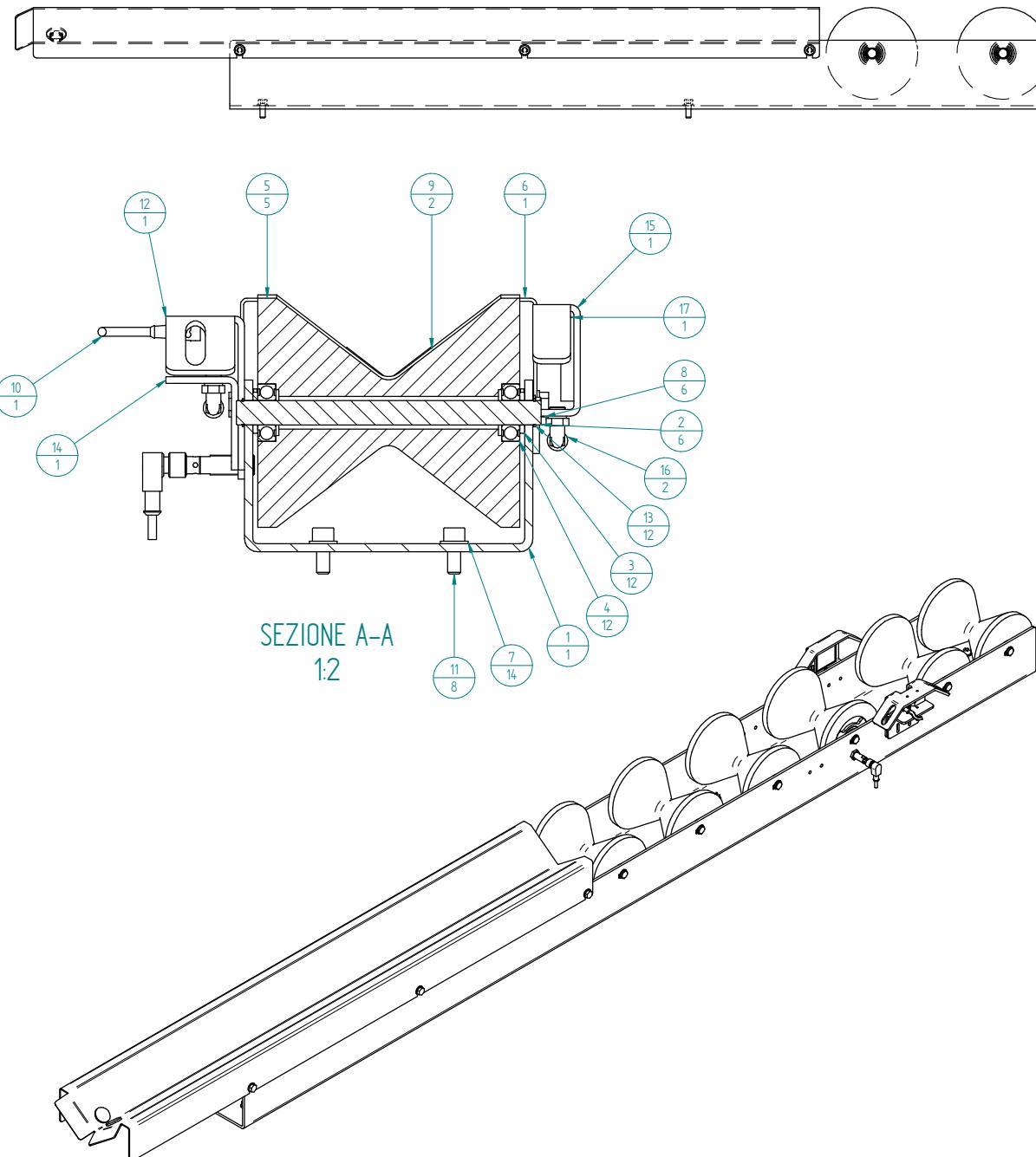
DESCRIZIONE
GRUPPO Elettrovalvole pneumatiche ISO 15407-1 26 mm (6EV 1X 5S)

MATERIALE	STATO MATERIALE Assemblato	Peso Kg 4.52	SCALA 1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: -
		CODICE DISEGNO S0142620	REVISIONE 0

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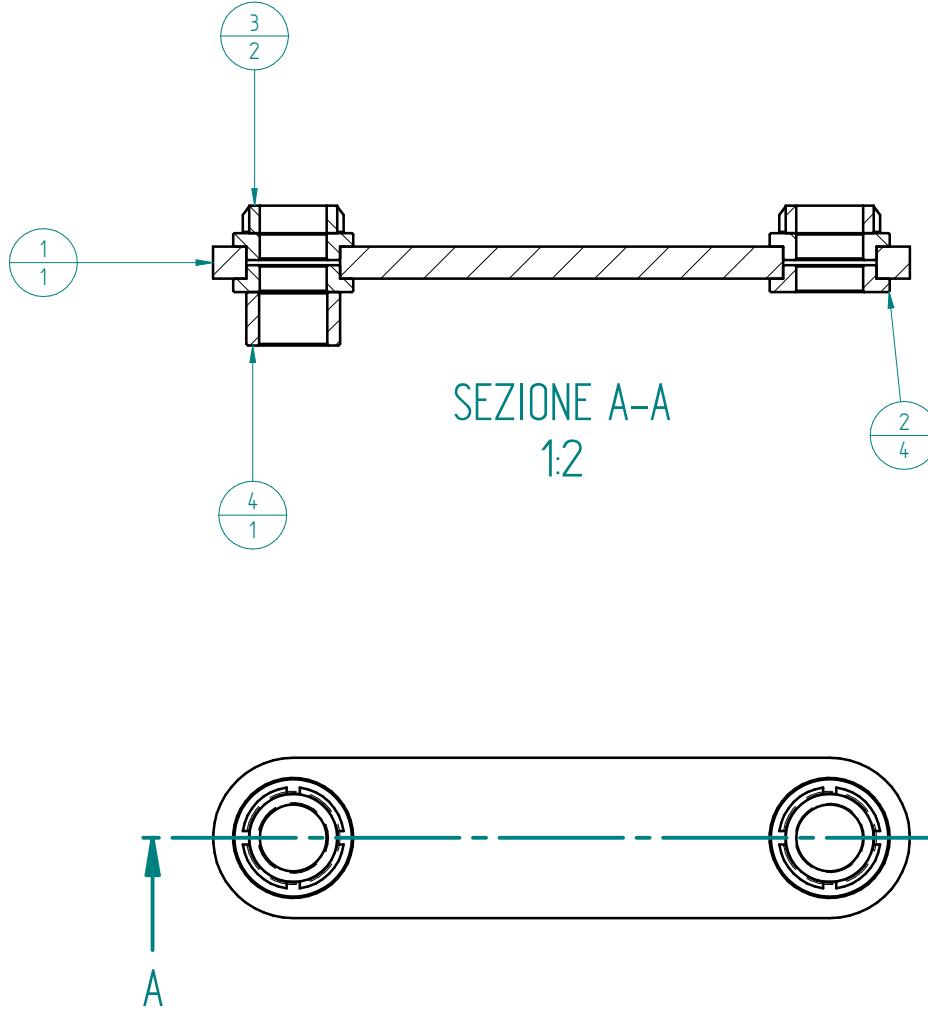
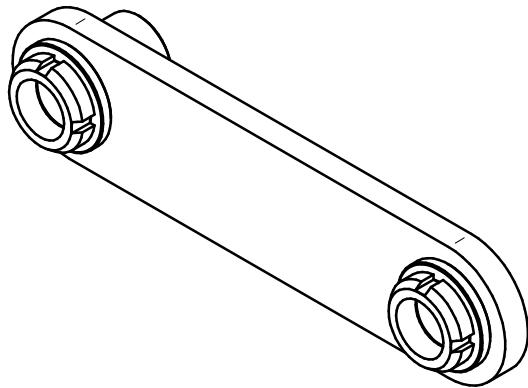
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672

E-mail tecnico@ipm-italy.it ipm-italy.it



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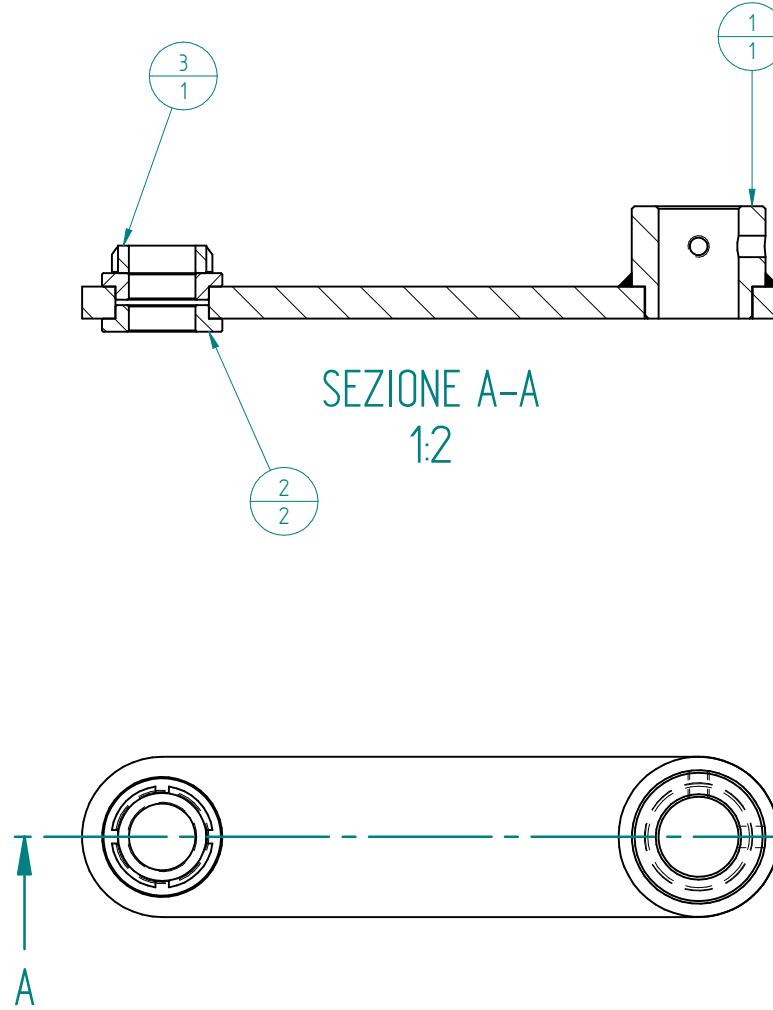
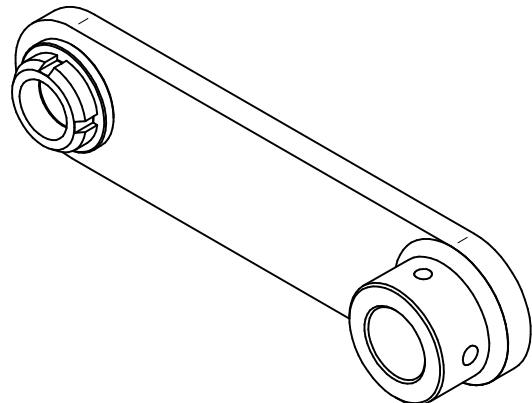
		Descrizione	Materiale	Reso	Ora
1	S0142622	LAMIERA piegata Sp. 5 telai rulliera ingresso	Acciaio Fe 360	29,747 kg	1
2	S0142626	PERNO D. 15 L. 184 Tipo 2_seeger	Acciaio C 40	1,546 kg	6
3	S0074624	DISTANZIALE Di. 15 D. 25L. 3	Acciaio Fe 360	0,086 kg	12
4	LIB00015	Cuscinetto radiale a sfere 6202 2Z (15-35-11)	Acciaio	0,384 kg	12
5	S0142627	RULLO Di. 20 D. 140L. 160 Tipo Conico 105° con 2 cuscinetti	Delrin	8,679 kg	5
6	S0142621	LAMIERA piegata Sp. 2 Tipo inox	Inox	6,918 kg	1
7	LIB00963	Rosetta piana M8 De. 17 Sp. 1,6 Acc. 140HV UNI 6592	Acciaio	0,030 kg	14
8	LIB00965	VITE TE M 8 x 10 UNI EN 24017	Acciaio	0,061 kg	6
9	S0018350	GUIDA \$ SCIVOLO	Polizene	0,008 kg	2
10	LIB05514	Fotocellula a riflessione E3Z-R86 con connettore a 90° (omron)	PVC	0,013 kg	1
11	LIB00043	Vite TCIE M 8 x 20 UNI 5931	Acciaio	0,117 kg	8
12	S0142623	LAMIERA piegata Sp. 4 staffa fotocellula	Acciaio Fe 360	0,403 kg	1
13	LIB00019	Anello elastico per dberi Ø 15 UNI 7435	Fe	0,008 kg	12
14	S0142624	LAMIERA piegata Sp. 4	Acciaio Fe 360	0,230 kg	1
15	S0142625	LAMIERA piegata Sp. 4 staffa carter fotocellula	Acciaio Fe 360	0,411 kg	1
16	LIB05548	Raccordo gomito maschio girevole rapido 1/8" Ø 6 Ottone nichelato	Ottone	0,044 kg	2
17	LIB09056	Catarinfrangente Sick P250 Art.5304812 (in dotazione con fotocellula WL8.)	PP (Polipropilene)	0,019 kg	1
18*	S0146921	RULLO Di. 20 D. 140L. 160 Tipo Conico 105° con 2 cuscinetti (lettura blink)	Delrin	1,706 kg	1
19*	00010544	INSERTO	Fe 360	0,089 kg	1
20*	LIB05533	Proximity Con connettore M 12x1 DN M 12 x 1	Acciaio	0,037 kg	1
21*	LIB00915	Ghiera Proximity M12	-	0,004 kg	1
22*	LIB05534	Connettore M 12 x 1 a 90° con cavo 10 mt	PVC	0,009 kg	1
DESCRIZIONE GRUPPO rulliera ingresso linea BA 200/2F/2T (std.)					
MATERIALE		STATO MATERIALE	Assemblato	Peso Kg	SCALA
TRATTAMENTI TERMICI				50,54	1:6
SBARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.					
ipm					
ITALIA: 46022 LUOGO (RA) V. dell'Angelino, n. 13 Tel. 0545-30708 / 0545-23342 - fax: 0545-30672 E-mail: tecnicco@ipm-italy.it - ipm-italy.it					
QUOTE SENZA INDICAZIONE DI TOLLERANZA		BELLONI	PROGETTORE	SOSTITUIRE IL:	
RACCORDI NON QUOTATI		-	BELLONI	SOSTITUITO DAL:	A2
SIMUSSI NON QUOTATI		-	BELLONI	CODICE DISEGNO	REVISIONE
		-	BELLONI	DATA	
		-	BELLONI	27/04/2016	
S0142628					
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni e termini di legge.					



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142629	SAGOMA Taglio Laser Sp. 12	Acciaio Fe 360	1,212 kg	1
2	S0133397	BOCCOLA (25-35-45-5-10) Bronzo	Bronzo B14	0,274 kg	4
3	LIB01308	Ghiera autobloccante normale M25x1,5	Acciaio	0,088 kg	2
4	S0092438	DISTANZIALE Di. 25,5 D. 35 L. 20	Acciaio Fe 360	0,070 kg	1

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
-		Assemblato		1,63	1:2
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA BELLONI	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	-	DISEGNATORE BELLONI	CODICE DISEGNO S0142630	
	SMUSSI NON QUOTATI	-	DATA 27/04/2016	REVISIONE 0	

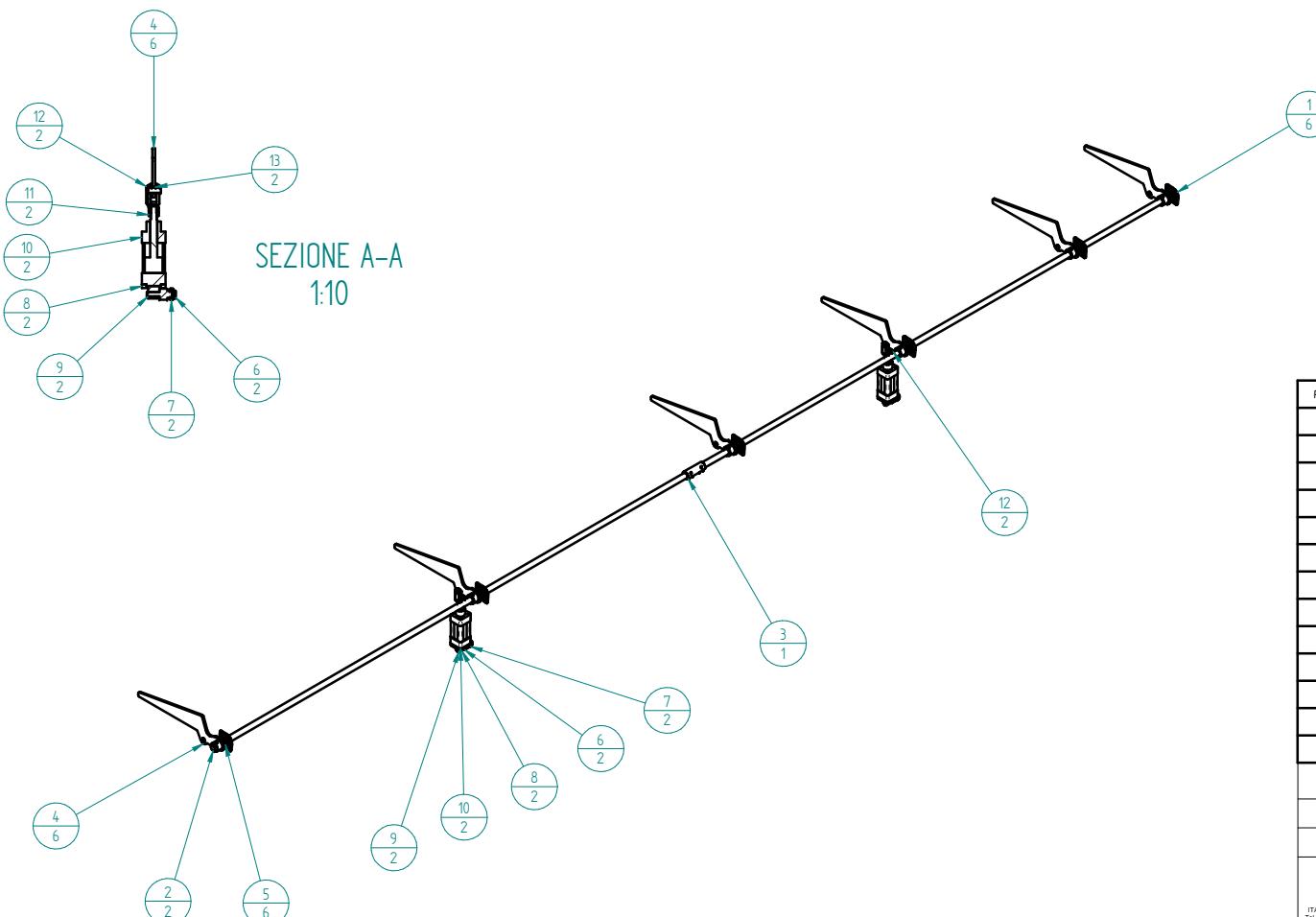
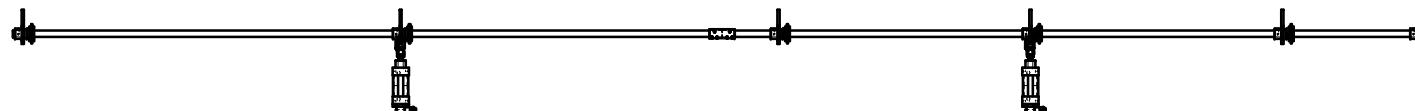
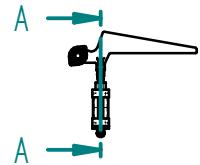
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142632	LEVA torsione sollevamento trasporto		1,536 kg	1
2	S0133397	BOCCOLA (25-35-45-5-10) Bronzo	Bronzo B14	0,137 kg	2
3	LIB01308	Ghiera autobloccante normale M25x1,5	Acciaio	0,044 kg	1

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
		Assemblato		1,71	1:2
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-		-		SOSTITUISCE IL:	SOSTITUITO DAL:
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it		PROGETTISTA: BELLONI DISEGNATORE: BELLONI DATA: 27/04/2016		A3	
		QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768		CODICE DISEGNO: S0142633	
		RACCORDI NON QUOTATI		REVISIONE: 0	
		SMUSSI NON QUOTATI			

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

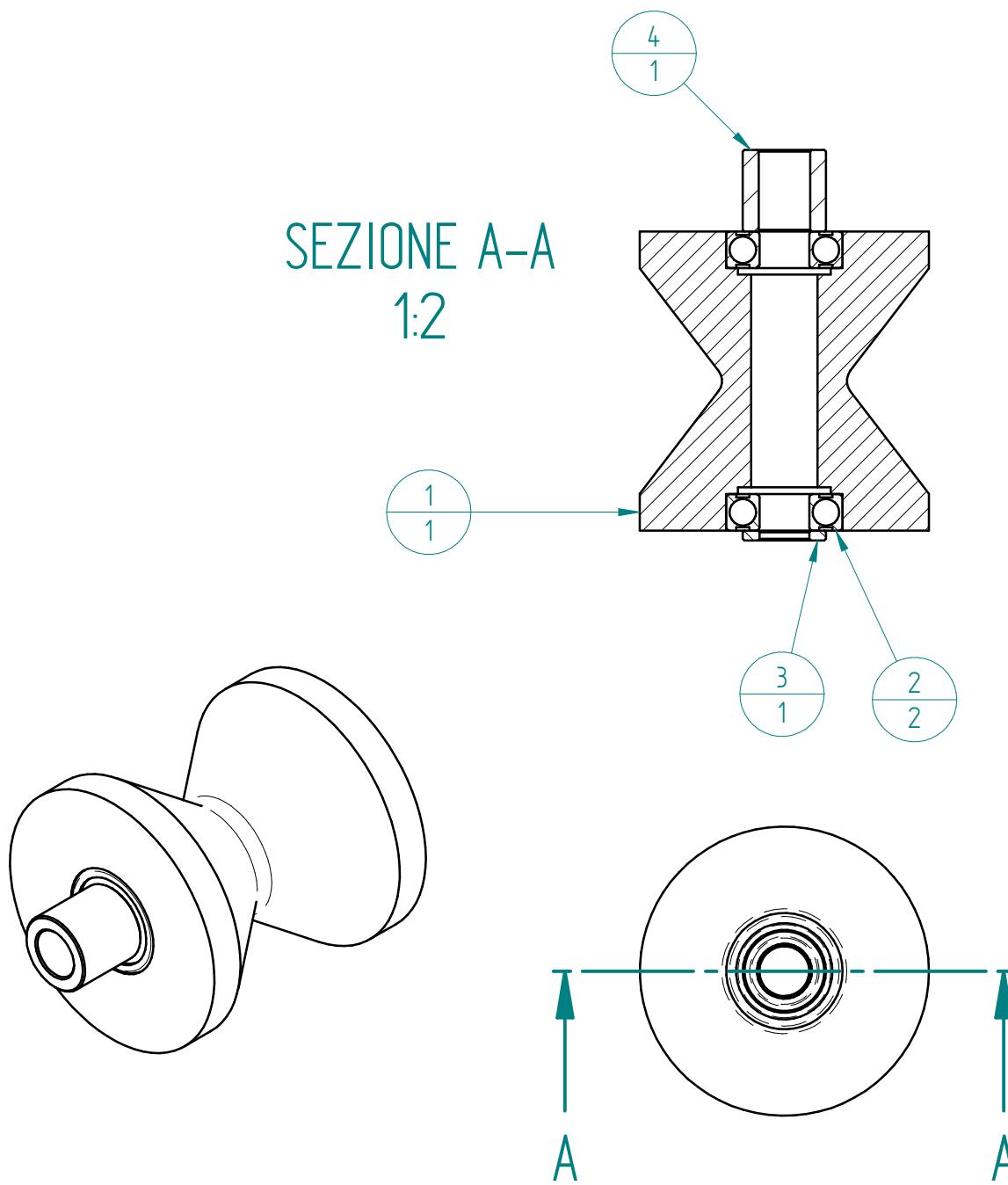


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	LIB00591	Supporto ASPFL 205 bi = 25	Acciaio Fe 360	2.374 kg	6
2	S0142466	TRAFILEA D. 25 L. 2815	Acciaio C 43	21.694 kg	2
3	S0060263	TUBO Di. 25 D. 35 L. 100 Tipo Trafilato	Acciaio Fe 360	0.364 kg	1
4	S0142638	LEVA scarico tubo BA 200/2F/2T		11.166 kg	6
5	S0142634	DISTANZIALE Di. 25,5 D. 35 L. 12	Acciaio Fe 360	0.253 kg	6
6	S0142635	PERNO D. 12 fissaggio cilindro	Acciaio C 40	0.404 kg	2
7	LIB01166	Ghiera autobloccante normale M20x1	Acciaio	0.060 kg	2
8	LIB00992	Cerniere Maschio CM 50 ISO MP4	Alluminio	0.269 kg	2
9	LIB00482	Anello elastico per alberi Ø 12 UNI 7435	Fe 360	0.001 kg	2
10	LIB01467	Cilindro pneumatico ISO 6431 Ø50 corsa 40		1.242 kg	2
11	LIB00059	Dado Acc. 8 Esagonale Basso Passo Fine M16x1,5 UNI 5589	Acciaio	0.036 kg	2
12	LIB00791	Forcella Femmina FF 16	-	0.340 kg	2
13	LIB06333	Boccola PAP 1610 P10 (16-18-10)	Acciaio	0.008 kg	2

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	
TRATTAMENTI TERMICI		Assemblato		38,21	
SBAVARARE IL PEZZO CON CURA. MARCARIE CODICE E REVISIONE.					
ipm		PROGETTISTA BELLONI	SOSTITUISCE IL	SOSTITUITO DAL	A2
ITALIA, 46022 LUOGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnicco@ipm-italy.it ipm-italy.it	RACCORDI NON QUOTATI	DESIGNATORE BELLONI	DATA	CODICE DISEGNO	REVISIONE
	SMUSSI NON QUOTATI		27/04/2016	S0142639	0

SEZIONE A-A

1:2

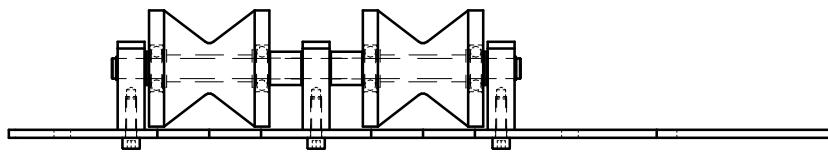
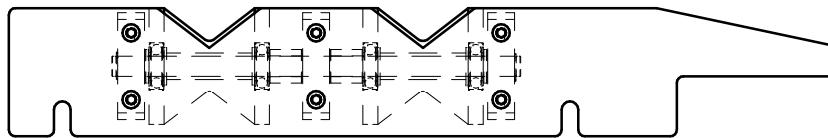
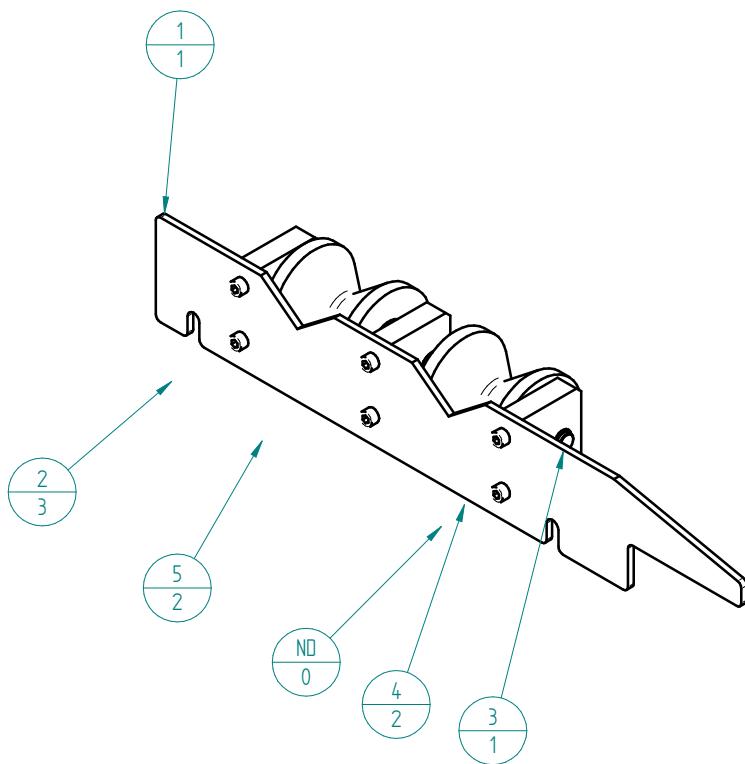


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142641	RULLO Di. 20 D. 87 L. 90 Tipo Conico 105° con 2 cuscinetti	Delrin	0,427 kg	1
2	LIB00015	Cuscinetto radiale a sfere 6202 2Z (15-35-11)	Acciaio	0,064 kg	2
3	S0074624	DISTANZIALE Di. 15 D. 25 L. 3	Acciaio Fe 360	0,007 kg	1
4	S0142642	DISTANZIALE Di. 15,5 D. 25 L. 24,5	Acciaio Fe 360	0,058 kg	1

DESCRIZIONE

GRUPPO rullo folle D. 87 L.90 conicità 105°

MATERIALE		STATO MATERIALE Assemblato	Peso Kg 0,55	SCALA 1:2
TRATTAMENTI TERMICI -		TRATTAMENTO SUPERFICIALE -	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.	
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA BELLONI	SOSTITUISCE IL: -
	RACCORDI NON QUOTATI	-	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	-	DATA 27/04/2016	CODICE DISEGNO S0142643
				REVISIONE 0
MODIFICA				

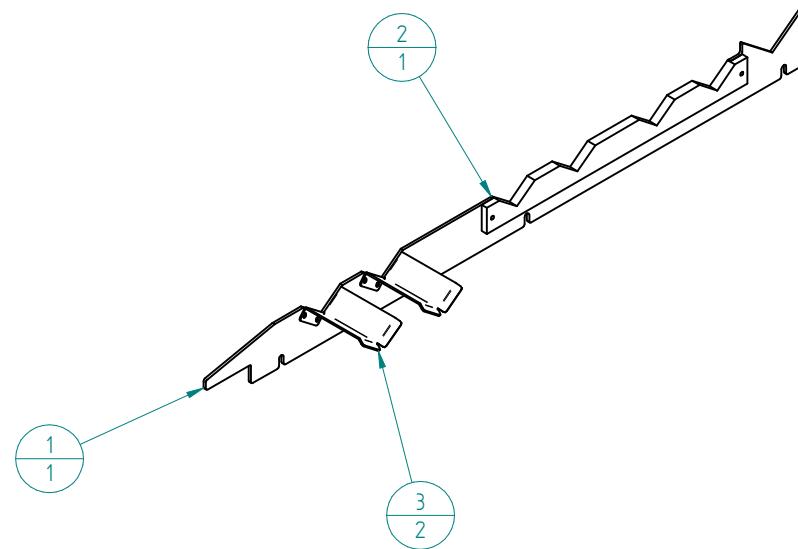
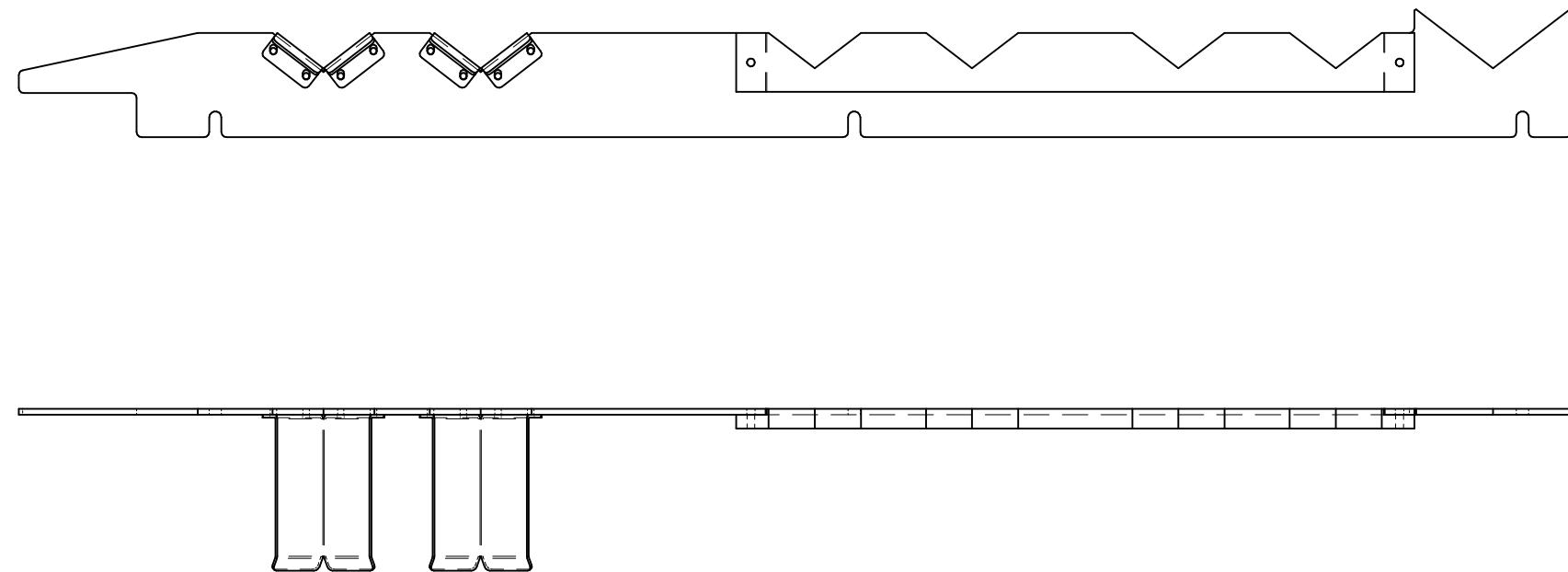


Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142645	SAGOMA Taglio Laser Sp. 6	Acciaio Fe 360	2,287 kg	1
2	S0142702	PIASTRA Sp. 20 supporto rullo	Alluminio 11S UNI-9002/5	0,835 kg	3
3	S0142640	PERNO D. 15 L. 306 Tipo 2_seeger	Acciaio C 40	0,424 kg	1
4	LIB00019	Anello elastico per alberi Ø 15 UNI 7435	Fe	0,001 kg	2
5	S0142643	GRUPPO rullo folle D. 87 L.90 conicità 105°		1,112 kg	2
6*	LIB00077	Vite TCIE M8 x 30 UNI 5931	Acciaio	0,112 kg	6

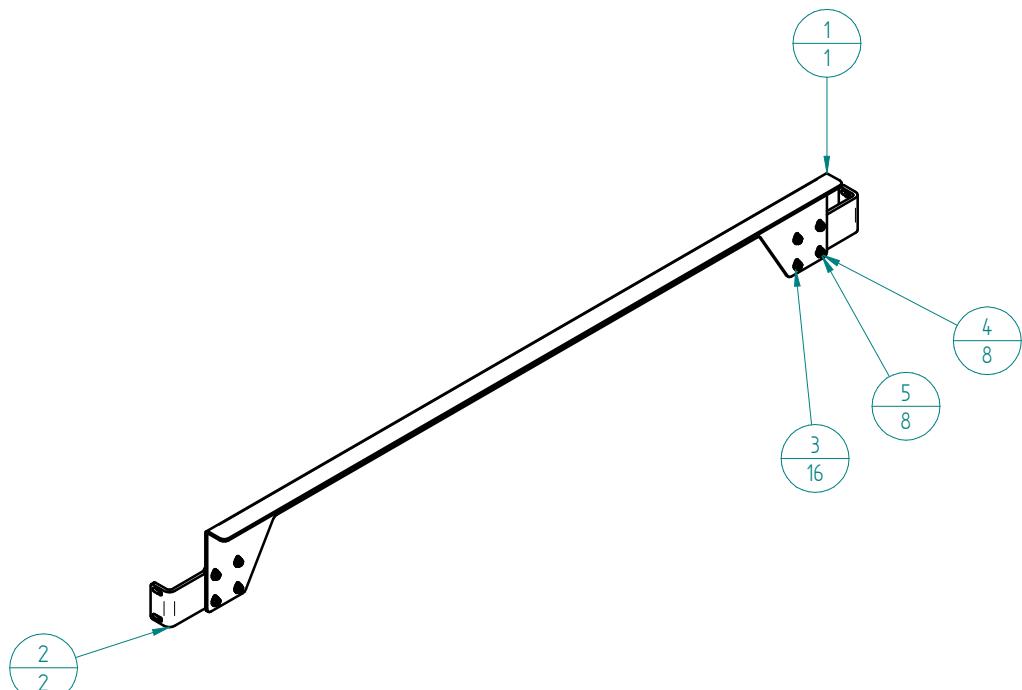
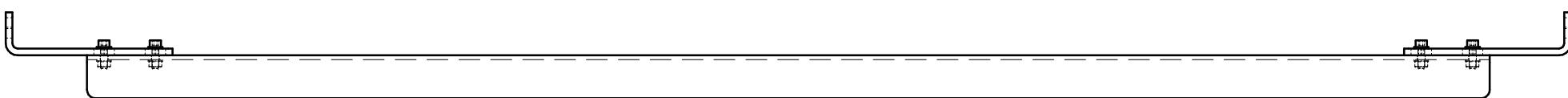
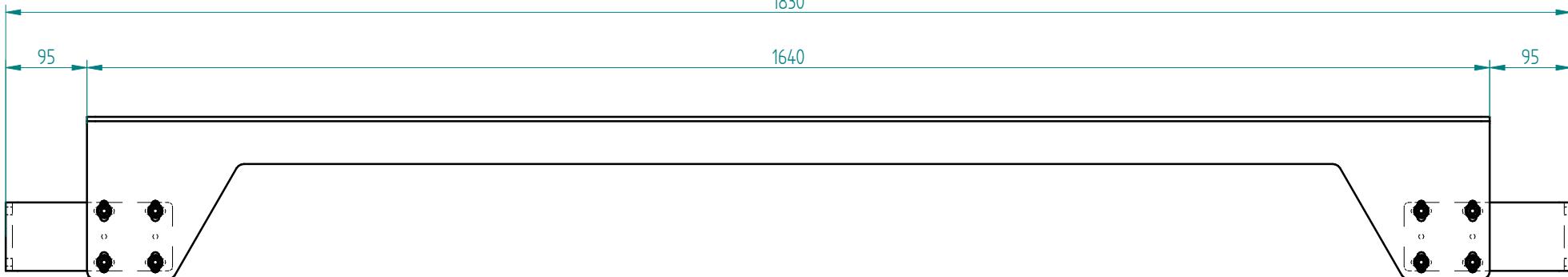
DESCRIZIONE
GRUPPO rulliera aggiuntiva supporto tubi BA 200/2F/2T doppio tubo (std.)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	4,78	1:4
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142646 REVISIONE 0

ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail: tecnico@ipm-italy.it ipm-italy.it



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142648	SAGOMA Taglio Laser Sp. 6	Acciaio Fe 360	5.355 kg	1
2	S0142647	PIASTRA Tipo polizene supporto tubi BA 200/2F/2T (doppio tubo)	Polizene verde	0.636 kg	1
3	S0142649	LAMIERA piegata Sp. 3 scivolo supporto tubo	Inox	1,020 kg	2
DESCRIZIONE					
GRUPPO paletta supporto tubi BA 200/2F/2T doppio tubo (std.)					
MATERIALE		STATO MATERIALE	Peso Kg		SCALA
		Assemblato	7,01		1:5
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.		LOUDspeaker icon
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it		PROGETTISTA BELLONI	SOSTITUISCE IL:		MODIFICA:
		RACCORDI NON QUOTATI	- DATA		CODICE DISEGNO
		SMUSSI NON QUOTATI	27/04/2016		REVISIONE
			S0142650		0



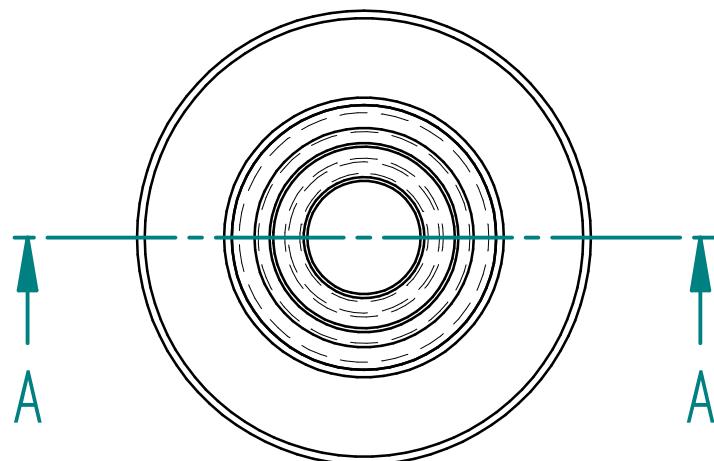
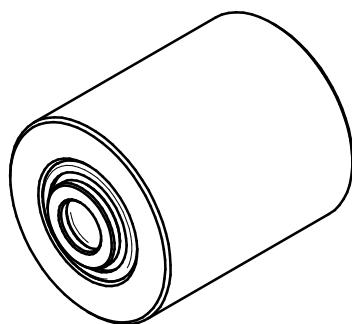
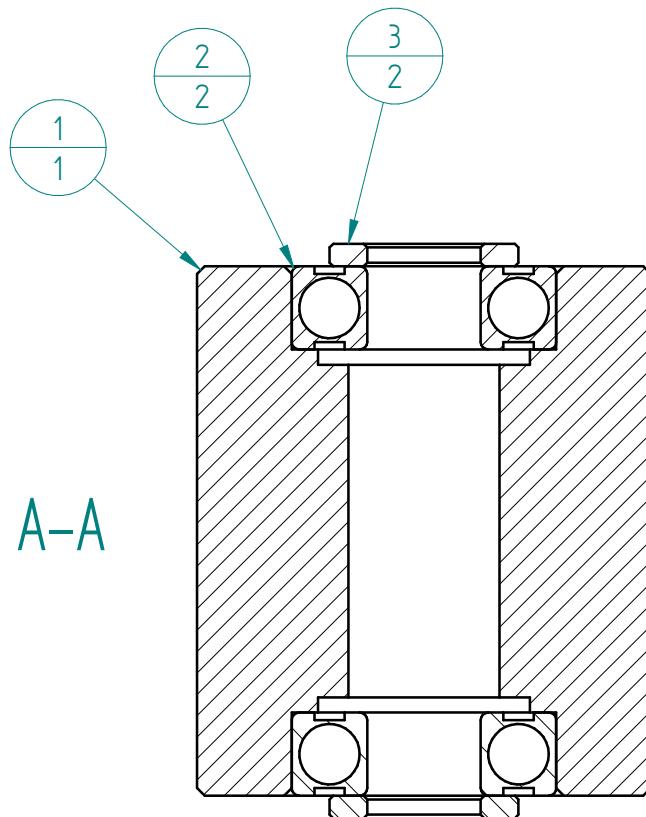
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142667	LAMIERA piegata Sp. 5	Acciaio Fe 360	7.644 kg	1
2	S0142668	LAMIERA piegata Sp. 8	Acciaio Fe 360	2.167 kg	2
3	LIB00963	Rosetta piana M8 De. 17 Sp. 1,6 Acc. 140HV UNI 6592	Acciaio	0.034 kg	16
4	LIB00150	Vite TCIE M8 x 25 UNI 5931	Acciaio	0.133 kg	8
5	LIB00097	Dado Acc. 8 Esagonale M8 UNI 5588	Acciaio	0.039 kg	8

DESCRIZIONE
GRUPPO traverso supporto pannelli BA 200/2F/2T (std.)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
-	Assemblato	10	1:5
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-	-	-
ipm ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142669 REVISIONE 0

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

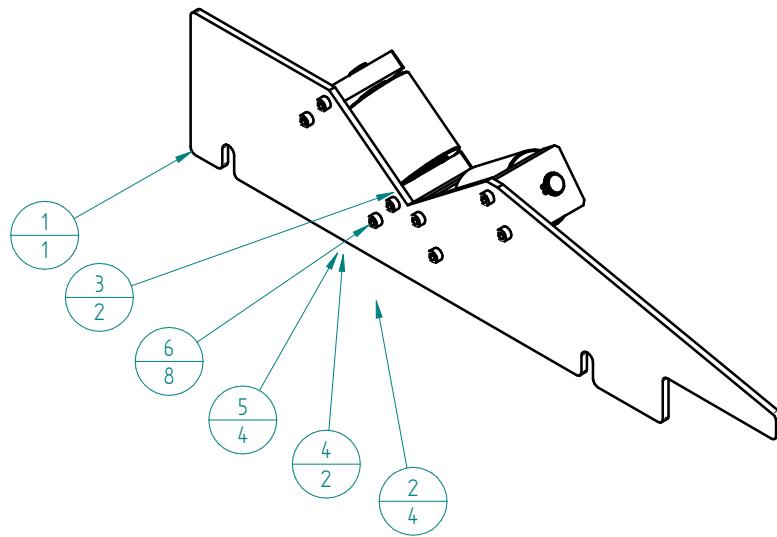
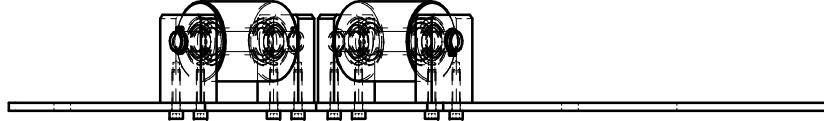
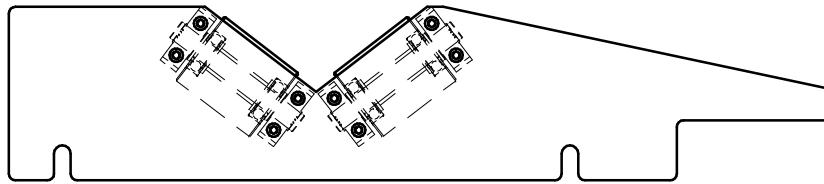
SEZIONE A-A 1:1



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142672	RULLO Di. 20 D. 60 L. 70 con 2 cuscinetti	Delrin	0,229 kg	1
2	LIB00015	Cuscinetto radiale a sfere 6202 2Z (15-35-11)	Acciaio	0,064 kg	2
3	S0074624	DISTANZIALE Di. 15 D. 25 L. 3	Acciaio Fe 360	0,014 kg	2

DESCRIZIONE GRUPPO rullo folle D. 60 L. 70

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	0,3	1:2
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL: -
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	RACCORDI NON QUOTATI	DISEGNATORE BELLONI	SOSTITUITO DAL: -
	SMUSSI NON QUOTATI	DATA 27/04/2016	CODICE DISEGNO S0142673
			REVISIONE 0
			MODIFICHE



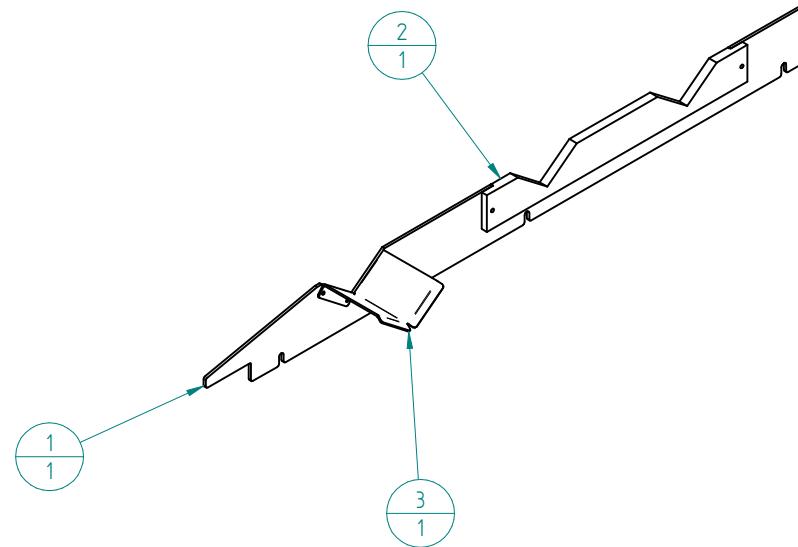
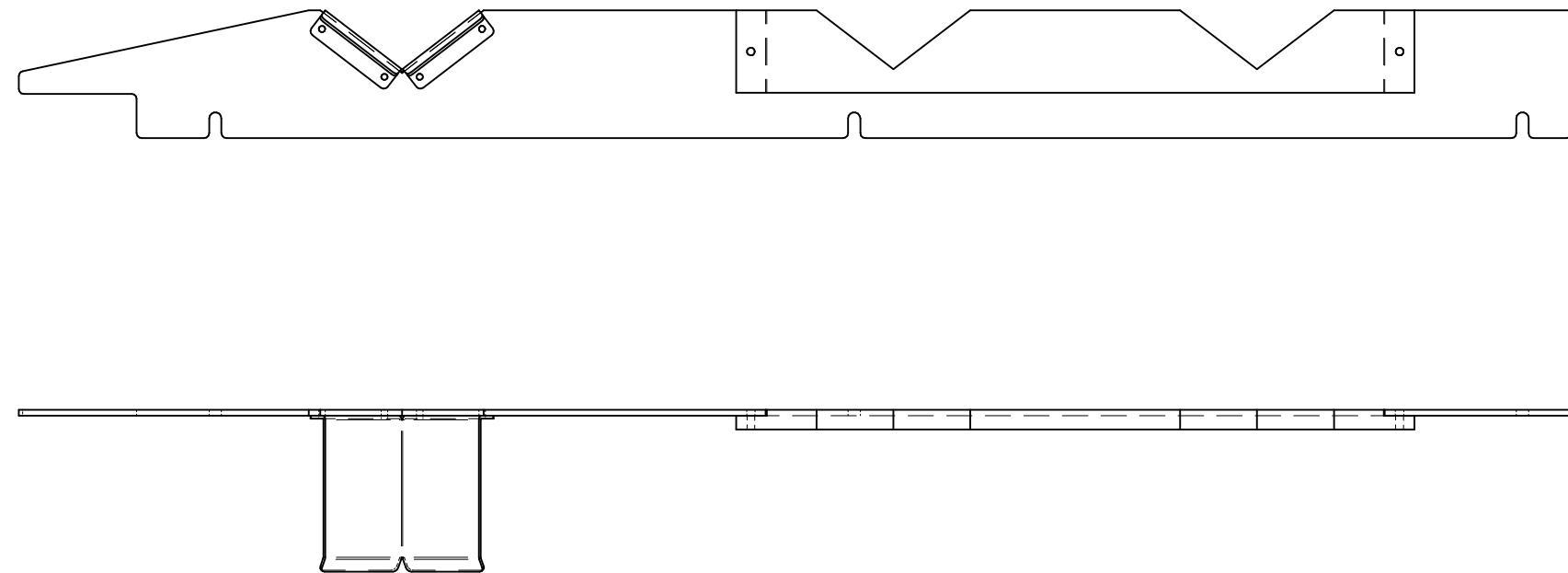
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142671	SAGOMA Taglio Laser Sp. 6	Acciaio Fe 360	2,795 kg	1
2	S0142680	PIASTRA Sp. 15 supporto rulli	Alluminio 11S UNI-9002/5	0,510 kg	4
3	S0142673	GRUPPO rullo folle D. 60 L. 70		0,615 kg	2
4	S0142674	PERNO D. 15 L. 116 Tipo 2_seeger	Acciaio C 40	0,321 kg	2
5	LIB00019	Anello elastico per alberi Ø 15 UNI 7435	Fe	0,003 kg	4
6	LIB00193	Vite TCIE M6 x 30 UNI 5931	Acciaio	0,077 kg	8

DESCRIZIONE
GRUPPO rulliera aggiuntiva supporto tubi BA 200/2F/2T singolo tubo (std.)

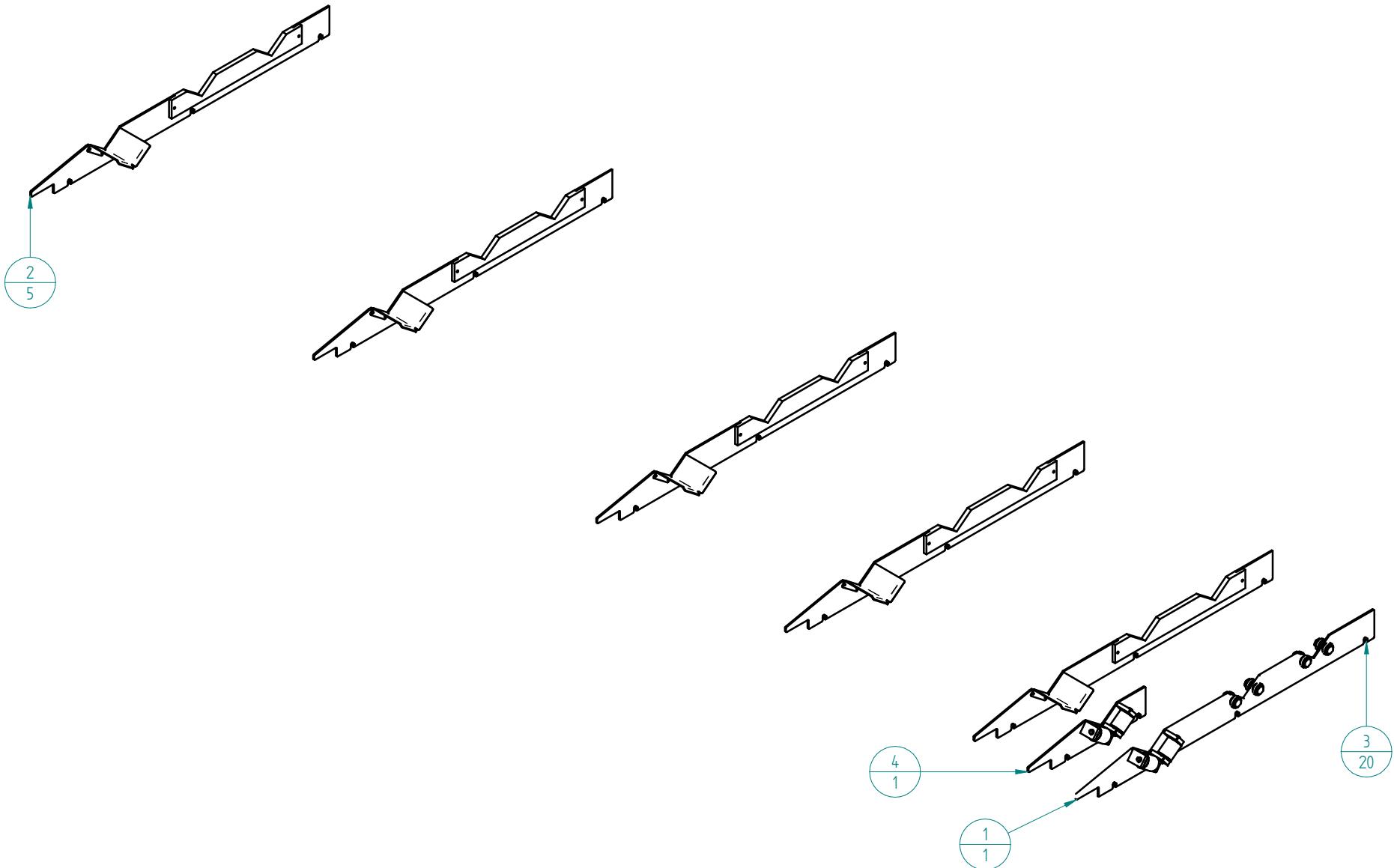
MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	4,34	1:4
TRATTAMENTI TERMICI	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-	-		
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142675 REVISIONE 0

ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142678	SAGOMA Taglio Laser Sp. 6	Acciaio Fe 360	6.145 kg	1
2	S0142677	PIASTRA Tipo polizene supporto tubi BA 200/2F/2T (singolo tubo)	Polizene verde	0.892 kg	1
3	S0142676	LAMIERA piegata Sp. 3 scivolo supporto tubo	Inox	0.854 kg	1
DESCRIZIONE					
GRUPPO paletta supporto tubi BA 200/2F/2T singolo tubo (std.)					
MATERIALE		STATO MATERIALE	Peso Kg		SCALA
		Assemblato	7,89		1:5
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.		
 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it		PROGETTISTA BELLONI	SOSTITUISCE IL:		MODIFICA:
		RACCORDI NON QUOTATI	-		SOSTITUITO DAL:
		SMUSSI NON QUOTATI	-		A3
		DATA	CODICE DISEGNO		REVISIONE
		27/04/2016	S0142679		0

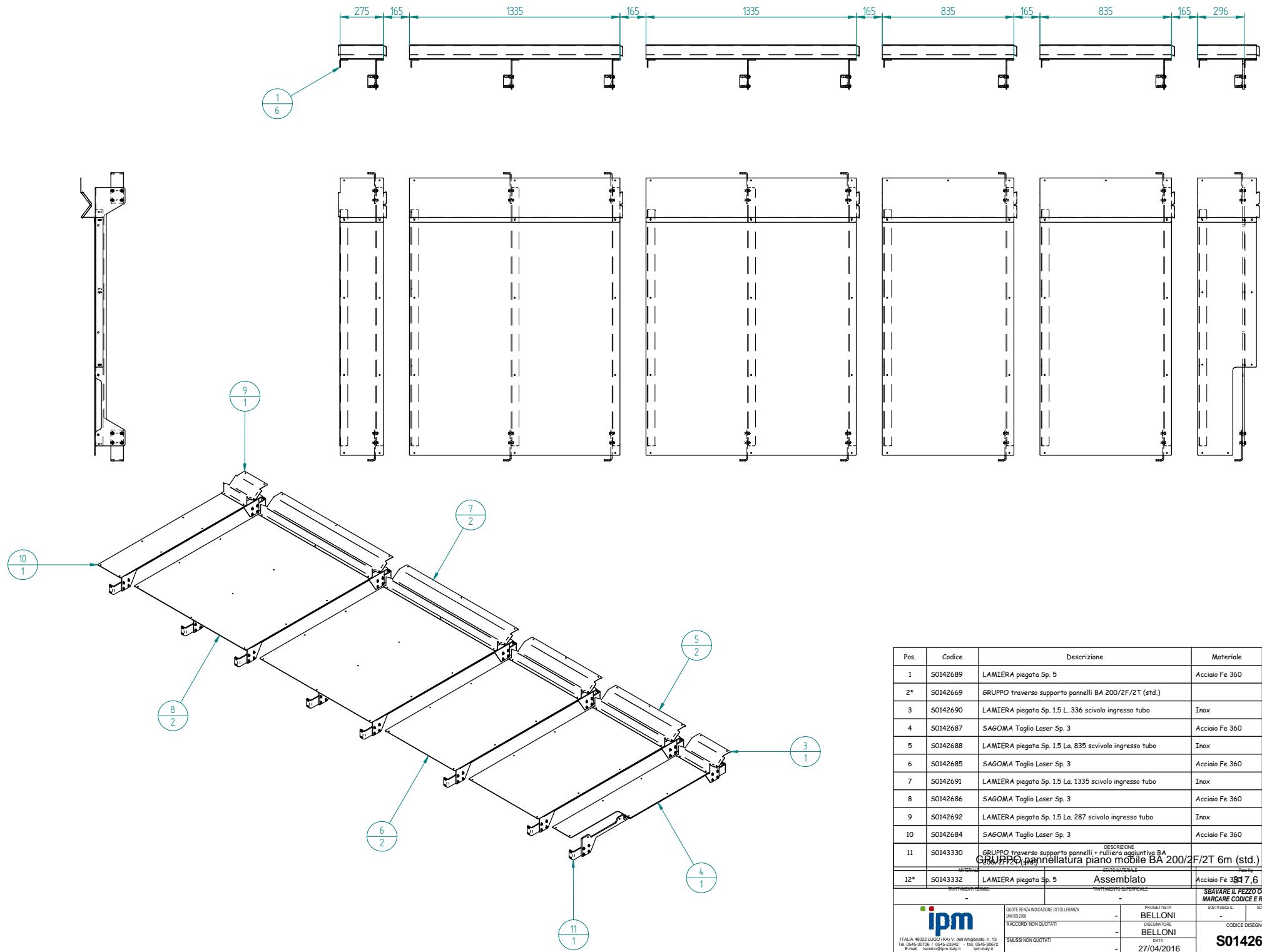


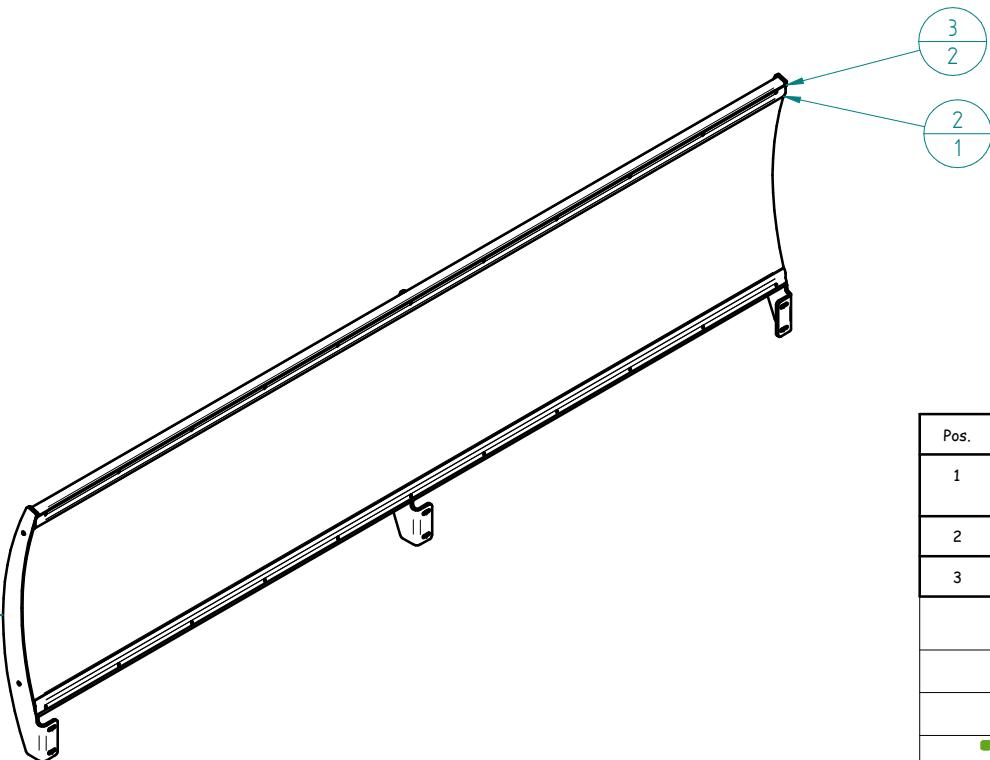
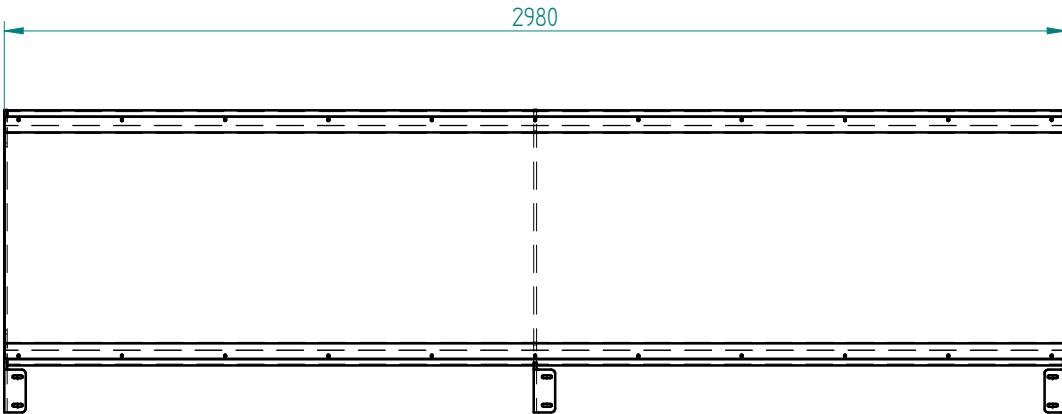
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0143331	GRUPPO paletta supporto tubi con rulliera BA 200/2F/2T singolo tubo (std.)		11.305 kg	1
2	S0142679	GRUPPO paletta supporto tubi BA 200/2F/2T singolo tubo (std.)		39.455 kg	5
3	L1BO1652	VITE TE M 12 x 16 UNI EN 24017	Acciaio	0.643 kg	20
4	S0142675	GRUPPO rulliera aggiuntiva supporto tubi BA 200/2F/2T singolo tubo (std.)		4.345 kg	1

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
-		Assemblato		55.74	1:15
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA BELLONI	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	-	DISEGNATORE BELLONI	CODICE DISEGNO	
	SMUSSI NON QUOTATI	-	DATA 27/04/2016	REVISIONE S0142683	

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Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



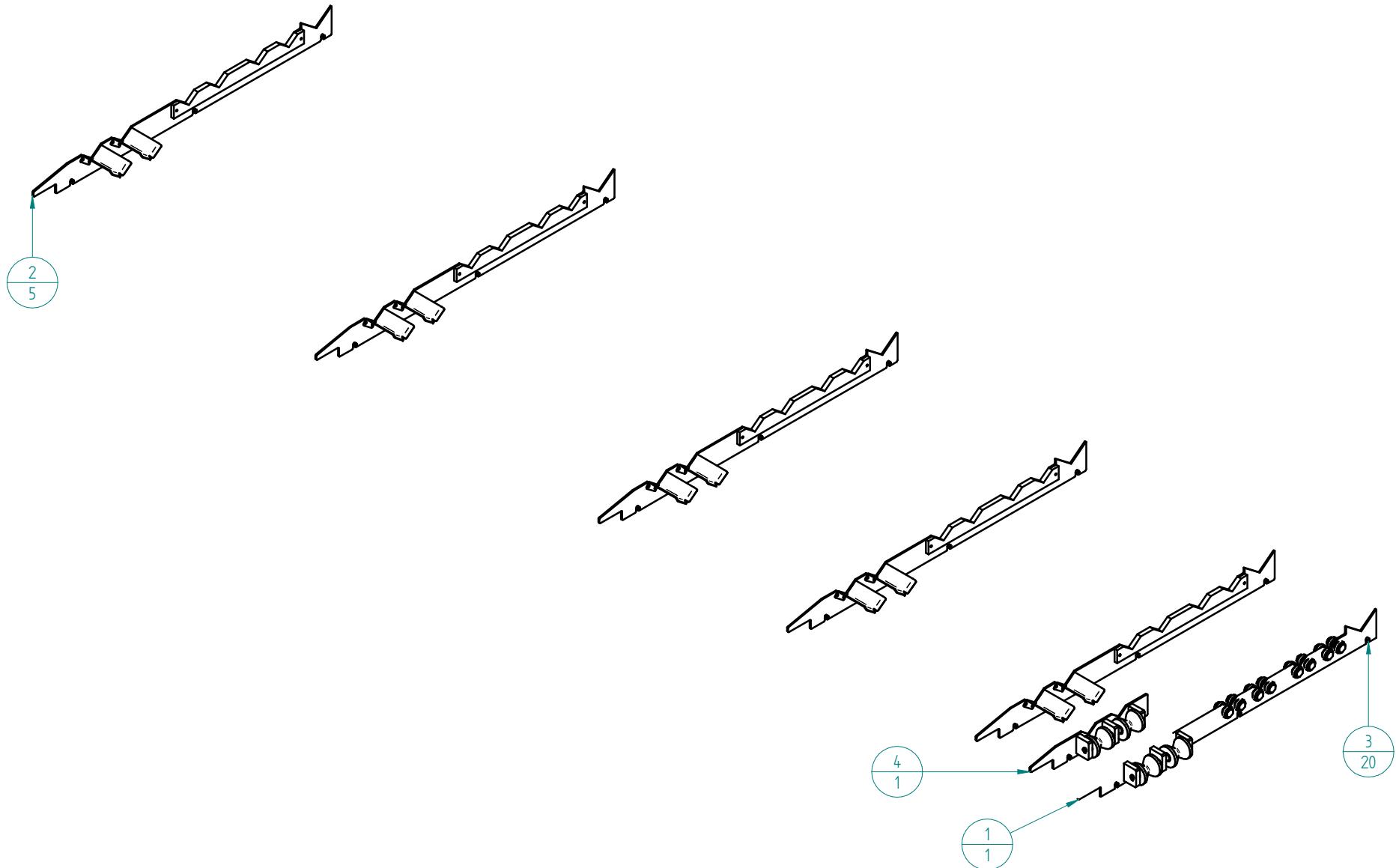


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142698	TELAIO protezione laterale piano mobile L. 2980 (zona piano di lavoro)		35.125 kg	1
2	LIB10878	Pannello Sp. 4 L. 2978 La. 641 norma 9030/112 curvo	Lexan	7.095 kg	1
3	S0142699	PROFILATO Sp. 2 L. 2978 x fissaggio pannelli lexan sp. 4 mm	Inox	4.252 kg	2

DESCRIZIONE GRUPPO protezione laterale L. 2980 (zona piano lavoro)

MATERIALE	STATO MATERIALE	Peso Kg	SCALA
	Assemblato	46.47	1:15
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.
-	-	-	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI SMUSSI NON QUOTATI	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 27/04/2016	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142700 REVISIONE 0

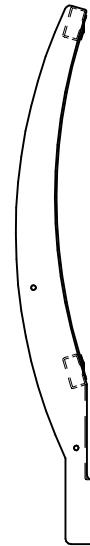
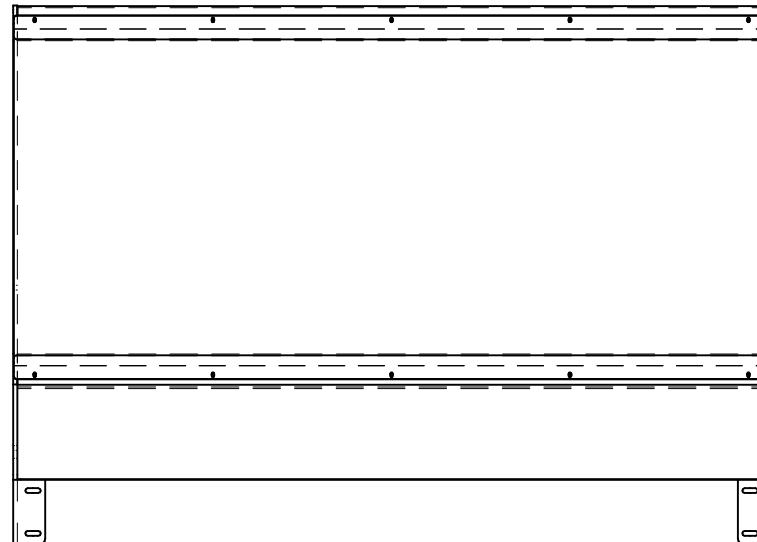
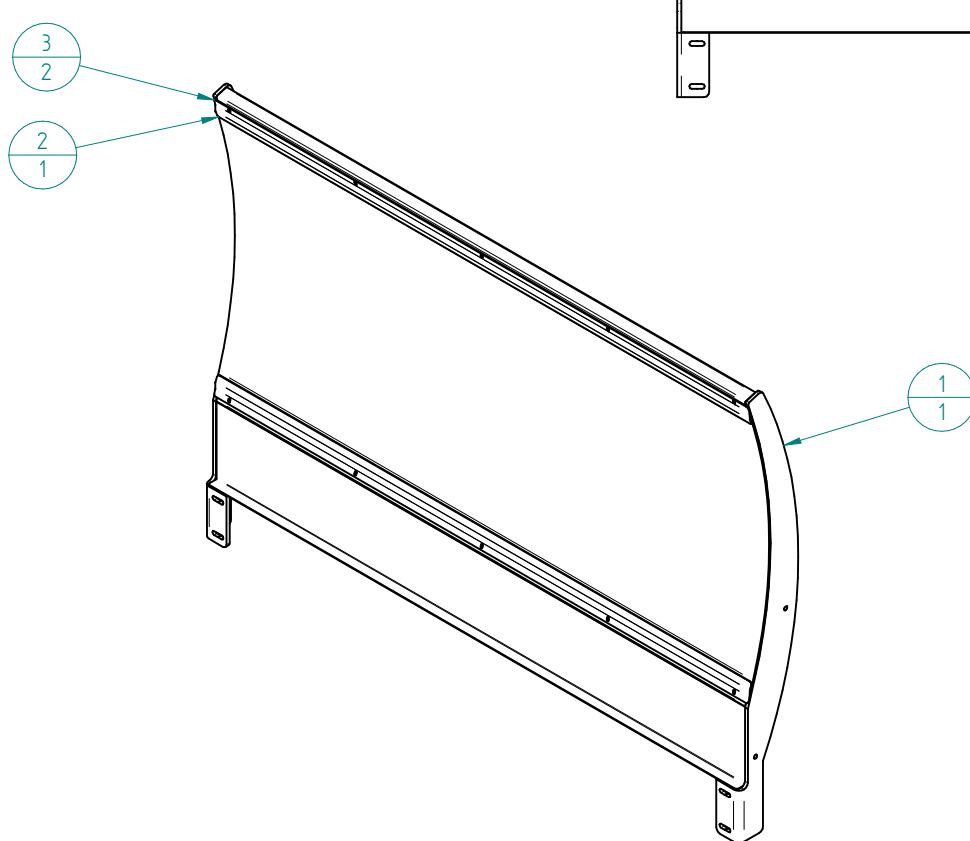
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Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0143333	GRUPPO paletta supporto tubi con rulliera BA 200/2F/2T doppio tubo (std.)		12.202 kg	1
2	S0142650	GRUPPO paletta supporto tubi BA 200/2F/2T doppio tubo(std.)		35.054 kg	5
3	L1B01652	VITE TE M 12 x 16 UNI EN 24017	Acciaio	0.643 kg	20
4	S0142646	GRUPPO rulliera aggiuntiva supporto tubi BA 200/2F/2T doppio tubo (std.)		4.788 kg	1

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
-		Assemblato		52.68	1:15
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA BELLONI	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	-	DISEGNATORE BELLONI	CODICE DISEGNO	
	SMUSSI NON QUOTATI	-	DATA	REVISIONE	
		-	27/04/2016	S0142705	

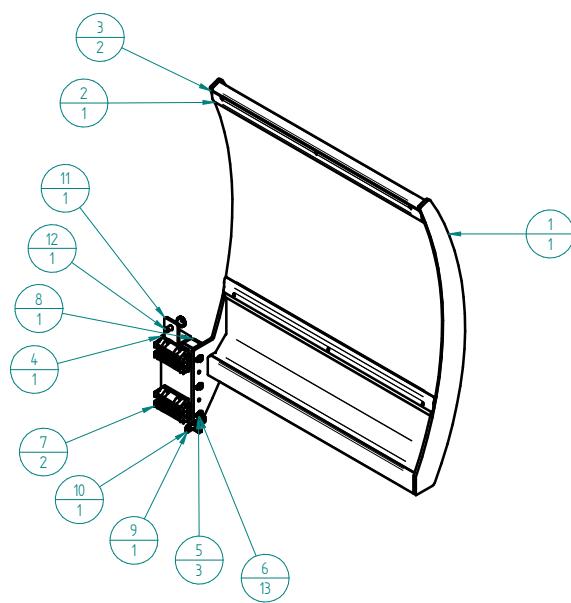
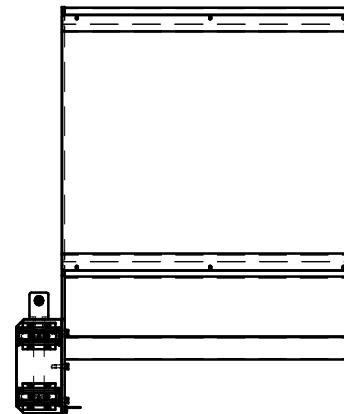
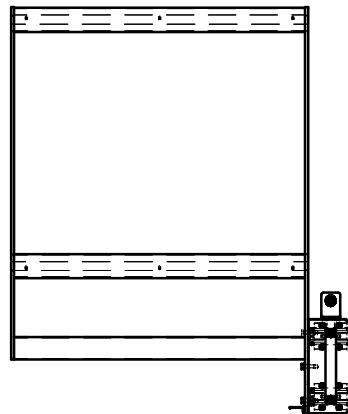
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142710	TELAILO protezione laterale piano mobile L. 1416 (zona coda)		23.214 kg	1
2	LIB10879	Pannello Sp. 4 L. 1414 La. 641 norma 9030/112 curvo	Lexan	3.369 kg	1
3	S0142711	PROFILATO Sp. 2 L. 1414 x fissaggio pannelli lexan sp. 4 mm	Inox	2.019 kg	2

**DESCRIZIONE
GRUPPO protezione laterale L. 1416 (zona coda)**

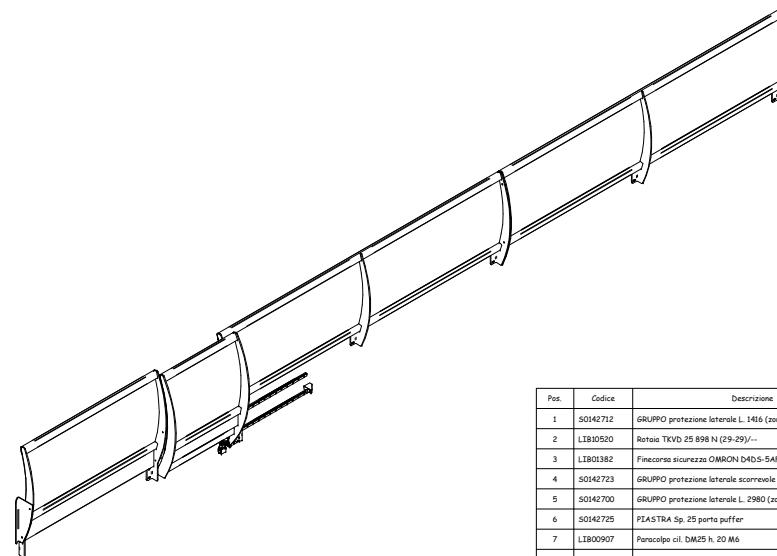
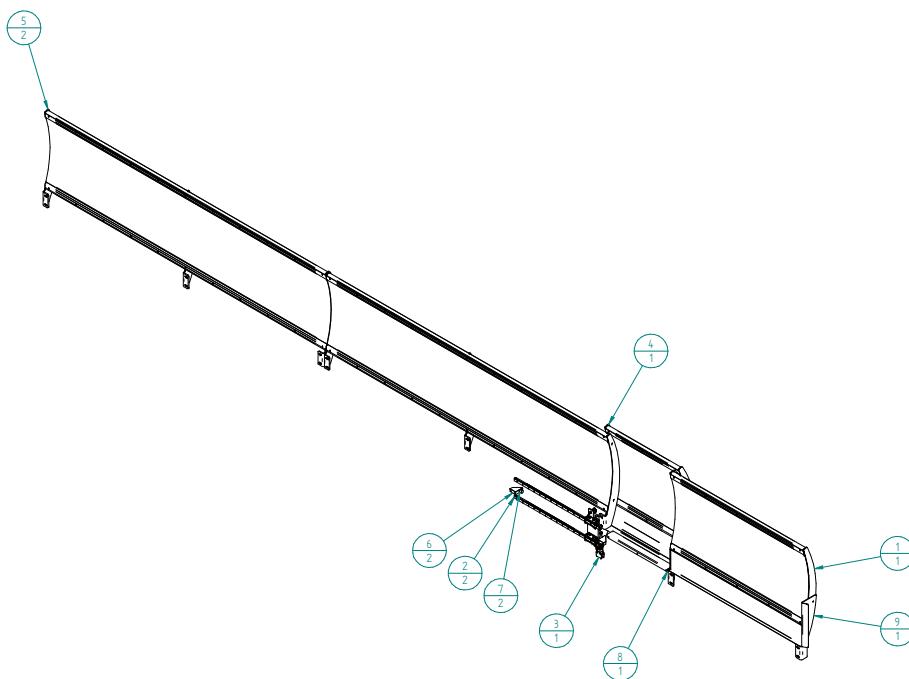
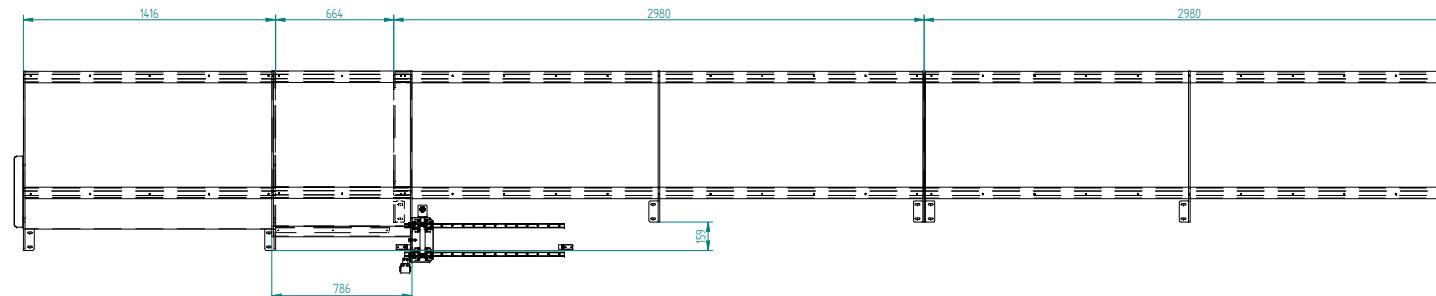
MATERIALE	STATO MATERIALE Assemblato	Peso Kg 28,6	SCALA 1:10
TRATTAMENTI TERMICI -	TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768 RACCORDI NON QUOTATI -	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA -	SOSTITUISCE IL: - SOSTITUITO DAL: - CODICE DISEGNO S0142712 REVISIONE 0
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail tecnico@ipm-italy.it ipm-italy.it	SMUSSI NON QUOTATI -	27/04/2016	MODIFICA: -



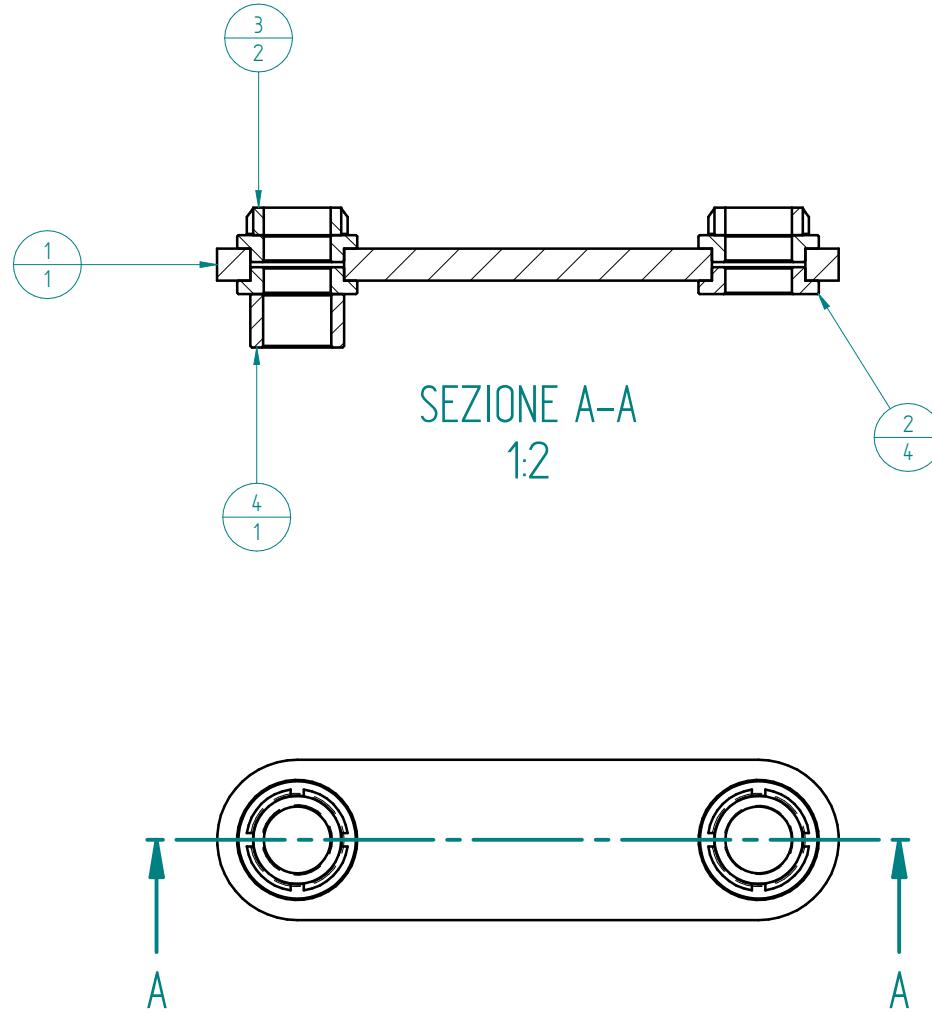
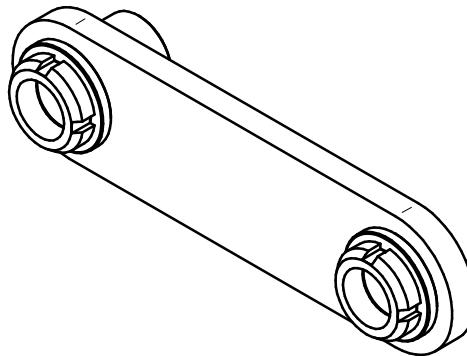
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142720	TELAIO protezione laterale scorrevole L. 786 (zona traino)		20.775 kg	1
2	L1B10881	Pannello Sp. 4 L. 784 La. 641 norma 9030/112 curvo	Lexan	1.868 kg	1
3	S0142721	PROFILATO Sp. 2 L. 784 x fissaggio pannelli lexan sp. 4 mm	Inox	1.119 kg	2
4	S0142713	PIASTRA Sp. 30 L. 250 La. 120 supporto pattini	Alluminio 11S UNI-9002/5	2.411 kg	1
5	L1B00963	Rosetta piana M8 De. 17 Sp. 1,6 Acc. 140HV UNI 6592	Acciaio	0.006 kg	3
6	L1B00150	Vite TCIE M8 x 25 UNI 5931	Acciaio	0.216 kg	13
7	L1B09848	Carrello KWVE 25-BL-G3 V1 (INA)	-	5.400 kg	2
8	L1B05574	Maniglia M.443/200 N (Elesa)	PP (Polipropilene)	0.058 kg	1
9	S0142714	PIASTRA Sp. 5 chiazzetta inviolabile	Acciaio Fe 360	0.039 kg	1
10	L1B01383	Chiave Finecorsa di Sicurezza OMRON	Acciaio	0.010 kg	1
11	S0142722	LAMIERA piegata Sp. 6 staffa pressore a molla	Acciaio Fe 360	0.254 kg	1
12	L1B02856	Pressore di posizionamento a molla GN 617.1-6-A M12x1,5 con arresto in pos. retratta (Elesa)	-	0.032 kg	1

DESCRIZIONE					
GRUPPO protezione laterale scorrevole L. 786 (zona traino)					
MATERIALE		STATO MATERIALE		Peso kg	
TRATTAMENTI TERMICI		Assemblato		32.18	
TRATTAMENTO SUPERFICIALE		-		SCALA 1:10	
TRATTAMENTI TERMICI	-	TRATTAMENTO SUPERFICIALE	-	SBARARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	A2
				SCALLOPPE L.	SCALLOPPE DAL
				DATA	REVISIONE
				S0142723	0

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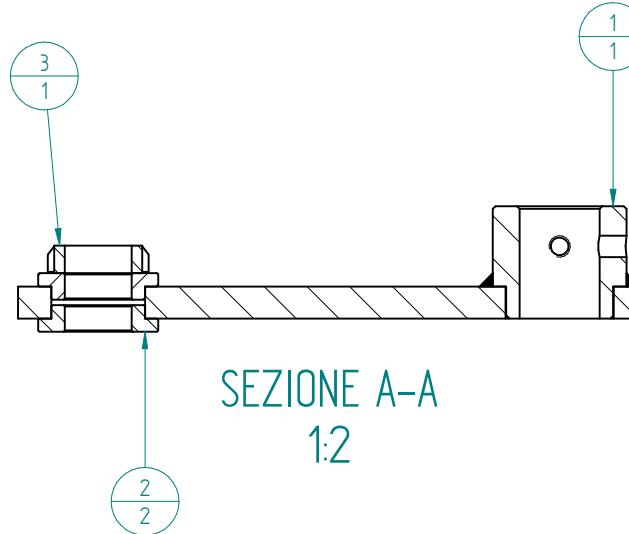
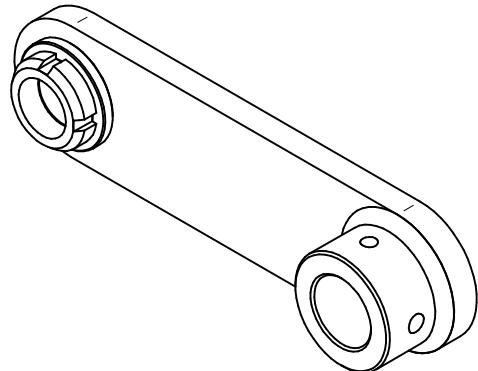
Pos.	Codice	Descrizione	Materiale	Peso	Q.tà				
1	S0142712	GRUPPO protezione laterale L_ 1416 (zona coda)		28,601 kg	1				
2	L1BD0520	Ritmo TKVD 25 898 N (29-29)..	Acciaio	4,679 kg	2				
3	L1B01382	Finecorsa sicurezza OMRON D4ON-5AFS-2NC	-	0,042 kg	1				
4	S0142723	GRUPPO protezione laterale scorrevole L_ 786 (zona traino)		32,189 kg	1				
5	S0142700	GRUPPO protezione laterale L_ 2980 (zona piano lavoro)		92,943 kg	2				
6	S0142725	PIASTRA Sp. 25 porta puffer	Acciaio Fe 360	1,251 kg	2				
7	L1B00907	Porcellone cil. DM25 - 20 Mm	Gomma	0,030 kg	2				
8	S0142724	LAMIERA piegata Sp. 3	Acciaio Fe 360	1,715 kg	1				
9	S0142701	LAMIERA piegata Sp. 4 invito tubo lato protezioni	Inox	2,091 kg	1				
DESCRIZIONE									
GRUPPO protezioni laterali piano mobile BA 200/2F/2T 6m (std.)									
SPERONE		Assemblato		163,5	ELENCO				
TRATTAMENTI TERZO		ATTIVITÀ SU PERIOLE			1:15				
-		-		SBARARE IL PEZZO CON CURA, MIGLIORARE CONCE E REVISONE					
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IMMAGINI									
									
ITALIA 0012 LUOGO (AA) V. d'Appignano, n. 12 33040 (BL) - ITALIA P.IVA 01234567890 E-mail: info@ipm-srl.it									
GEA GESTIONE ADDIZIONE DI TOLERANZA 080/208									
PROGETTO BELLONI									
CONSEGNA BELLONI									
CODICE DISegNO									
DATA 27/04/2016									



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142728	SAGOMA Taglio Laser Sp. 12	Acciaio Fe 360	1,054 kg	1
2	S0133397	BOCCOLA (25-35-45-5-10) Bronzo	Bronzo B14	0,274 kg	4
3	LIB01308	Ghiera autobloccante normale M25x1,5	Acciaio	0,088 kg	2
4	S0092438	DISTANZIALE Di. 25,5 D. 35 L. 20	Acciaio Fe 360	0,070 kg	1

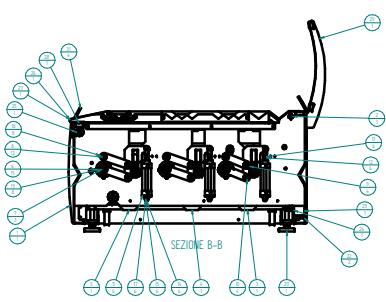
DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
-		Assemblato		1,47	1:2
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA BELLONI	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	-	DISEGNATORE BELLONI	CODICE DISEGNO S0142729	
	SMUSSI NON QUOTATI	-	DATA 27/04/2016	REVISIONE 0	

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

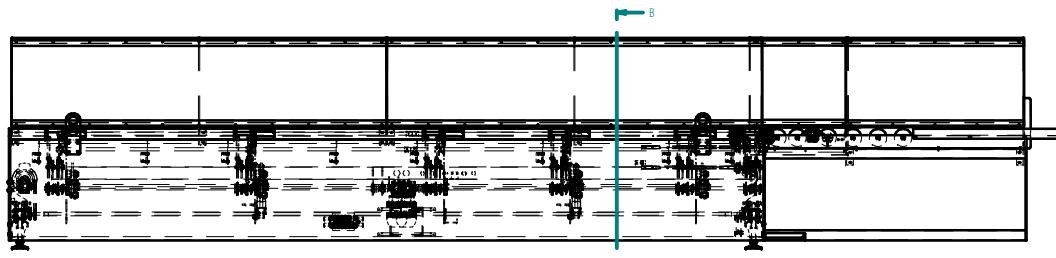


Pos.	Codice	Descrizione	Materiale	Peso	Q.tà
1	S0142731	LEVA torsione sollevamento trasporto 1		1.378 kg	1
2	S0133397	BOCCOLA (25-35-45-5-10) Bronzo	Bronzo B14	0.137 kg	2
3	LIB01308	Ghiera autobloccante normale M25x1,5	Acciaio	0.044 kg	1

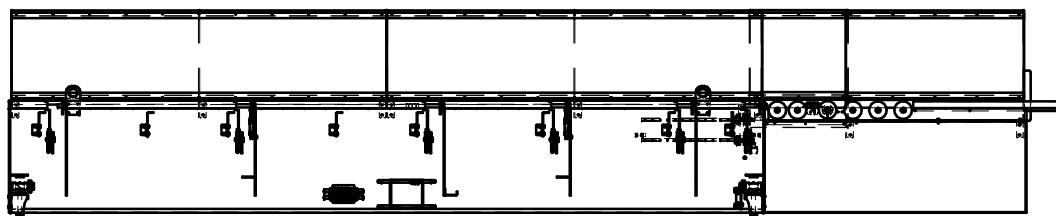
DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
		Assemblato		1,55	1:2
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
-		-		SOSTITUISCE IL:	SOSTITUITO DAL:
		QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	BELLONI	A3
RACCORDI NON QUOTATI		-	DISEGNATORE BELLONI	CODICE DISEGNO	REVISIONE
SMUSSI NON QUOTATI		-	DATA 27/04/2016	S0142732	0
Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.					



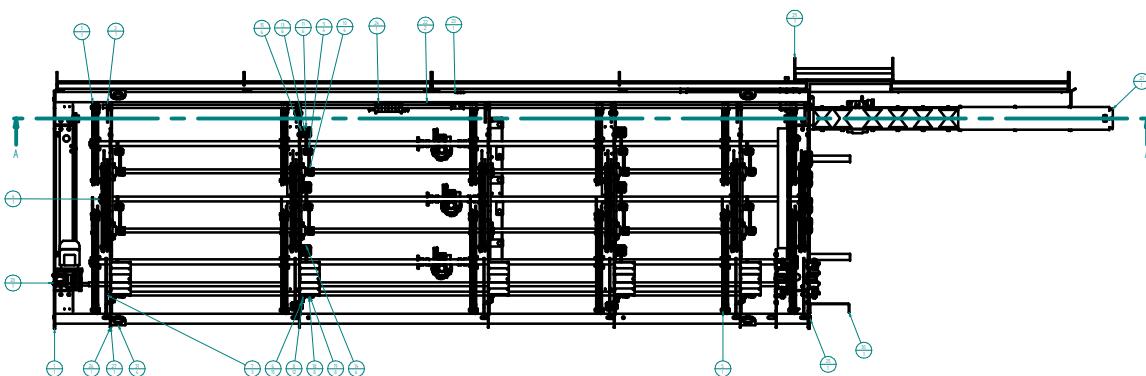
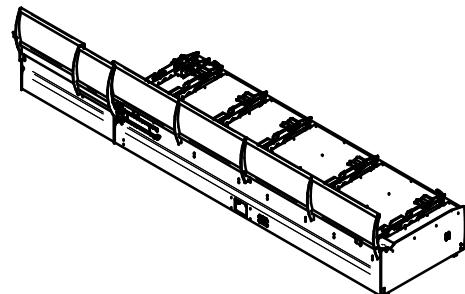
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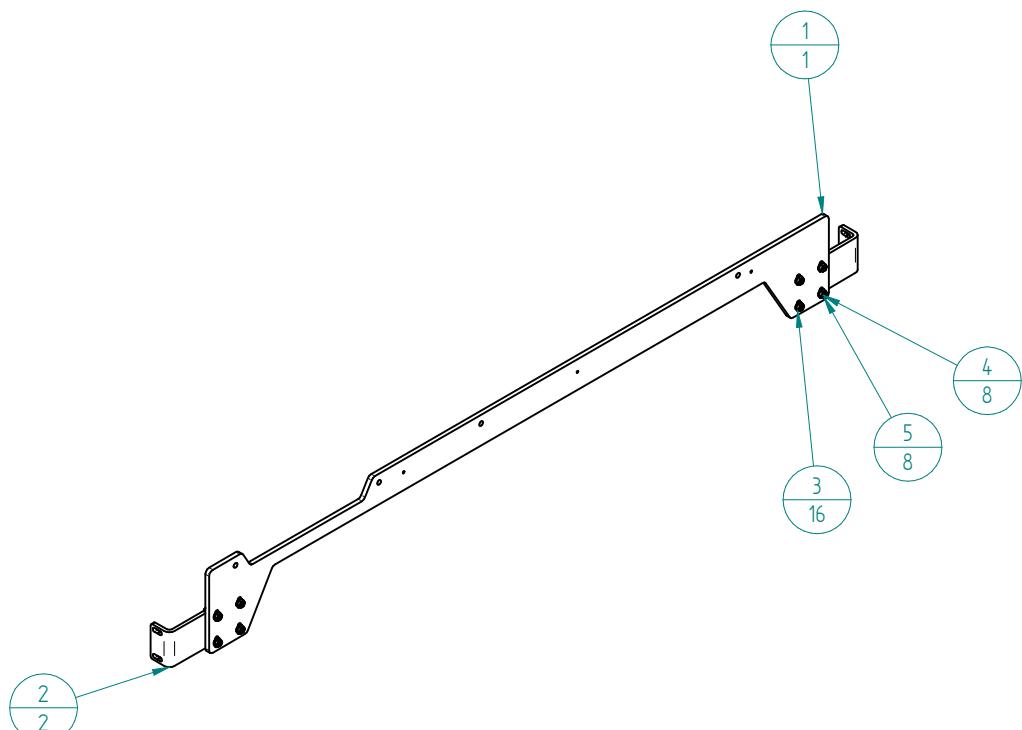
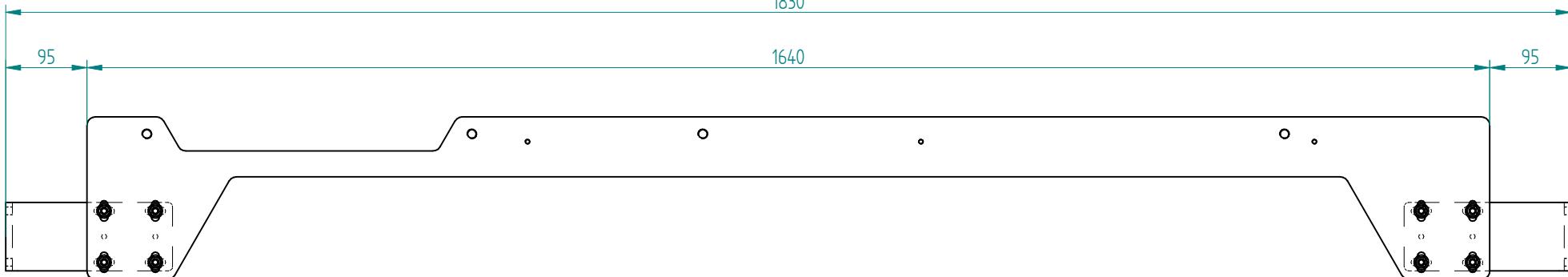


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SEZIONE A-





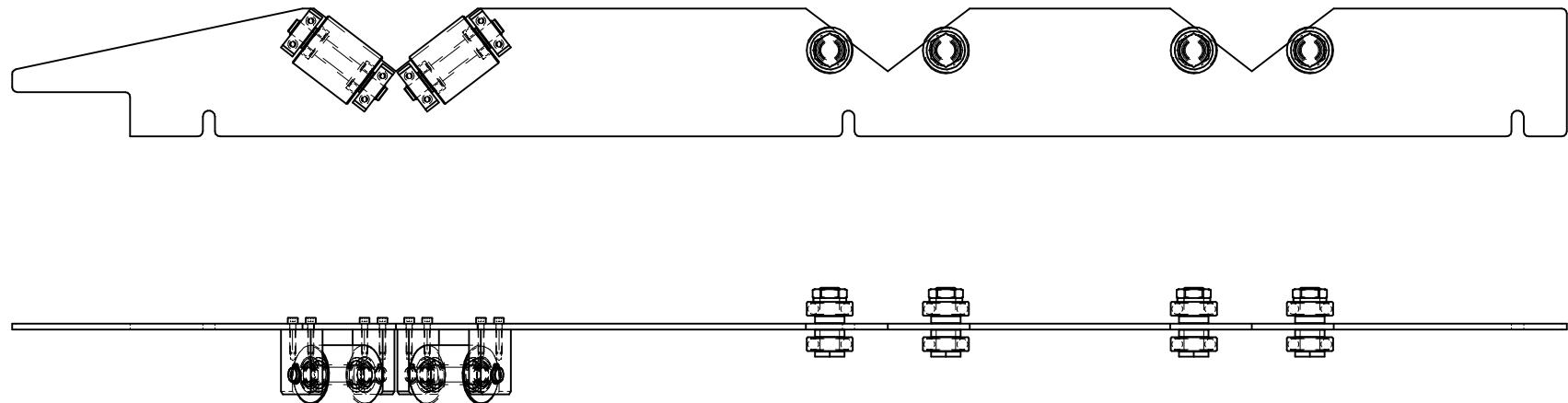
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0143329	LAMIERA Sp. 10	Acciaio Fe 360	10,308 kg	1
2	S0142668	LAMIERA piegata Sp. 8	Acciaio Fe 360	2,167 kg	2
3	LIB00963	Rosetta piana M8 De. 17 Sp. 1,6 Acc. 140HV UNI 6592	Acciaio	0,034 kg	16
4	LIB00150	Vite TCIE M8 x 25 UNI 5931	Acciaio	0,133 kg	8
5	LIB00097	Dado Acc. 8 Esagonale M8 UNI 5588	Acciaio	0,039 kg	8

DESCRIZIONE
GRUPPO traverso supporto pannelli + rulliera aggiuntiva BA 200/2F/2T (std.)

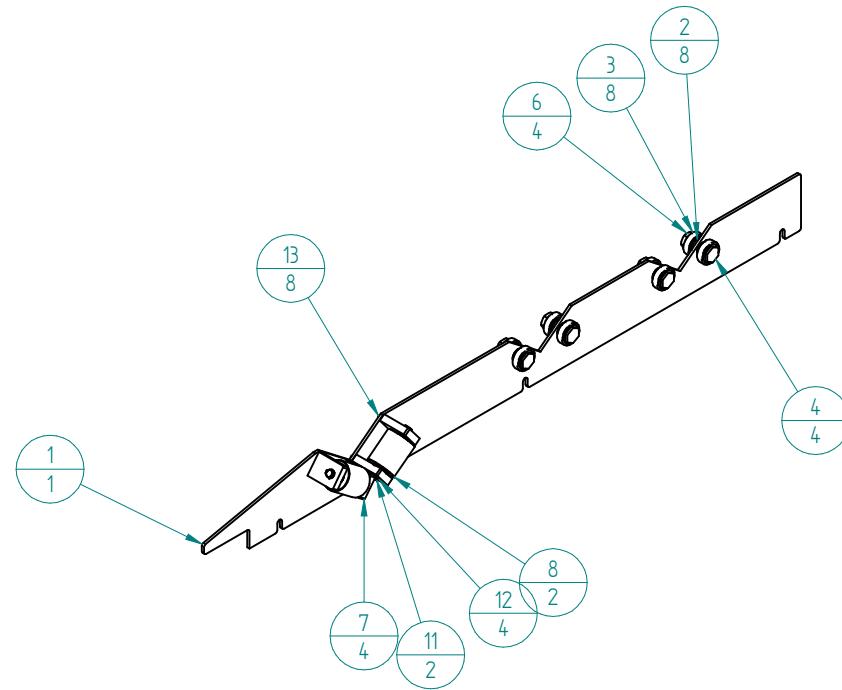
MATERIALE	STATO MATERIALE	Peso Kg	SCALA
-	Assemblato	12,67	1:5

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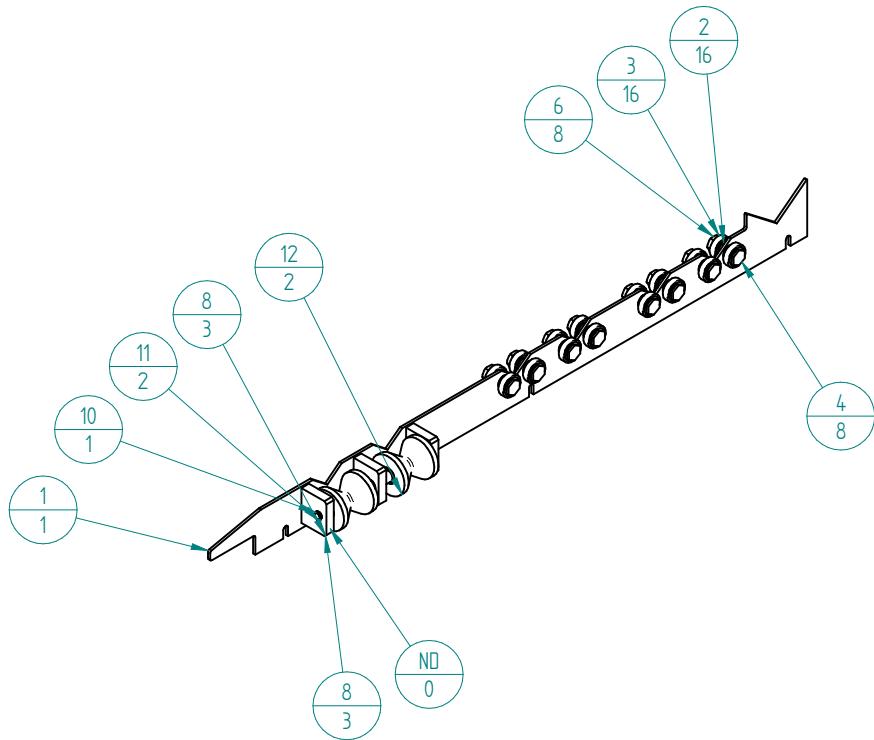
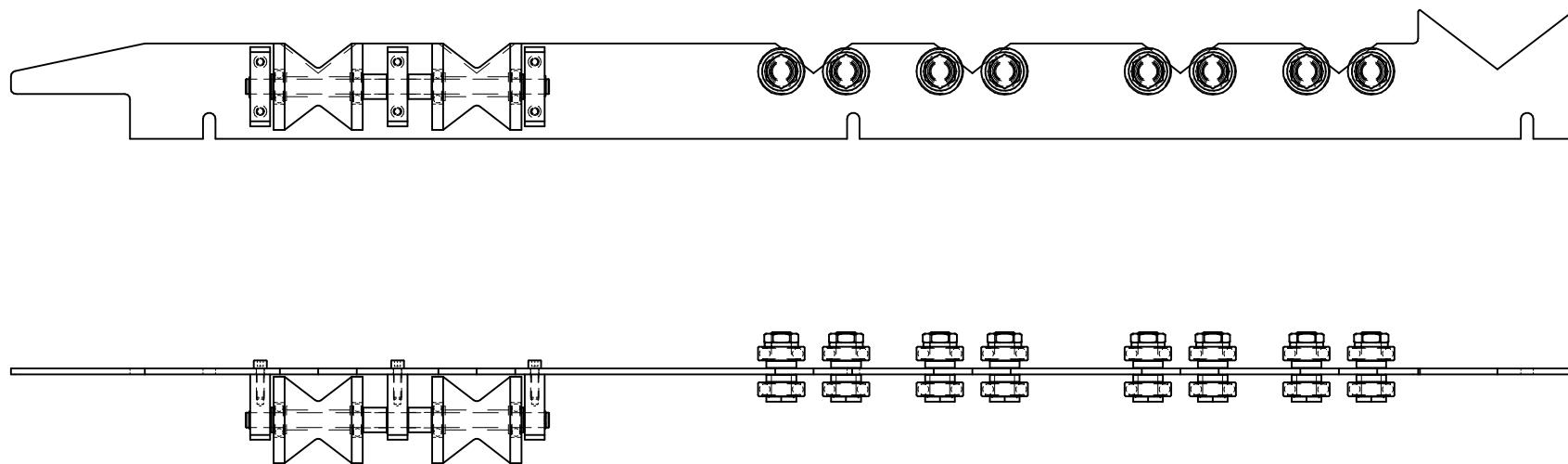
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	RACCORDI NON QUOTATI	DISEGNATORE BELLONI			
	SMUSSI NON QUOTATI	DATA 05/05/2016	CODICE DISEGNO S0143330	REVISIONE 0	



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142681	PIASTRA Sp. 6 Tipo Forata	Acciaio Fe 360	8,066 kg	1
2	S0094490	DISTANZIALE Di. 20 D. 30 L. 8	Acciaio Fe 360	0,195 kg	8
3	LIB00202	Cuscinetto radiale a sfere 6204 2Z (20-47-14)	Acciaio	0,553 kg	8
4	S0142666	VITE M20 (completamente filettata)	Acciaio	0,765 kg	4
5*	LIB01282	Rosetta elastica grower M 20	Acciaio	0,070 kg	4
6	LIB01373	Dado Acc. 8 Esagonale Basso M20 UNI 5589	Acciaio	0,131 kg	4
7	S0142680	PIASTRA Sp. 15 supporto rulli	Alluminio 11S UNI-9002/5	0,510 kg	4
8	S0142673	GRUPPO rullo folle D. 60 L. 70		0,615 kg	2
11	S0142674	PERNO D. 15 L. 116 Tipo 2_seeger	Acciaio C 40	0,321 kg	2
12	LIB00019	Anello elastico per alberi Ø 15 UNI 7435	Fe	0,003 kg	4
13	LIB00193	Vite TCIE M6 x 30 UNI 5931	Acciaio	0,077 kg	8



DESCRIZIONE					
GRUPPO paletta supporto tubi con rulliera BA 200/2F/2T singolo tubo (std.)					
MATERIALE	STATO MATERIALE	Peso Kg	SCALA		
	Assemblato	11,3	1:5		
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 ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13 Tel. 0545-30706 / 0545-23342 - fax. 0545-30672 E-mail: tecnico@ipm-italy.it ipm-italy.it	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI DISEGNATORE BELLONI DATA 05/05/2016	SOSTITUISCE IL:	SOSTITUITO DAL:	
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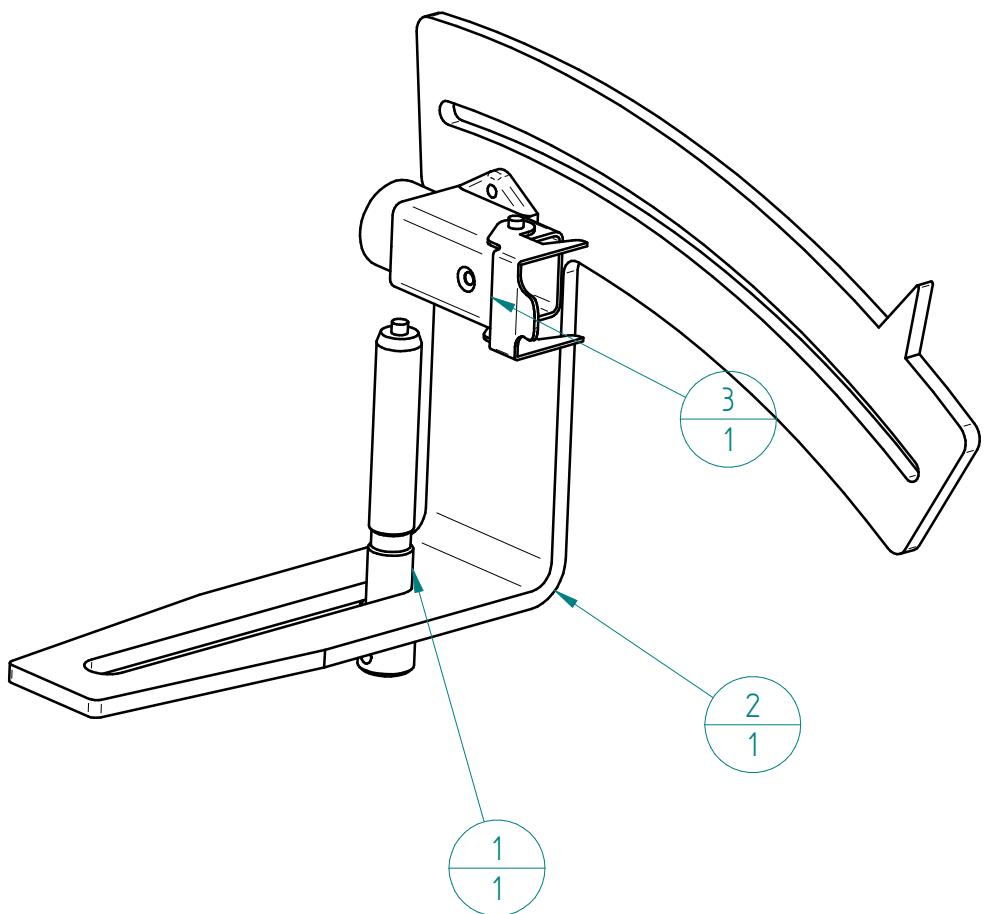
Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	S0142703	SAGOMA Taglio Laser Sp. 6	Acciaio Fe 360	6,288 kg	1
2	S0094490	DISTANZIALE Di. 20 D. 30 L. 8	Acciaio Fe 360	0,390 kg	16
3	LIB00202	Cuscinetto radiale a sfere 6204 2Z (20-47-14)	Acciaio	1,106 kg	16
4	S0142666	VITE M20 (completamente filettata)	Acciaio	1,531 kg	8
5*	LIB01282	Rosetta elastica grower M 20	Acciaio	0,141 kg	8
6	LIB01373	Dado Acc. 8 Esagonale Basso M20 UNI 5589	Acciaio	0,262 kg	8
8	S0142702	PIASTRA Sp. 20 supporto rullo	Alluminio 11S UNI-9002/5	0,835 kg	3
10	S0142640	PERNO D. 15 L. 306 Tipo 2_seeger	Acciaio C 40	0,424 kg	1
11	LIB00019	Anello elastico per alberi Ø 15 UNI 7435	Fe	0,001 kg	2
12	S0142643	GRUPPO rullo folle D. 87 L.90 conicità 105°		1,112 kg	2
13*	LIB00077	Vite TCIE M8 x 30 UNI 5931	Acciaio	0,112 kg	6

DESCRIZIONE					
MATERIALE		STATO MATERIALE		Peso Kg	SCALA
		Assemblato		12,2	1:5
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE		SBAVARE IL PEZZO CON CURA. MARCARE CODICE E REVISIONE.	
ipm	QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	-	PROGETTISTA BELLONI	SOSTITUISCE IL:	SOSTITUITO DAL:
	RACCORDI NON QUOTATI	-	DISEGNATORE		
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				05/05/2016	

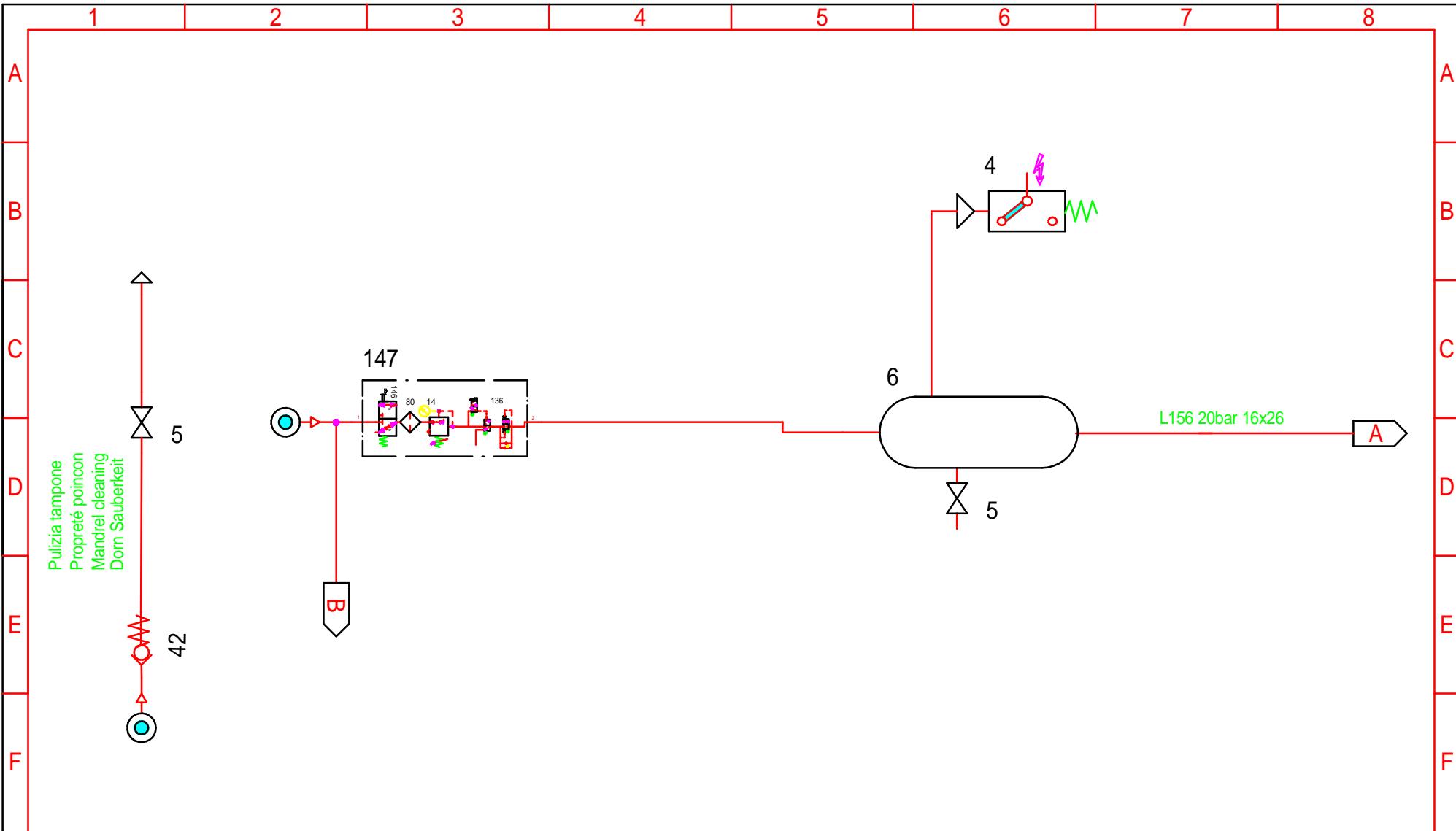
ITALIA 48022 LUGO (RA) V. dell'Artigianato, n. 13
Tel. 0545-30706 / 0545-23342 - fax. 0545-30672
E-mail tecnico@ipm-italy.it ipm-italy.it

Proprietà riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.

MODIFICA:



Pos.	Codice	Descrizione	Materiale	Peso	Q.ta
1	LIB05557	piometro DN 12 L. 87 modello CS marca OPTRIS -20 350°C 0 10 V	Acciaio	0,075 kg	1
2	S0146063	PIASTRA Sp. 5 piometro	Acciaio Fe 360	0,798 kg	1
3	LIB02223	Custodia Ilme da Parete 1 Leva MKA IAP20 (M20)	Alluminio	0,026 kg	1
4*	S0110087	DESCRIZIONE CANNOTTO D. 15 Raffreddamento piometro M12x1 COMPLESSIVO piometro per forno	Alluminio 11S DIN 9002/5	0,005 kg	1
MATERIALE		STATO MATERIALE	Peso Kg	SCALA	
		Assemblato	0,89	1:2	
TRATTAMENTI TERMICI		TRATTAMENTO SUPERFICIALE	SBAVARE IL PEZZO CON CURA. MARCAR E CODICE E REVISIONE.		
		QUOTE SENZA INDICAZIONE DI TOLLERANZA UNI ISO 2768	PROGETTISTA BELLONI	SOSTITUISCE IL:	SOSTITUITO DAL:
		RACCORDI NON QUOTATI	DISEGNATORE		
		SMUSSI NON QUOTATI	DATA 17/06/2016	CODICE DISEGNO S0146064	REVISIONE 0
Proprieta' riservata - Riproduzione vietata - La Ditta tutela i propri diritti sui disegni a termine di legge.					



Gruppo FR

Groupe FR

Group FR

Gruppe FR

Elettrovalvola scarico circ.

Electrosouape decharge circ.

Solenoid valve discharge circ.

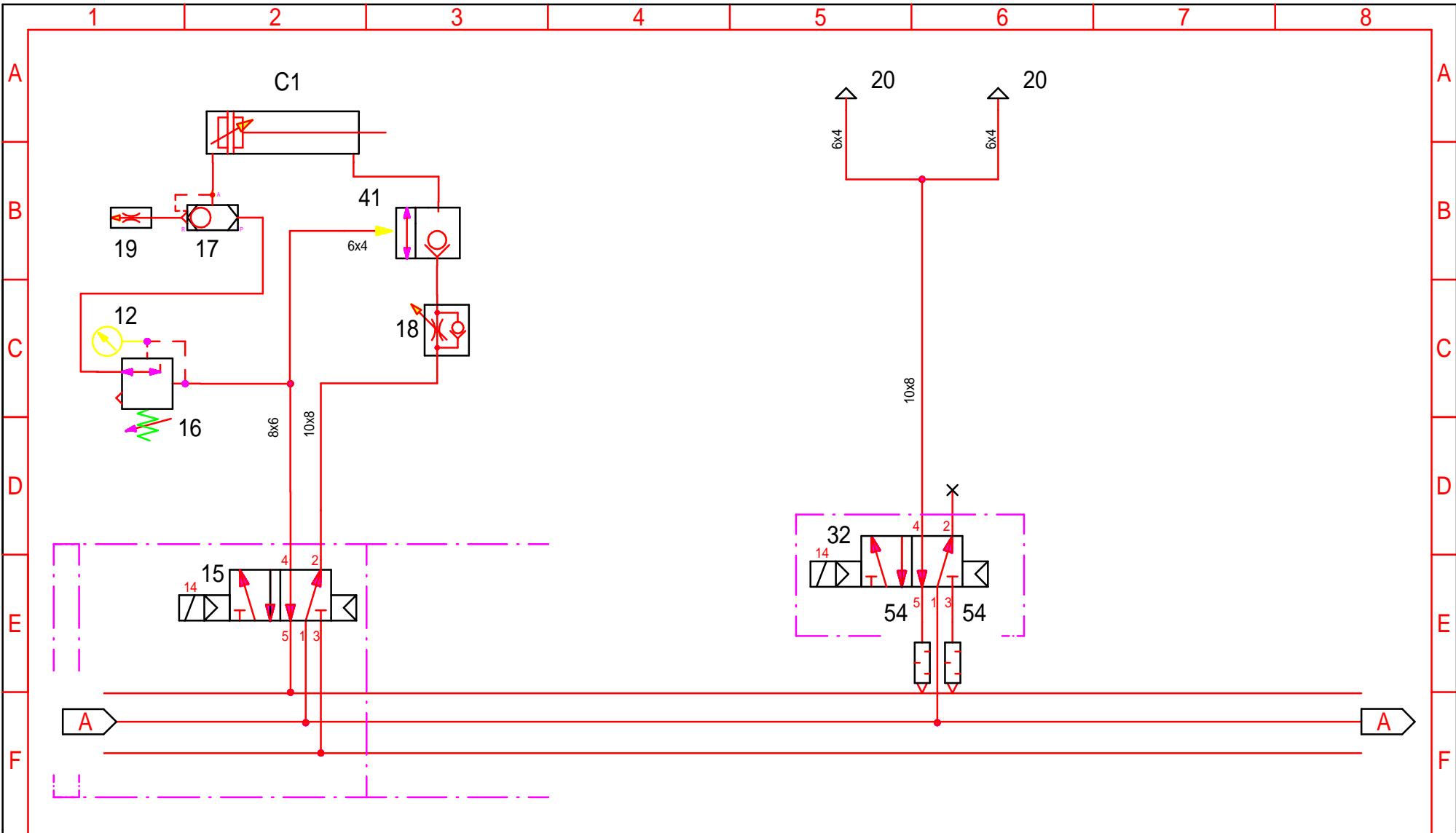
Elektro-ventil Auslass des Umlaufs

Serbatoio - Pressostato

Reservoir - Regulateur de pression

Tank - Pressure switch

Tank - Druckwachter



Traino entrata

Tirage tube entree

Haul-off entrance

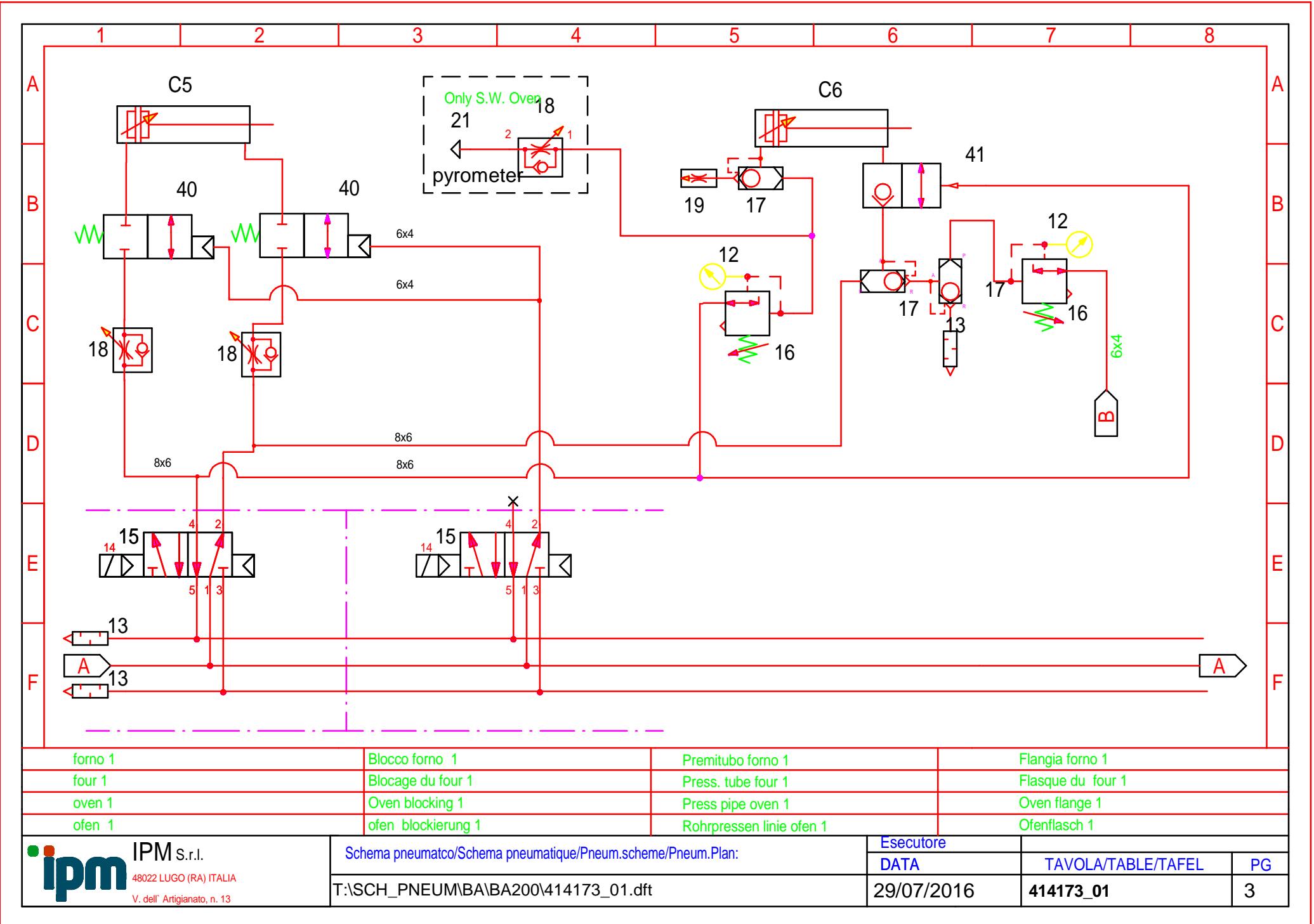
Schleppsraupe

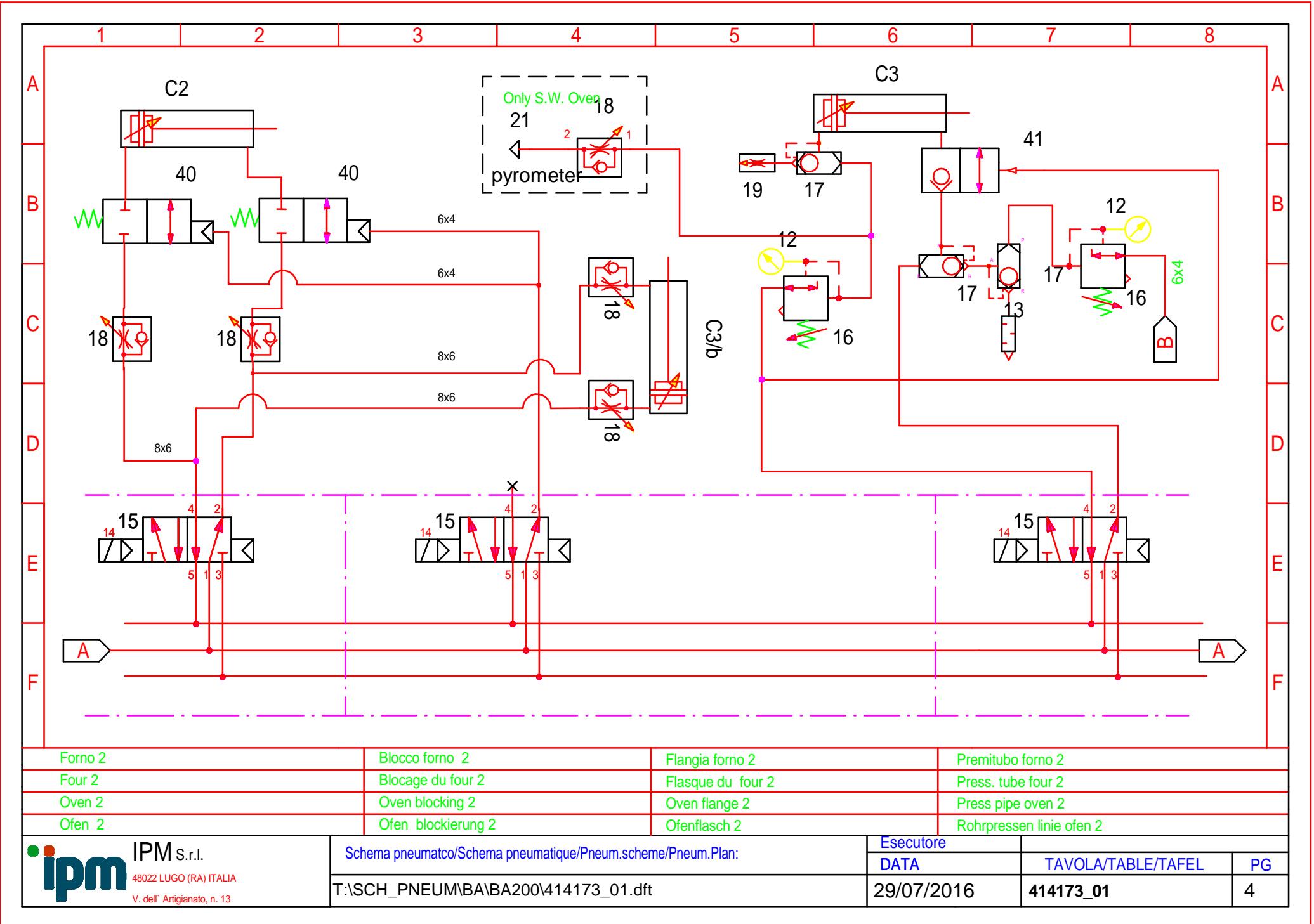
soffio entrata

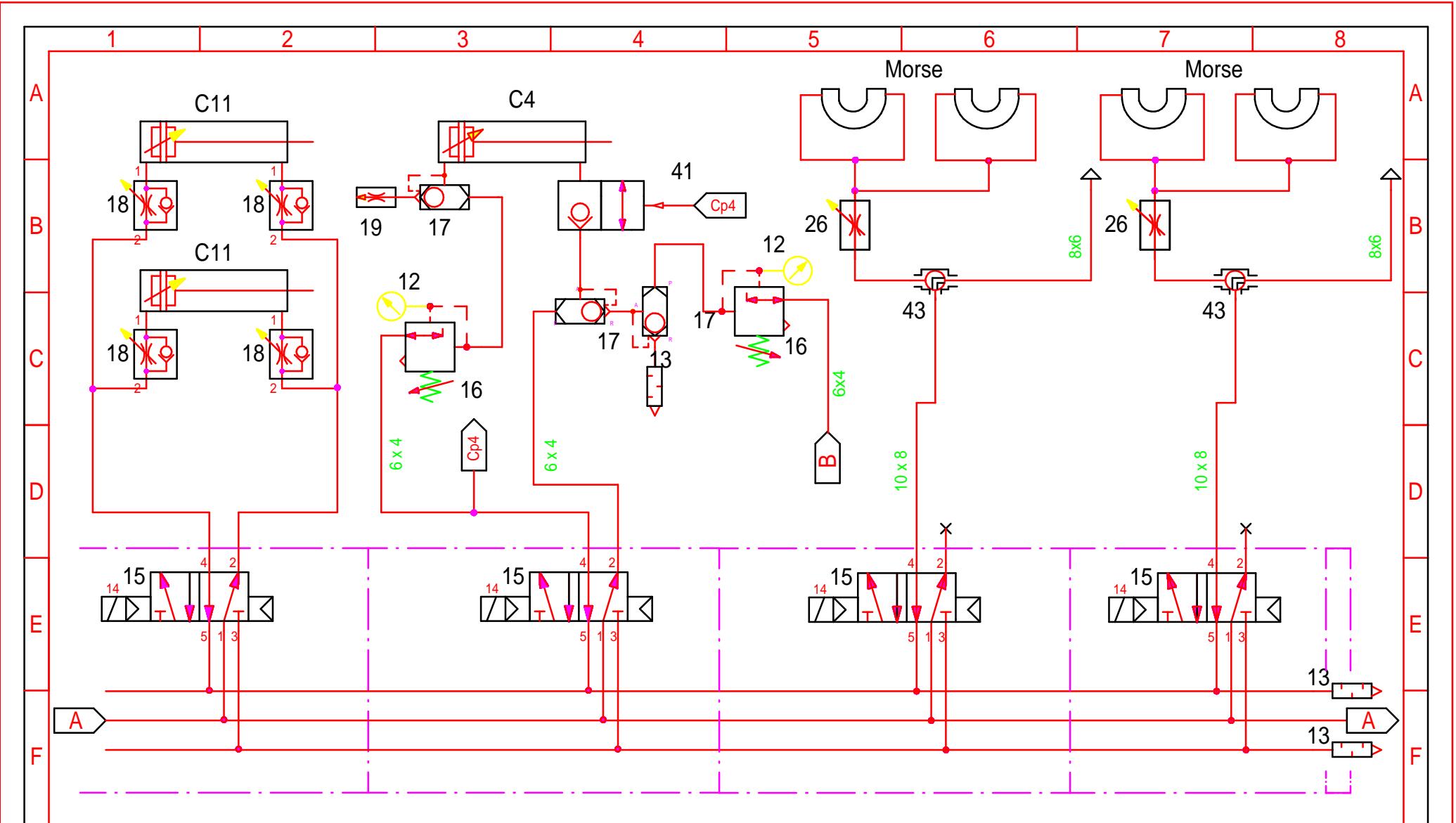
Valve decharg. eau

Water discharge valve

Ventil fur wasserauslass







Pareggiatore

Premitubo linea formazione

Gonfiaggio interno bicchiere 1

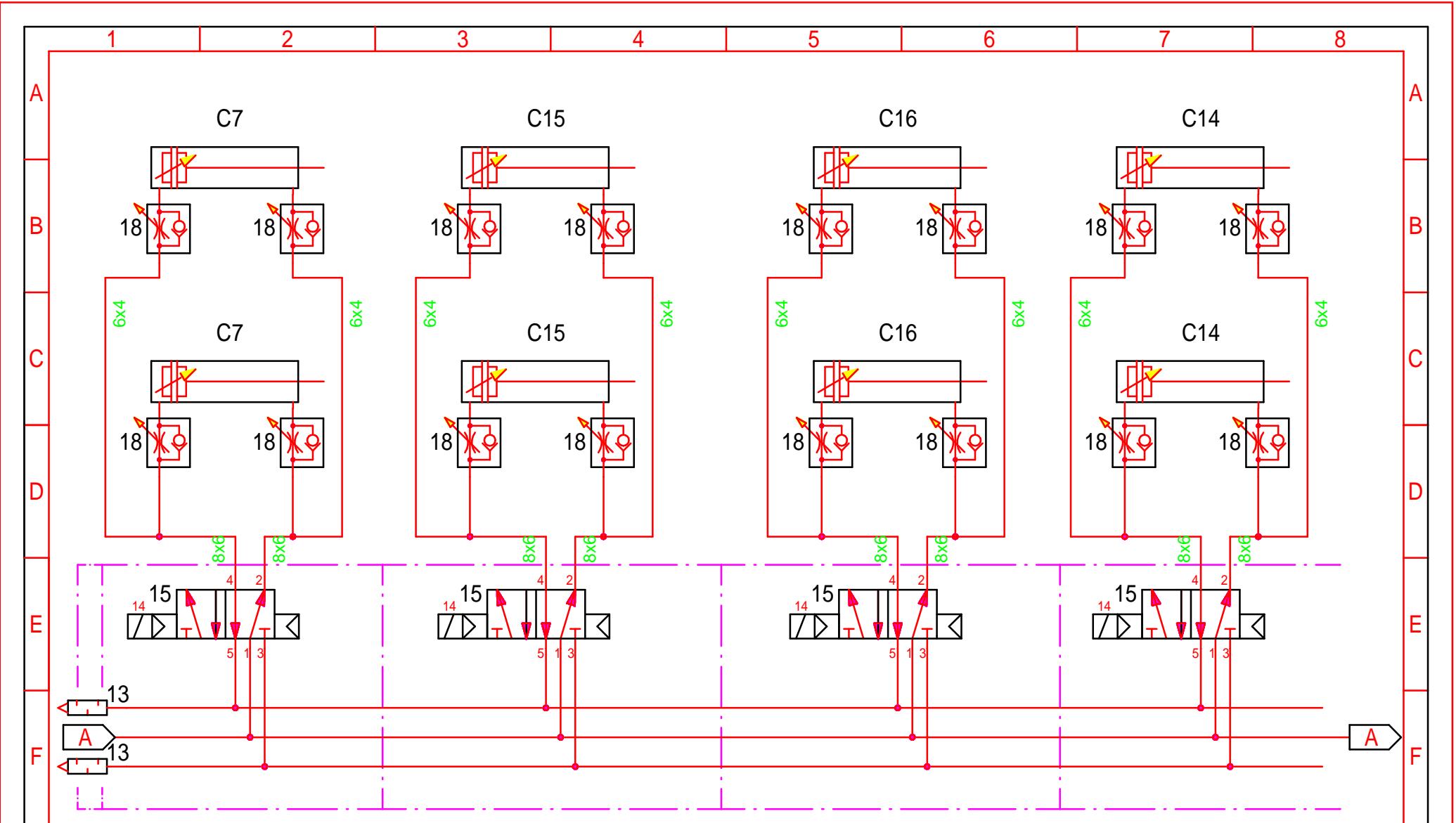
Gonfiaggio interno bicchiere 2

jogger

Press. tube ligne form.

Gonflage int. tulipe

Gonflage int. tulipe



Scarico tubo linea

dechargeement tube ligne

Pipe discarg. line

Selezionatore linea 1

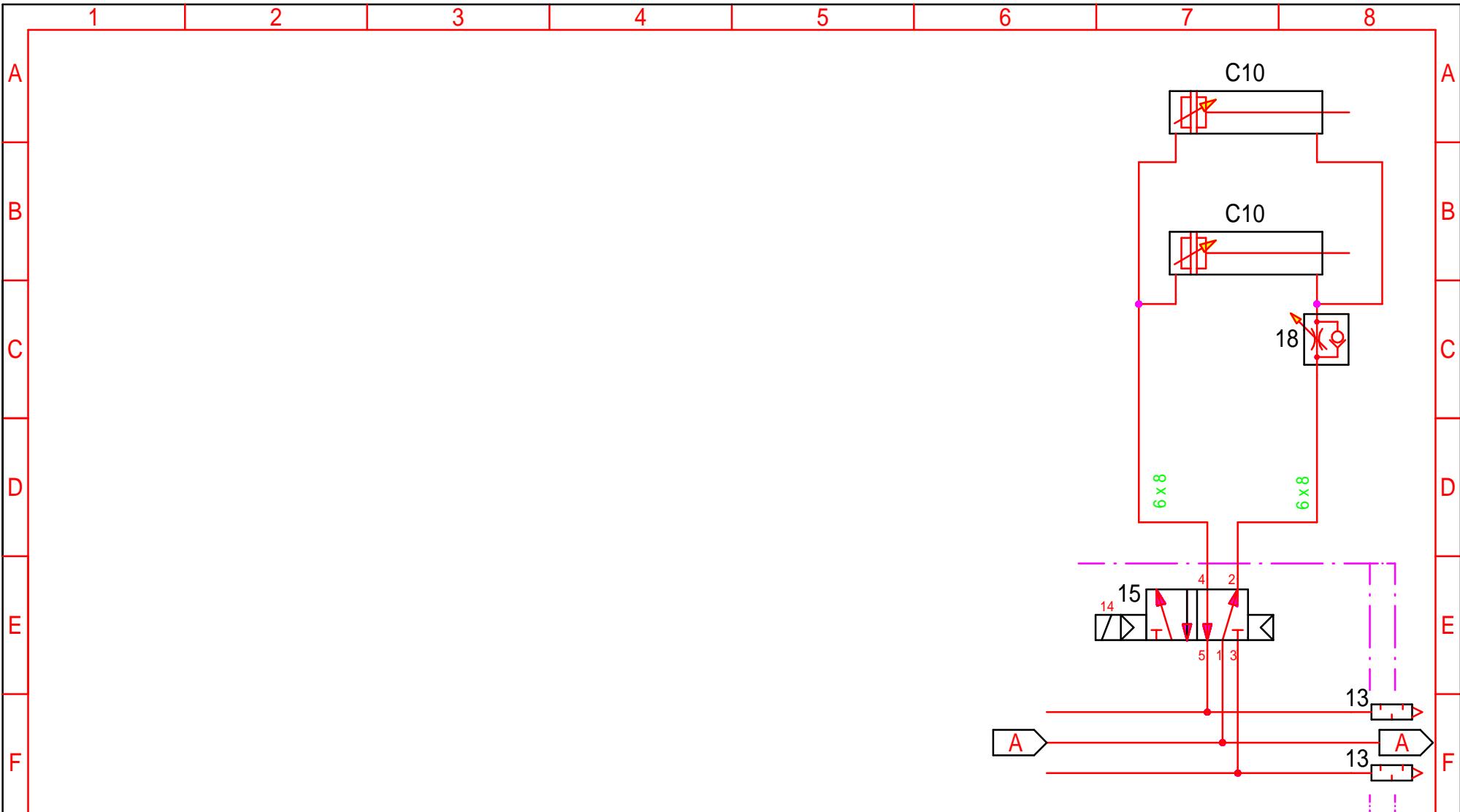
Selector line 1

Selezionatore linea 2

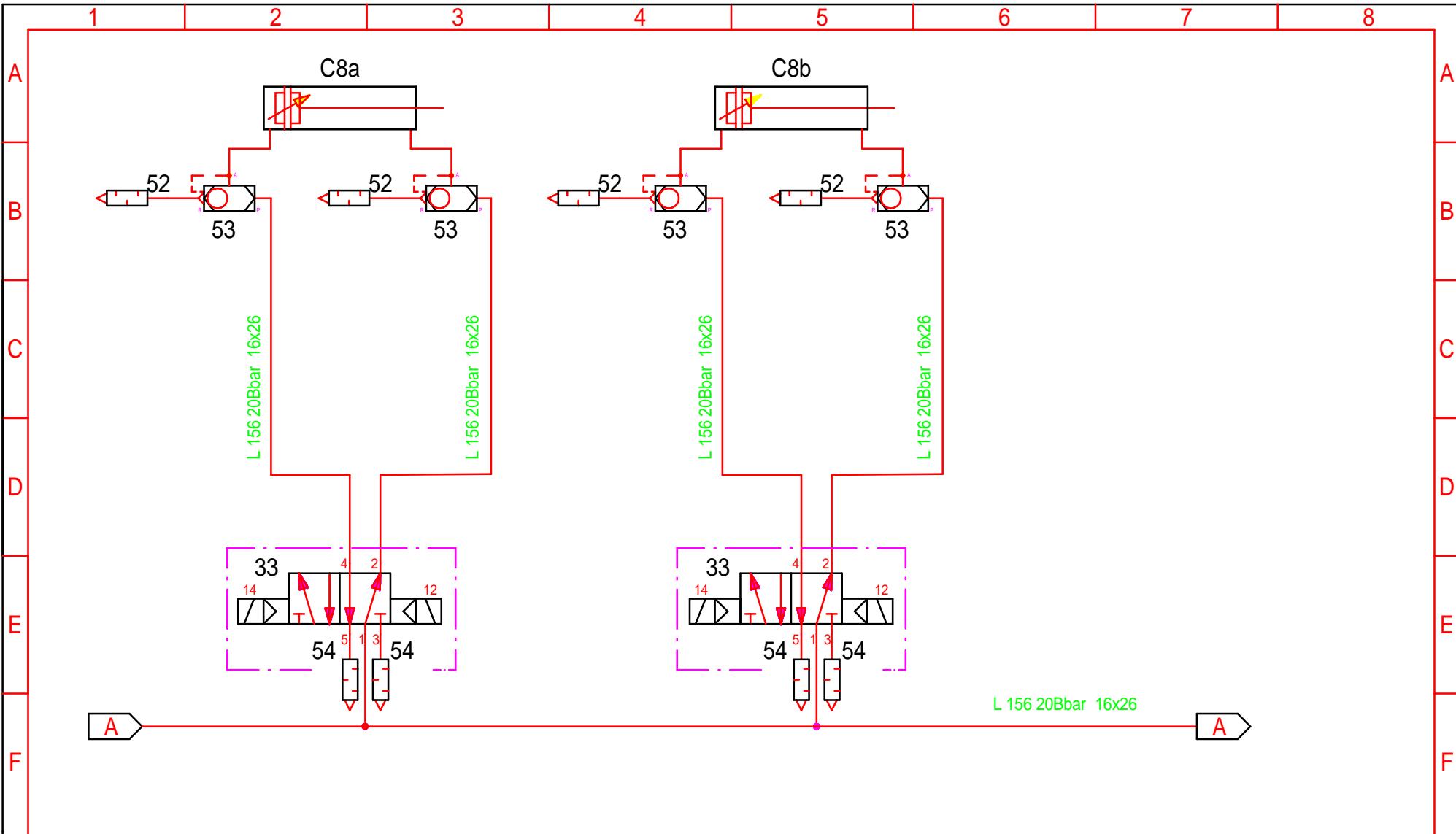
Selector line 2

Selezionatore linea 3

Selector line 3



Espulsione linea formazione
 Expulsion ligne formation
 Formation line expulsion
 Bildungslinie auswerfen



Morse inferiori

Coquilles inférieur

Lower Vices

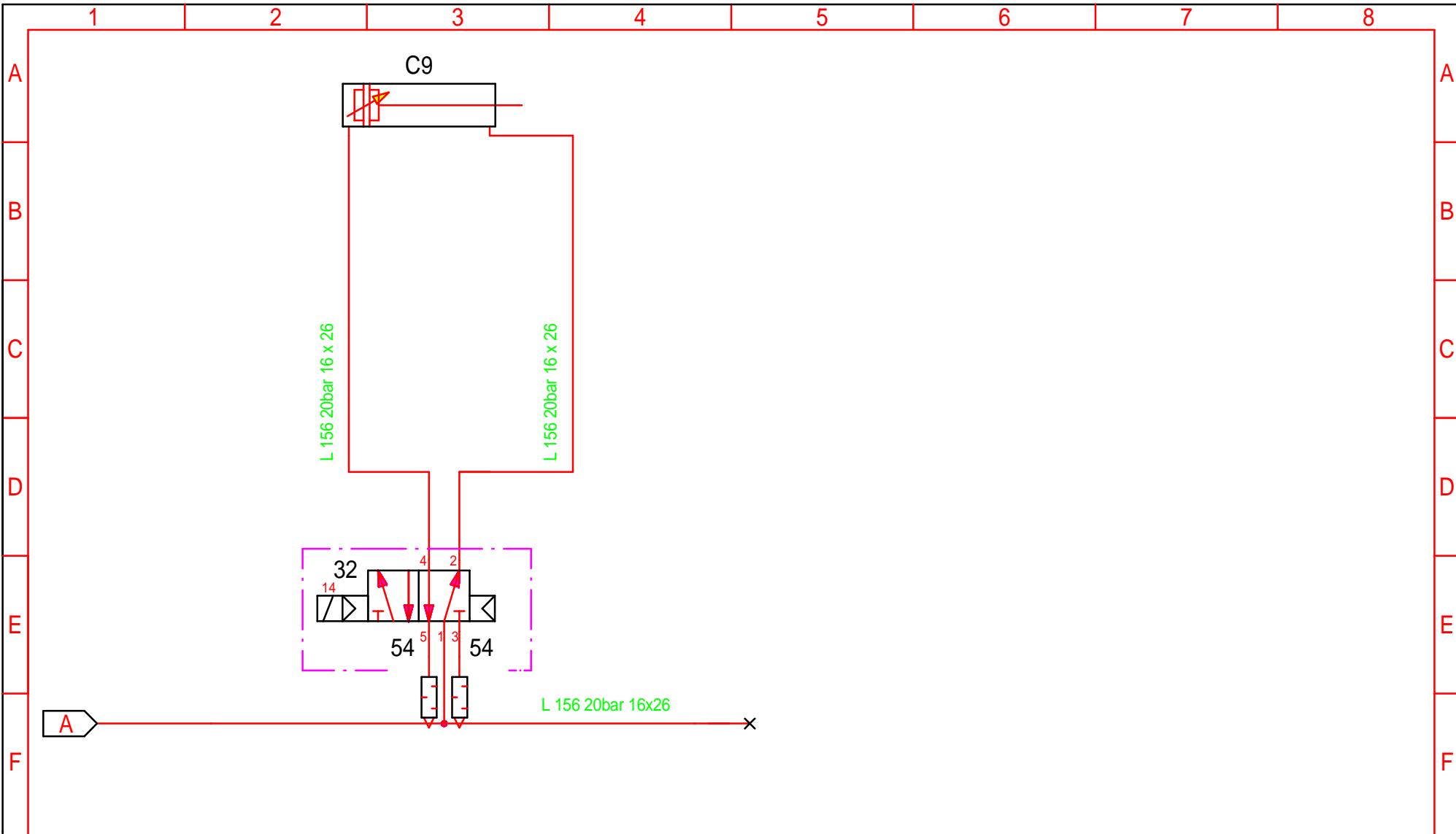
Untere klemmen

Morse superiori

Coquilles supérieur

Upper Vices

Oberekl klemmen



Utensile bicchierante

Outilage de tulipage

Socketing tooling

Aufmuffungswerkzeug

DICHIARAZIONE DI CONFORMITÀ
EC DECLARATION OF CONFORMITY
DECLARATION CE DE CONFORMITE
EG KONFORMITÄTSERKLÄRUNG
DECLARACION DE CONFORMIDAD



La ditta: IPM S.r.l.
 We: Via dell'Artigianato N° 13
 Nous: 48022 Lugo (RA) - ITALY
 Wir: P.IVA/VAT IT 01020900393
 Planta:

dichiara sotto la propria responsabilità che la macchina:
 declares under our sole responsibility that the machine:
 déclarons sous notre seule responsabilité que la machine:

erklären in alleiniger Verantwortung, dass die Maschine:
 declara bajo la propia responsabilidad que la máquina:

Tipo, Type, Type, Typenbezeichnung, Tipo	BELLING MACHINE
Modello, Model, Modèle, Modell, Modelo	BA 200/2F
N. di matricola, Serial n. (s.), No(s). Série, Seriennummer (n), N. de matrícula	414173
Anno di costruzione, Manufacturing year, Année de construction, Konstruktionsjahr, Año de construcción	2016

(I)
 (GB)
 (F)
 (D)
 (E)

come descritto nella documentazione allegata, è conforme:
 as described in the enclosed documentation is in conformity with the:
 décrite dans la documentation jointe est conforme à la directive:
 beschrieben in der beigelegten Dokumentation, mit der:
 como descrito en la Documentación anexa, está conforme a las :

	(I) Direttive macchine (GB) Machinery Directive (F) Directive machines (D) Maschinenrichtlinie (E) Directiva Máquinas	(I) Direttiva Compatibilità Elettromagnetica (GB) Electromagnetic compatibility directive (F) directive compatibilité électromagnétique (D) elektromagnetische vereinbarkeit (E) directiva compatibilidad electromagnética
(I) Come descritto nella documentazione allegata, è conforme alle :	2006/42/CE	2004/108/CE
(GB) as described in the enclosed documentation is in conformity with the :	2006/42/CE	2004/108/CE
(F) décrite dans la documentation jointe est conforme à la :	2006/42/CE	2004/108/CE
(D) beschrieben in der beigelegten Dokumentation, mit der :	2006/42/CE	2004/108/CE
(E) como descrito en la documentación está conforme a las :	2006/42/CE	2004/108/CE

E AUTORIZZA
 AND AUTHORIZES
 ET AUTORISE
 UND DIE FIRMA AUTORIZIERT IHN
 Y AUTORIZA

A COSTITUIRE IL FASCICOLO TECNICO PER SUO CONTO
 TO MAKE UP THE TECHNICAL BROCHURE ON HIS BEHALF
 A CONSTITUER LE DOSSIER TECHNIQUE POUR SON COMPTE
 DIE TECHNISCHEN PAPIERE IN IHREM NAMEN AUFZUSTELLEN.
 A CONSTITUIR EL EXPEDIENTE TÉCNICO POR SU CUENTA.

Cognome, Nome; Name, First name, Nom, Prénom
 Name, Vorname; Apellido, Nombre:
 Posizione, Position, Titre, Stellung, Posición

LUOGO: Lugo
 DATA: 04/08/2016

Argnani Claudio

Responsabile della progettazione, Project manager, Responsable des
 projects, EntwurfsLeiter, Responsable del proyecto

Firma