



## SAC CS4 Sliding Table Saw

**Note: Operation of this saw requires a separate class and qualification in addition to a Green Card. These safety instructions are for reference and project planning purposes.**

The sliding table saw is used primarily for cutting panels straight and square. Used properly, it can cut many pieces in an efficient and safe manner. By securing a panel to the sliding carriage and moving it through the blade, a straight line can be safely and accurately cut. This technique may also be used to straighten uneven, solid wood with a rip blade or combination blade. This sliding table saw has many features that are different from your personal table saw. In order to avoid accidents, the following operational safety rules must be strictly observed by anyone working with the Guild's sliding table saw.

The sliding carriage is parallel and in alignment to the saw blade. It holds and supports the work piece as the work piece is moved through the blade. The straight edge created is then placed against the crosscut fence to produce a square cut. Repeating this method can produce a piece with four square corners. Stops on the carriage can be attached to allow repeat cuts to exactly the same length. A separate adjustable fence can be fastened to the carriage to make angled cuts. There is a scoring blade that can minimize tear out on the bottom edge of the cut when properly aligned. Besides coming into contact with a sharp, spinning blade, one potentially lethal hazard of the sliding table saw is binding of the work piece resulting in kick back. (Imagine a 5 pound ninja star hurtling towards your carotid artery.) This can happen during any of the operations and many of the safety rules and procedures are designed specifically to help prevent this from happening.

**Failure to follow the safety rules will result in a loss of shop privileges.**

### Definitions:

Sliding carriage: A platform on which the material being cut is attached. It is used to move that material through the saw blade.

Scoring blade: A small saw blade that makes a shallow cut in the underside of a plywood panel prior to that panel reaching the main cutting blade.

Riving knife: A thin blade, located behind the saw blade that rises and falls with the movement of the saw blade. The riving knife keeps the material being cut from closing up on the rear of the blade, thus avoiding kick back.

Kick back: The material being cut has a tendency to close up as it exits the blade and may be thrown back at the operator by the teeth of the saw blade rising up into the material.

Rip blade: The cutting blade has large, squared off teeth and deep gullets designed to cut along the grain of the wood.

Combination blade: Has more teeth than a rip blade has and an alternating top bevel to shear across the grain of a board. It is less aggressive in its cutting action than the rip blade but will make a smoother cut across the grain.

### **Start with a Risk Assessment to ensure a safe work area:**

1. Approach all work in the Guild Shop and on the sliding table saw with your focused attention to the task at hand.
2. Make sure the entire work area around the sliding table saw is clear of obstructions, especially the path through which the carriage will travel.
3. A perimeter around the area where you are using the saw should be kept clear of anything (including people) that might impair traction or footing, and cause slips or falls.
4. Remember, the area behind the saw blade is dangerous due to the constant possibility of kick backs.
5. Eye and hearing protection are required, and dust protection is **strongly** recommended.
6. Remove loose fitting clothing, gloves, and jewelry. If you have long hair, make sure it is tied back so it can't fall into moving parts.

### **Plywood Handling**

1. Plywood sheets are heavy and cumbersome. The best way to mount them on the saw is to walk them across the floor by pivoting the bottom corners from side to side. Once in proximity to the saw carriage, lean the panel over on to the carriage and then lift the opposite end up to align the panel with the fence. When squaring a sheet of

plywood, begin with a crosscut and rotate the sheet counter clockwise, ending with a rip cut.

2. **Remember to protect your back and use your legs when lifting heavy materials.**

### **Sliding Table Saw Safety and Operational Rules:**

1. Keep yourself and other out of the risk zone when cutting.
2. Be aware of where your hands are as you cut and as you slide the carriage. Keep your eyes on the board against the fence.
3. **NEVER** put your hand in the guard area while the blades are spinning.
4. Make sure the work piece is behind the blade guard when starting the saw.
5. Make sure the scoring blade has been retracted below the surface of the table. If the scoring blade is to be used, test cuts should be performed to assure proper alignment with the cutting blade.
6. Make sure the work piece is flat against the work surface at the blade and maintain contact with the fence as you cut.
7. **NEVER** rip boards less than 10 inches in width on the sliding table saw. If you need to rip a board of that dimension, the Saw Stop will be the best and safest choice. If using the rip fence as a stop, make sure the surface of the fence is retracted behind the cutting blade to avoid catching material between the blade and the fence.
8. A cupped board may be ripped as long as the cup is facing down, and it is secured at both ends to the carriage. This allows for two surfaces to be supporting the board through the cut. **DO NOT** secure so tightly as to flatten the entire surface of the board.
9. Bowed lumber may be ripped with the curve facing down and the leading edge secured to the sled while the trailing end is held in place with an auxiliary hold down. If the bow is severe, it should be flattened first on the jointer before being placed on the sliding table saw.
10. **DO NOT REMOVE THE RIVING KNIFE.**
11. **Dadoing or tenoning** operations are not to be performed on this saw.
12. Do **NOT** place objects other than the work piece on the carriage.
13. Do **NOT** leave the machine unattended while it is running.
14. Assess the cut to be performed. Make proper adjustments to the crosscut fence, support, stops, hold downs, and return handle. If making angled cuts, a special angle fence will be made available. Long miters are best performed on the Saw Stop. Adjust the guard to the proper height as well. Make sure it will clear any hold downs or fences being used to make the cut. **MAKE SURE THAT THE SAW BLADE IS NOT TILTED INTO THE SAW GUARD. THE SAW GUARD/DUST HOOD CAN BE LIFTED OUT OF THE WAY IF NEEDED OR THE WHOLE ARM MAY BE LOOSENED, AND THE UNIT SWUNG OUT OF THE WAY. ALL ADJUSTMENTS MUST BE MADE WITH THE SAW TURNED OFF.**
15. Turn on the main power. The switch is located on the opposite side of the cabinet from

the operator's side.

16. Make sure the scoring blade is set below the table. If the scoring blade is to be used, test cuts will confirm the proper alignment and depth of cut. This must be checked each time the scoring blade is to be used and it is only to be set by a shop attendant trained on the saw.
17. If cutting plywood and a clean cut with no tear out is desired, a sacrificial piece of plywood can be placed beneath the primary piece and will act as a zero-clearance plate avoiding the need for the scoring blade.
18. Adjust the height of the main blade and confirm that it is set at 90 degrees.
19. Lock the sliding carriage (especially when loading large material) by engaging the lock. The lock is located on the end of the carriage and is activated by rotating the lever. Load the work piece onto the saw. Secure the work piece by using the hold down. Once the material is secured and properly supported, disengage the lock.
20. Turn on the dust collector. The blast gate should always be open during saw operation. Once finished, close the gate. Check that the work piece and any falloff are safely away from both lades. The guard can be a good reminder. Turn on the machine with the cabinet switch. Check that the work piece is properly referenced to the fence and carriage surface.
21. Press the work piece down on the carriage and against the fence while walking the piece through the blade. Your front hand should be at the area of the board which will pass through the blade first. Your back hand should push the work toward the fence and have your thumb hooked over the edge of the board and the carriage. Pay attention to the feed rate as you do this.
22. Move your work piece out of the way of the blade before moving the carriage back. Do **NOT** back pieces through the blade.
23. Remove any offcuts that may be in the way before making another cut. Never place hands in the blade area while the blades are spinning. Use a stick or stop the machine. To stop the machine, turn it off with the cabinet switch. **Do not use the emergency red button unless it is an actual emergency.**
24. Turn off the main power.

## Sliding Table Saw Maintenance

Weekly – lubricate the slider bearings and rip fence guide tube with LPS1.  
Check the cutting blade and scoring blade clean if necessary.

Monthly- clean raise and tilt screws and spray with LPS1  
Check Alignment

### Slider and blade are parallel (Healing Left) -

- 1.) Raise blade all the way.
- 2.) Using a piece of MDF at least 24" square (it can be larger in any or both dimensions) make a quick rip cut along an edge of the board removing about 1/4" to 1/2" of material. You should see an alternating or X pattern on the cut edge that indicates both the front and the back edge of the blade is cutting in the same plane.

### Check Cross Cut Fence for 90 degrees to blade -

- 1.) 5 sided cut method
- 2.) Select a piece of stock to use for the test, something at least 24" square is a good size that will give the test a decent amount of resolution. The stock material should be stable and flat for the best results, 3/4" Melamine, plywood, or MDF is a good choice. You'll need to measure some fairly small variations in this stock, the best way to do this is with calipers.
- 3.) Place the stock against the crosscut fence and cut off about 1/4" to 1/2" of material. Note, it is a good idea to have some reasonable amount material on the "waste" side of the blade. This ensures that the blade is in a stable state and that the test is being conducted under "normal" conditions.
- 4.) Rotate the stock counter clockwise 90 degrees by placing the fresh cut edge against the crosscut fence and make another cut. Repeat this step until you have rotated the stock back to the original position. Note, extra care should be taken to ensure that there is nothing between the stock and the crosscut fence to throw off the cut angle even a little as it will affect the test.
- 5.) Make another cut in this position (this is the fifth cut) slightly wider than the other cuts, and save the off cut.
- 6.) Take THIS off cut and mark one end F for forward (this edge was cut first by the blade, or against the fence.), and A for aft in the correct positions.
- 7.) Compare the difference in width between the F and A ends; the difference IS the accuracy. For example if one end is 1/8" thicker than the other then the fence is out of square by an amount of about 1/8" over the sum of the sides that were cut. If a ~24" square test piece was used, the fence is out of square by 1/8" over 96" in length ( $24 \times 4 = 96$ ). The method creates an additive error each time the stock is rotated and cut.
- 8.) You can use this information to determine how much to move the fence to bring the cut more into square. In the case of a 24" square test piece, the fence would be moved about 0.03" measured at a point on the fence 24" away from the blade ( $1/8" \div 4$  is about 0.03"). The actual amount the fence needs to be adjusted equals  $.125/96 = x / \text{pin-screw distance}$ . The point is since your adjusting the fence at the end of the fence (much longer than 24 inches) the adjustment needed is rarely more than 1/8 to 1/4 of a screw turn.
- 9.) If the F end is narrower than the A end, the fence needs to away from the operator, if the A end is narrower, the fence needs to move toward the operator.

- 10.) Once the new reference is set, the five sided cut test should be performed again to see how close to square the system is with a new correction. The acceptable difference is .005" in width in either direction.

#### **Check Cross Cut Fence Measurement Scale**

- 1) Using the board you just squared, set the stop block about an inch narrower than the board.
- 2) Make a short cut into the board. Using a GOOD tape measure check the distance from the side of the board placed against the stop block and the cut. It should agree with the distance on the rip fence measurement scale.

#### **Check Rip Fence for Parallel to Blade**

- 1) Using the piece of MDF, check that the rip fence is parallel to the blade, by removing about  $\frac{1}{4}$ " to  $\frac{1}{2}$ " of material.
- 2) You should see an alternating or X pattern on the cut edge that indicates both the front and the back edge of the blade is cutting in the same plane.
- 3) Fence can be adjusted by adjusting the rip fence bar alignment.

#### **Check Rip Fence Measurement Scale**

- 1) Using the board you squared set the Fence for a distance a little narrower than the board.
- 2) Make a small cut in the board
- 3) Using a GOOD tape measure check the distance from the side of the board placed against the rip fence and the cut. It should agree with the distance on the rip fence measurement scale.



**CS40**

**CS4**



**CATALOGO RICAMBI  
SPARE PARTS LIST  
ERSATZTEILKATALOG  
CATALOGUE DES PIECES DETACHEES  
CATALOGO REPUESTOS**

CODE : 85220101

REV. 05 DATE 22-11-2004

**sueri**group

### **INDICAZIONI PER LA RICHIESTA DI PARTI DI RICAMBIO**

Il presente CATALOGO RICAMBI costituisce parte integrante ed essenziale del prodotto.

Esso è composto da una serie di TAVOLE raffiguranti le varie parti della macchina comprese le versioni a richiesta. Individuare la tavola relativa alla parte della macchina nella quale si è verificato il guasto e rilevare il numero di figura del pezzo di cui chiedere il ricambio.

Per ogni richiesta di ricambi devono essere forniti i seguenti dati:

Modello di macchina; Matricola; Codice del Catalogo Ricambi; Codice della Tavola di riferimento; Numero della figura; Quantità di pezzi di ricambio desiderati;

### **HOW TO ORDER SPARE PARTS**

This SPARE PARTS CATALOGUE is integral and essential part of the product.

It is inclusive of a series of TABLES representing the various parts of the machine, including versions on request.

Find the table referring to the defective part of the machine and look for the reference number of the piece to be replaced.

When requiring spare parts, always provide the following information:

Machine model; Serial number; Code of the Spare Parts Catalogue; Code of the reference Table; Figure number; Quantity of required spare parts.

### **HINWEISE ZUR ERSATZTEILBESTELLUNG**

Der vorliegende ERSATZTEILKATALOG stellt einen ergänzenden und wesentlichen Teil des Produkts dar.

Er besteht aus einer Reihe von TAFELN, die die verschiedenen Teile der Maschine darstellen, einschließlich der auf Anforderung erhältlichen Versionen.

Die Tafel mit dem Maschinenteil, an dem ein Defekt aufgetreten ist, aufsuchen, und die Abbildungsnummer des Teils, das ausgetauscht werden soll, ermitteln.

Bei jeder Ersatzteilbestellung müssen die folgenden Daten angegeben werden:

Modell der Maschine; Fabriknummer; Codenummer des Ersatzteilkatalogs; Codenummer der betreffenden Tafel; Abbildungsnummer; Anzahl der gewünschten Ersatzteile.

### **INDICATIONS POUR DEMANDER DES PIÈCES DE RECHANGE**

Le présent CATALOGUE DES PIÈCES DE RECHANGE fait partie intégrante et essentielle du produit.

Il comprend une série des TABLEAUX représentant les composants divers de la machine, y compris les versions sur demande.

Cherchez le tableau relatif à la pièce défectueuse de la machine et, par la suite, le numéro de figure de la pièce que vous devez remplacer.

Pour chaque commande de pièces détachées, il faut nous fournir les données suivantes:

Modèle de la machine; Numéro de série; Code du Catalogue des Pièces de Rechange; Numéro du Tableau de référence; Numéro de la figure; Quantité des pièces de rechange requises.

### **INDICACIONES PARA PEDIR PIEZAS DE RECAMBIO**

Este CATALOGO DE PIEZAS DE RECAMBIO se considera parte integrante y esencial del producto.

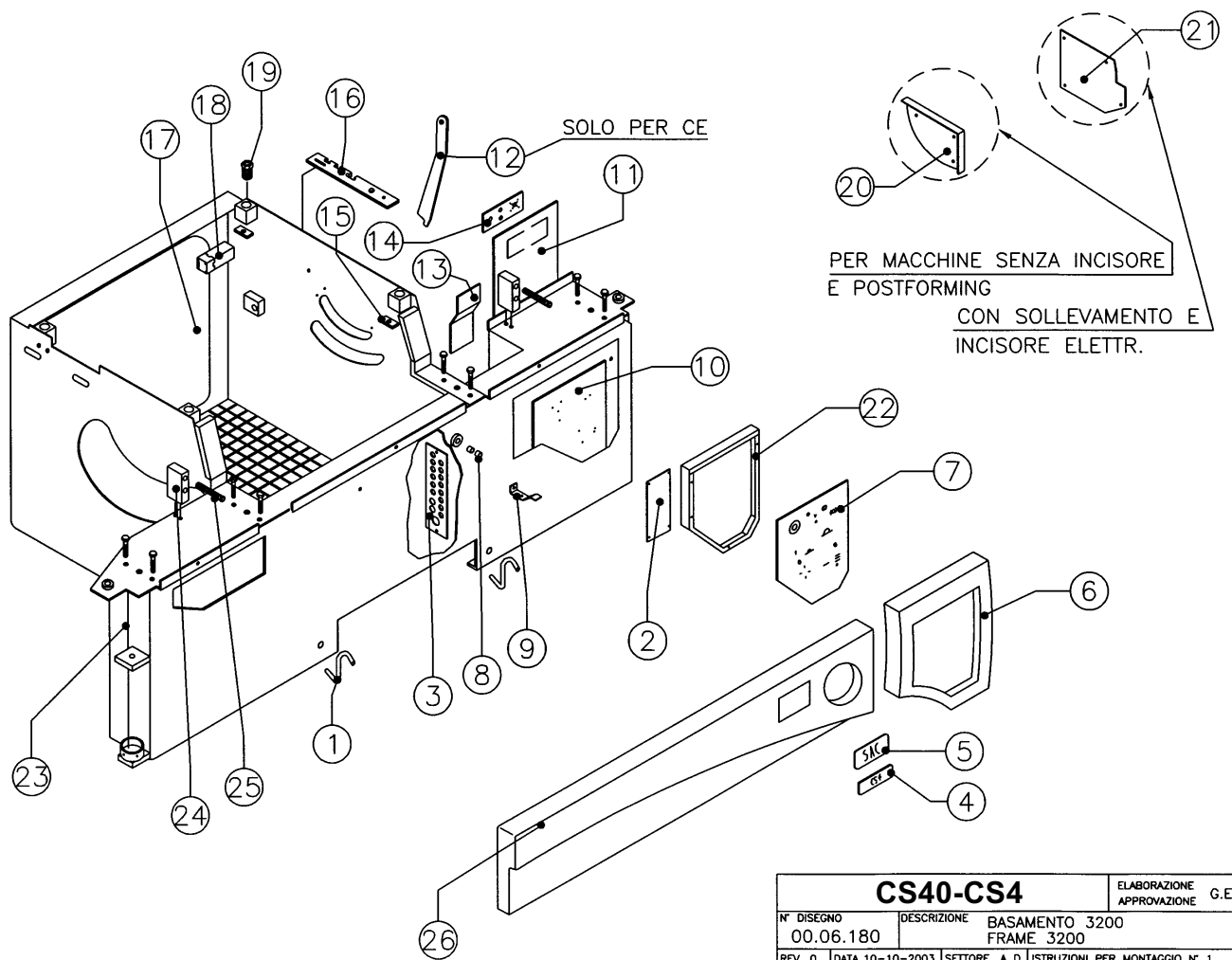
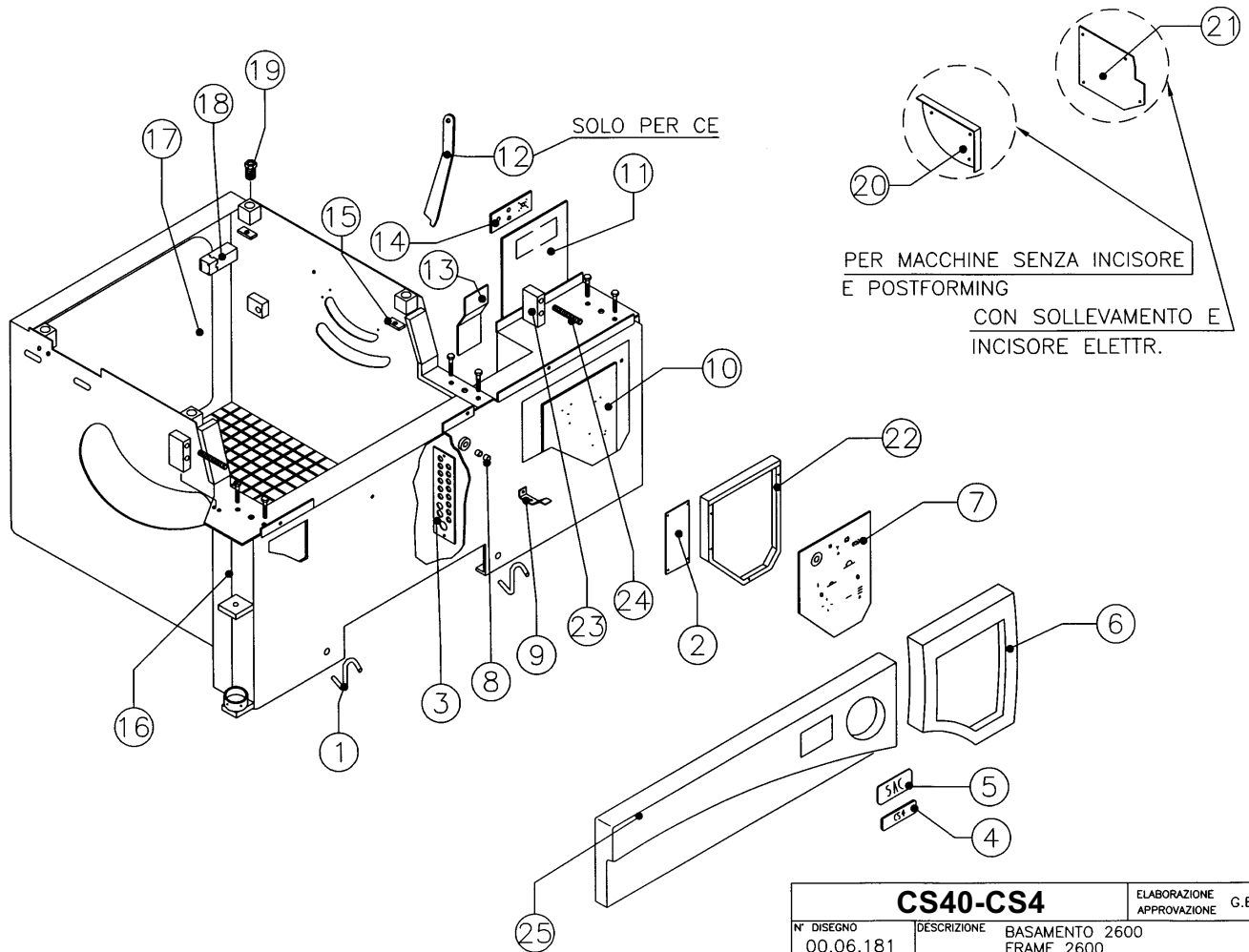
Está formado por una serie de TABLAS que representan las componentes distintos de la máquina, incluidas las versiones bajo pedido.

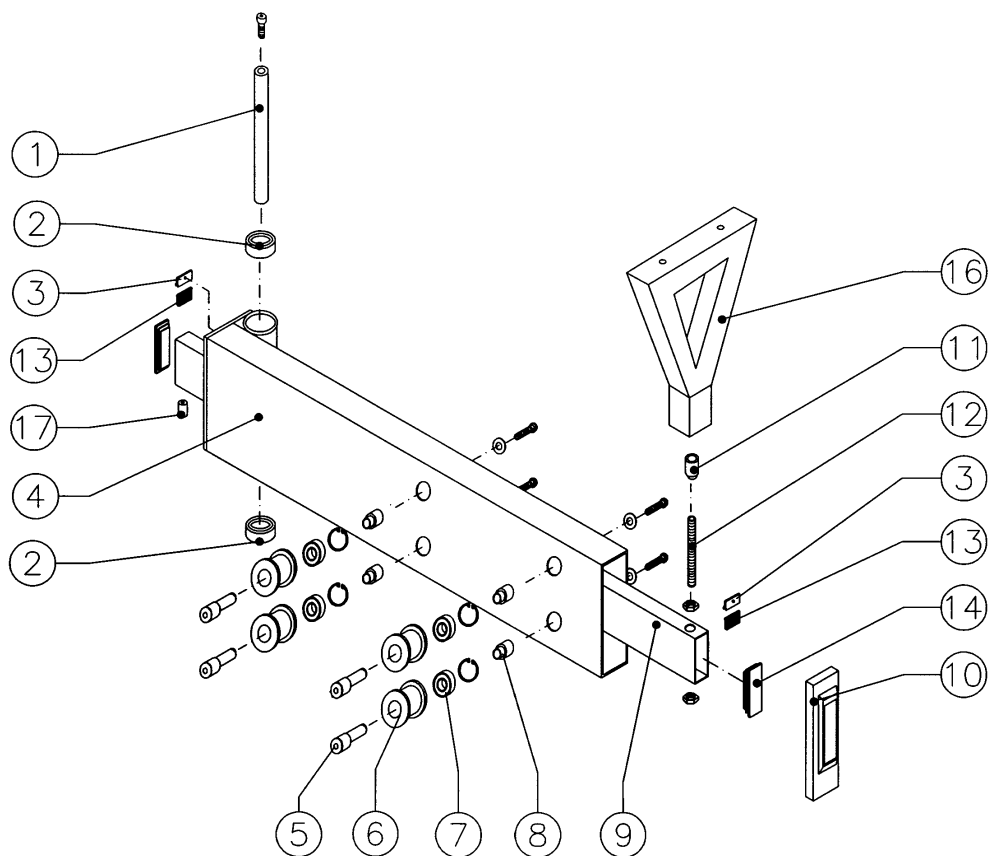
Individúe la tabla relativa al componente de la máquina dañado y busque el número de figura de la pieza que desea pedir.

Cada pedido de piezas de recambio debe ser completado con las siguientes informaciones:

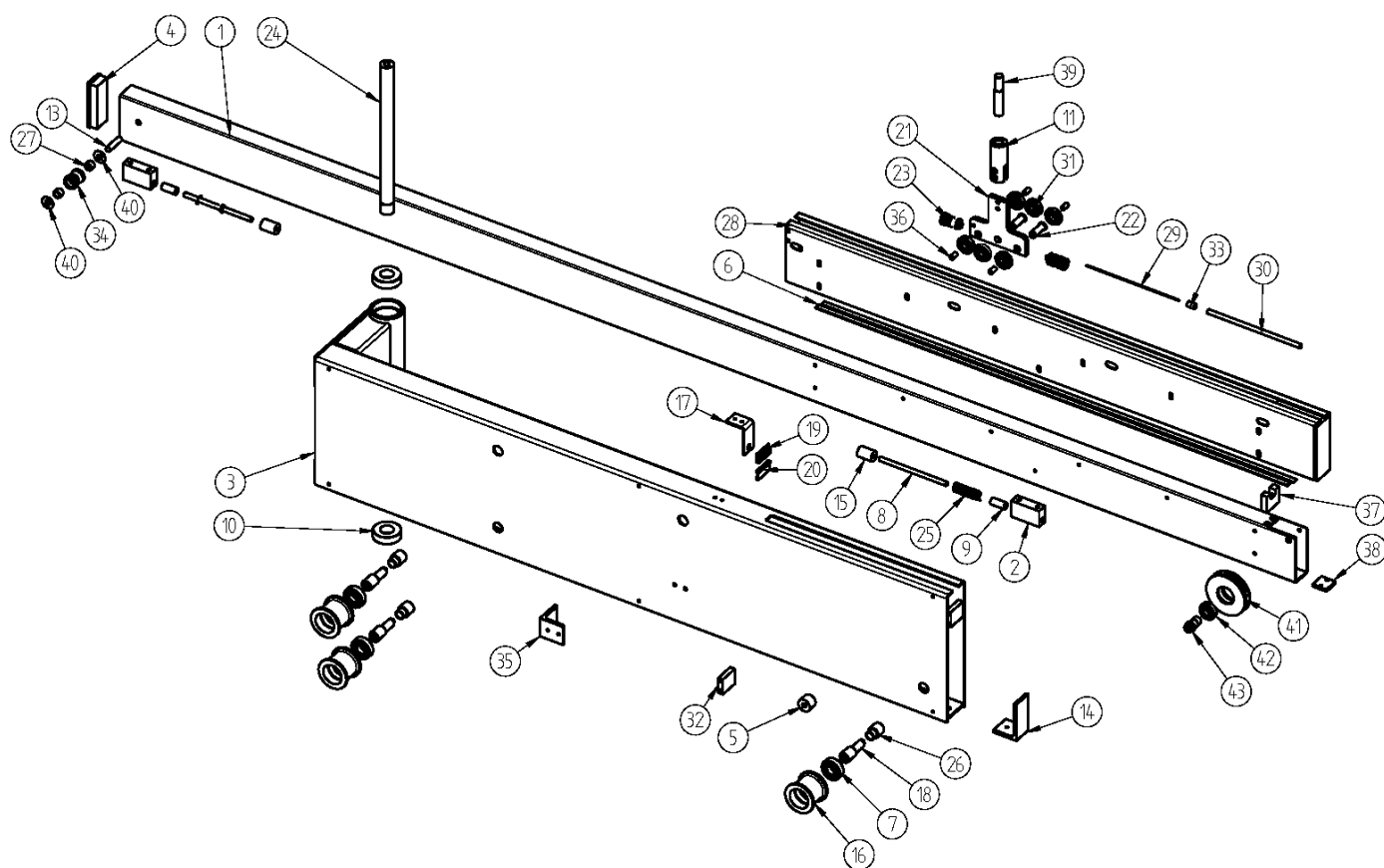
Modelo de la máquina; Número de matrícula; Código del Catálogo de Piezas de Recambio; Código de la Tabla de referencia; Número de la figura; Cantidad de piezas de recambio deseados.





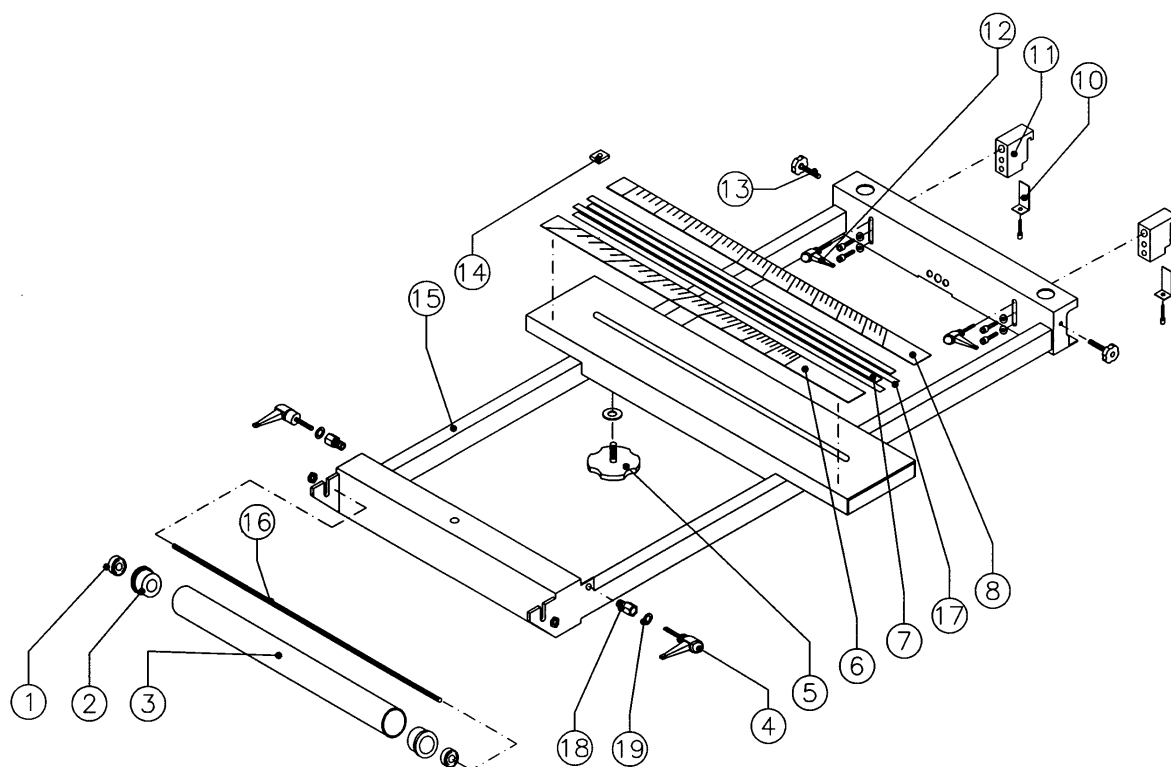


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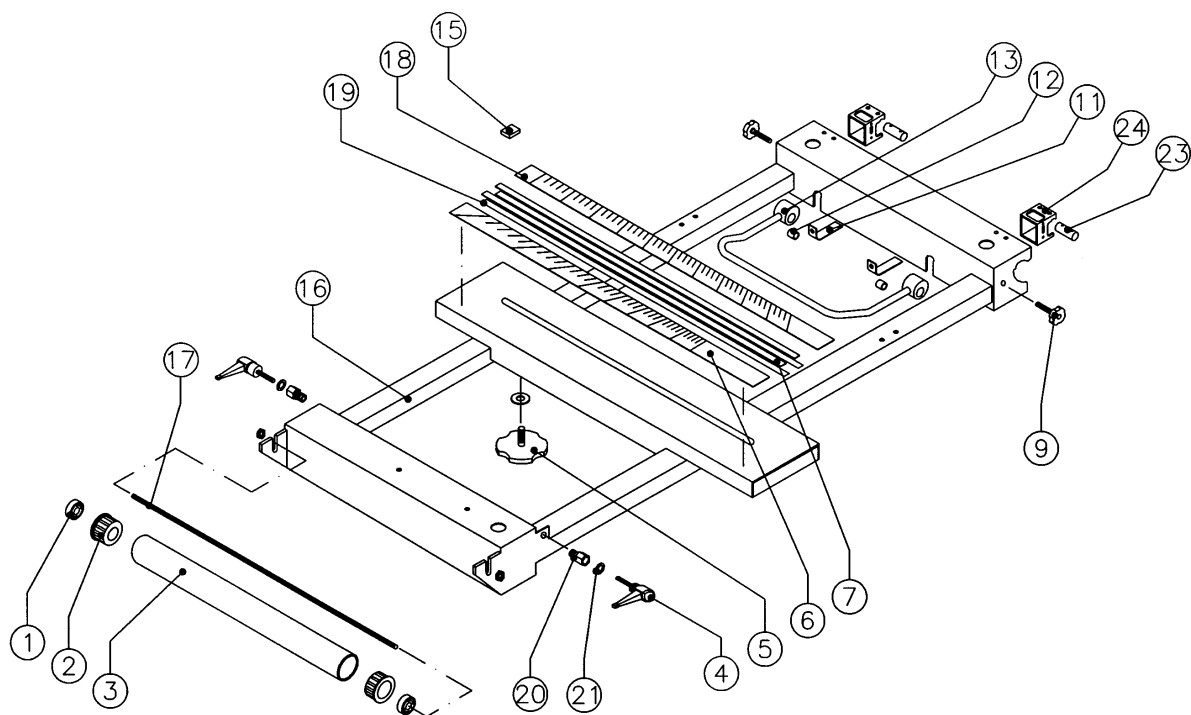


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00.06.124	BANDIERA PER TELAIO INCLINABILE MANUALE TELESCOPIC ARM FOR MANUAL INCLINABLE CROS CUT		
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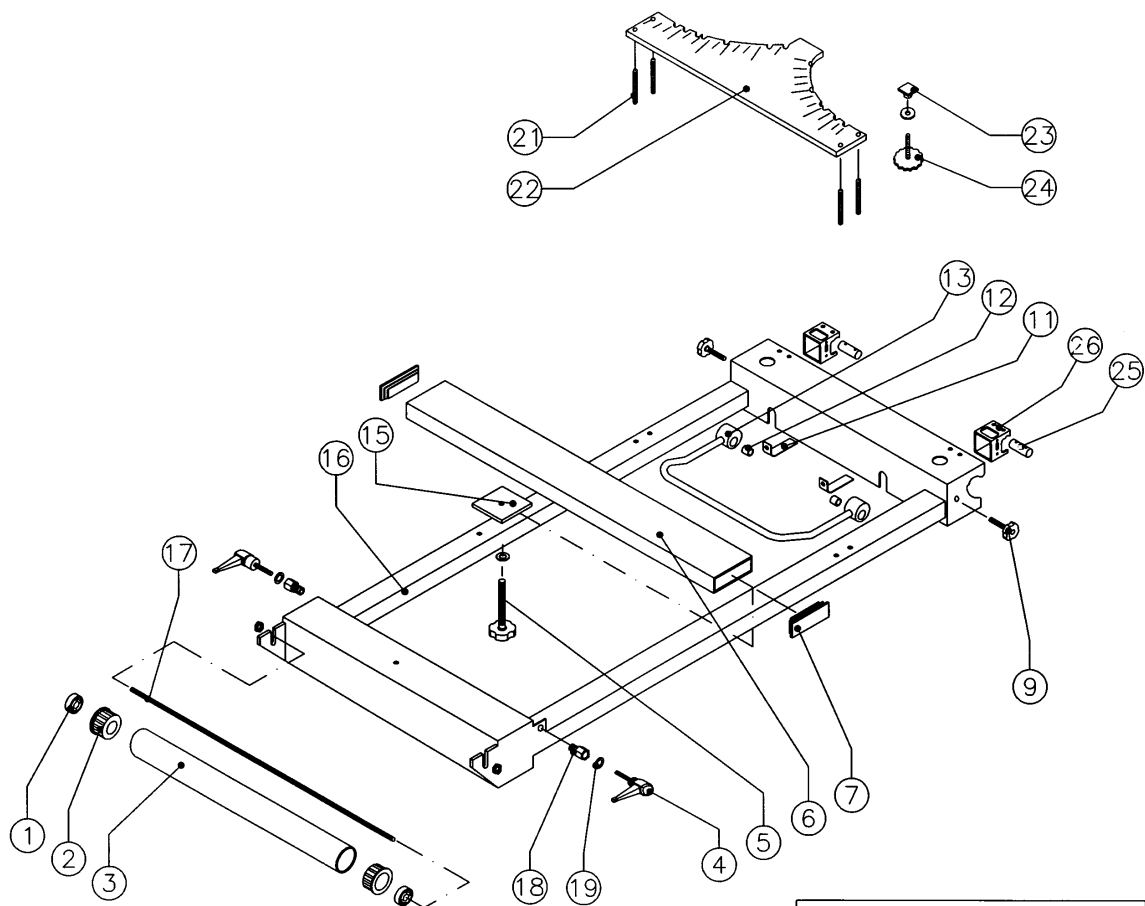
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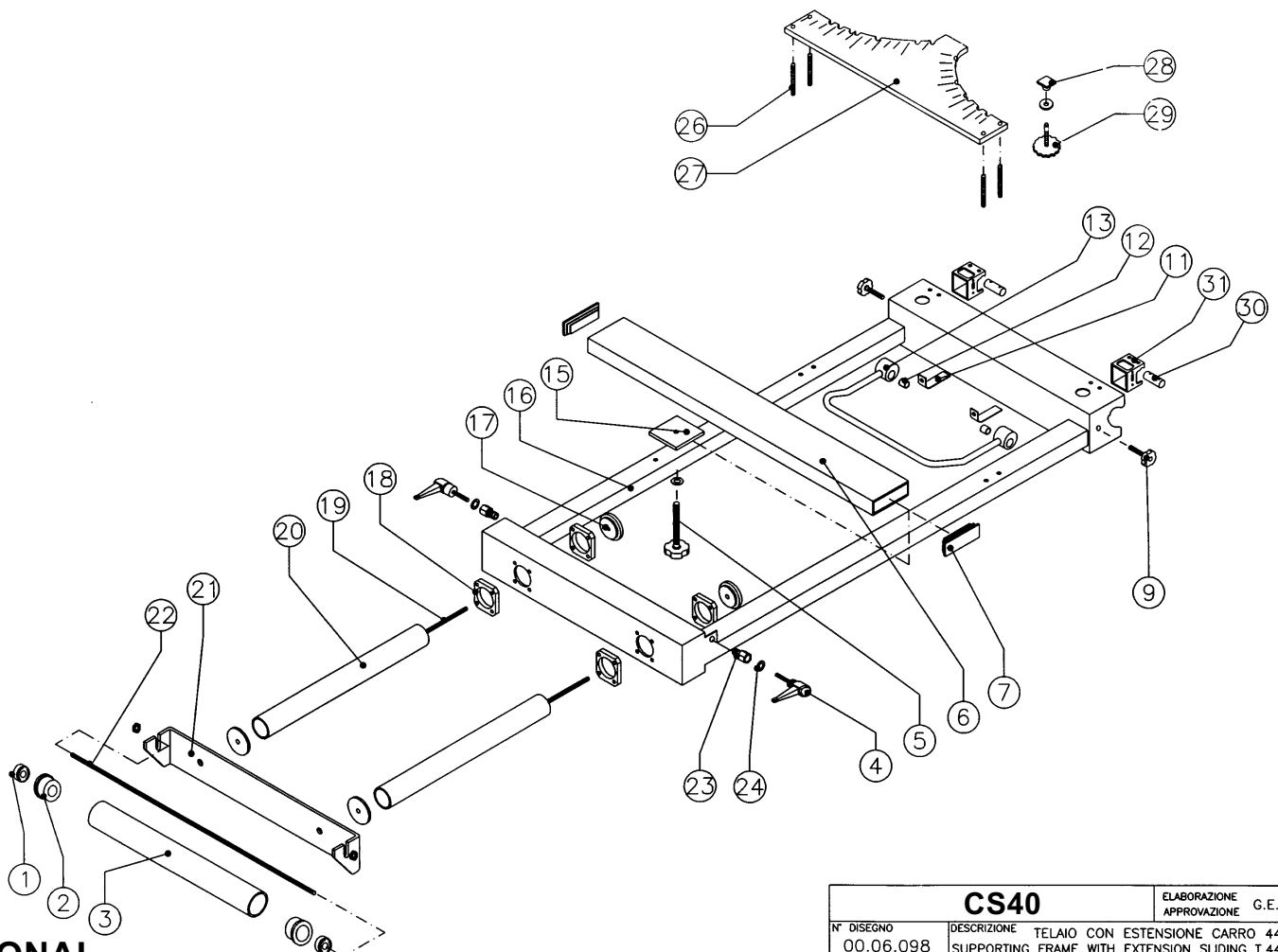
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00.06.096	TELAIO CARRO 330 SUPPORTING FRAME SLIDING TABLE 330		
REV. 4	DATA 01-06-2004	SETTORE F	ISTRUZIONI PER MONTAGGIO N° 34



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00.06.111	TELAIO CARRO 440 (TEMA) SUPPORTING FRAME SLIDING TABLE 440 (TEMA)		
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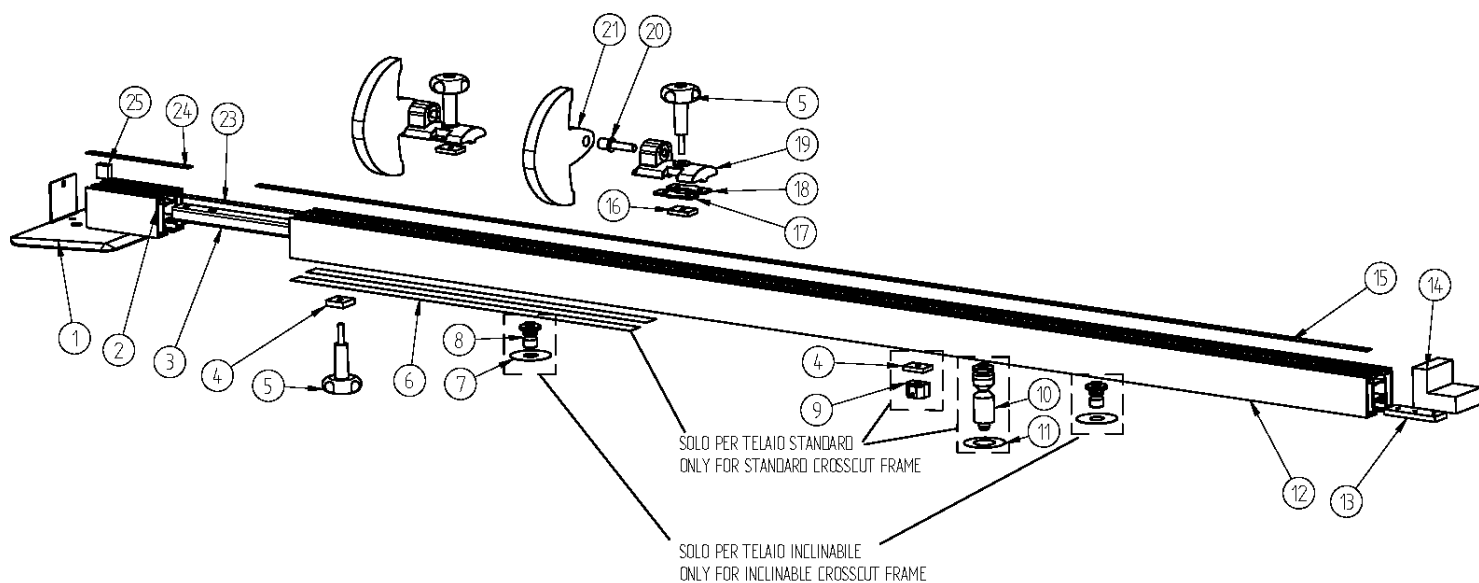
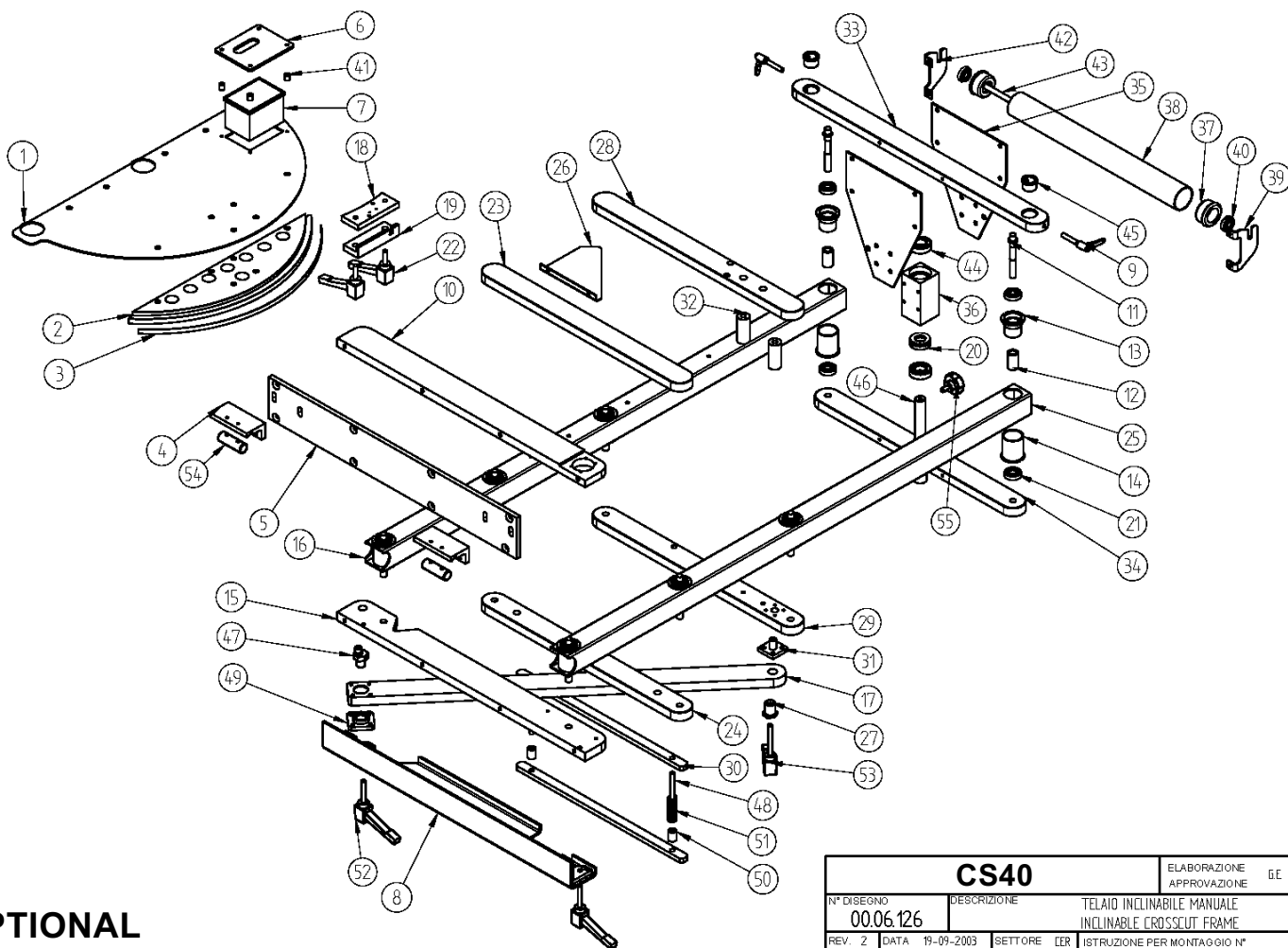


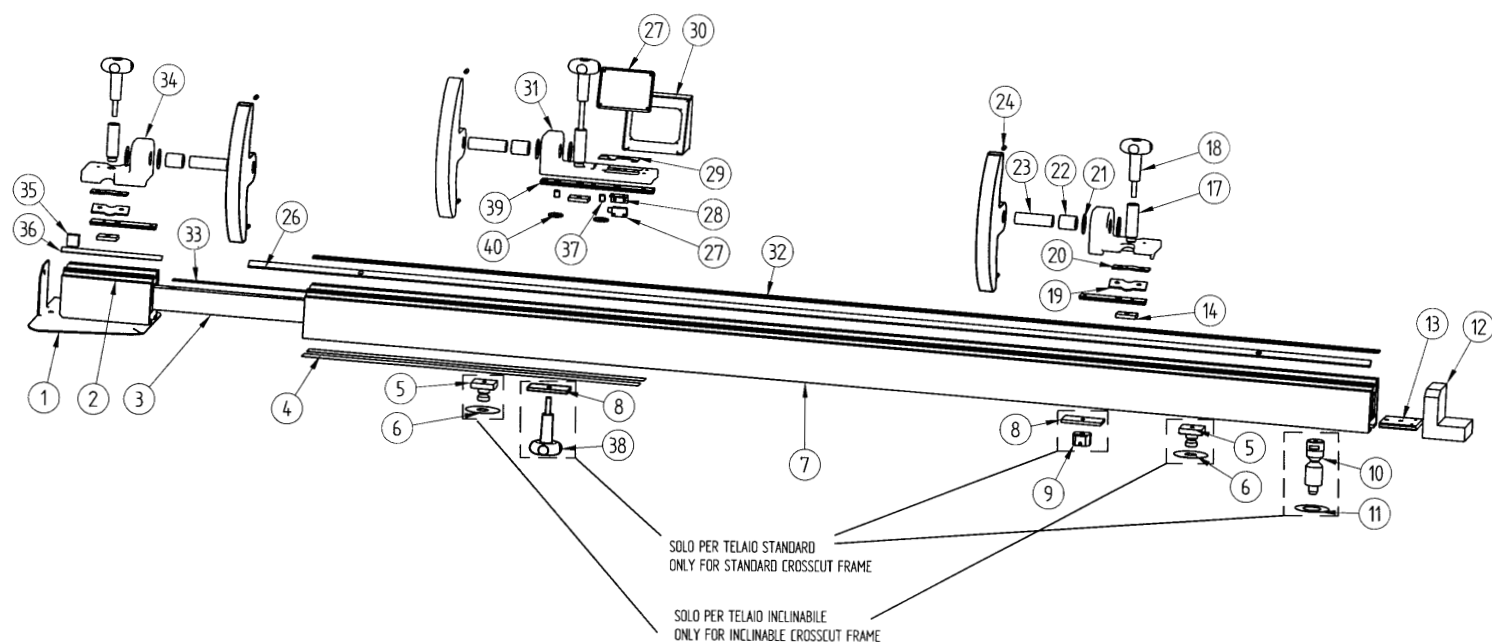
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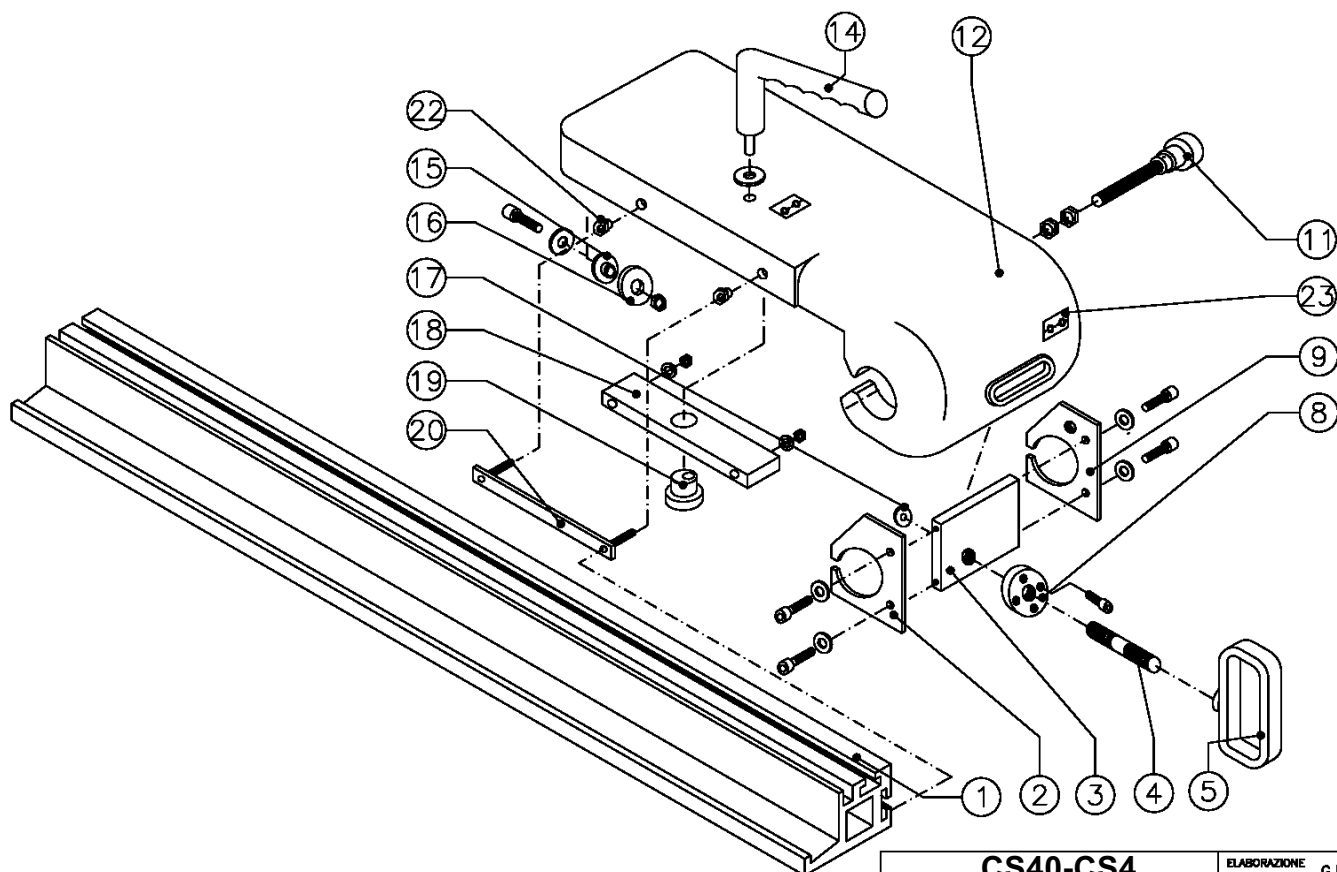
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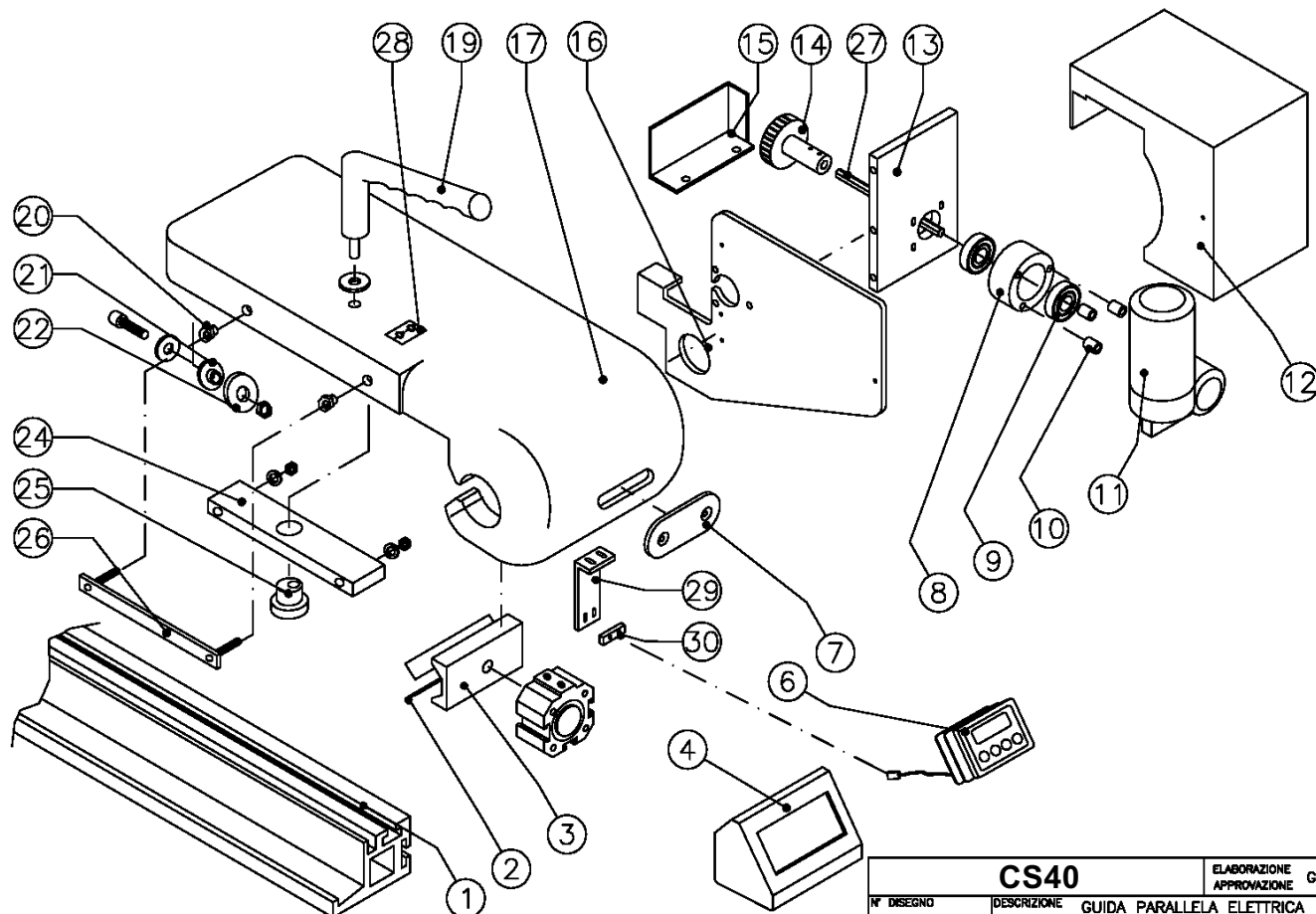


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00.06.173	SQUADRA TELAIO 80 CON BATTUTE VISUALIZZATE CROSSCUT FENCE WITH DIGITAL READOUT ON THE STOPS		
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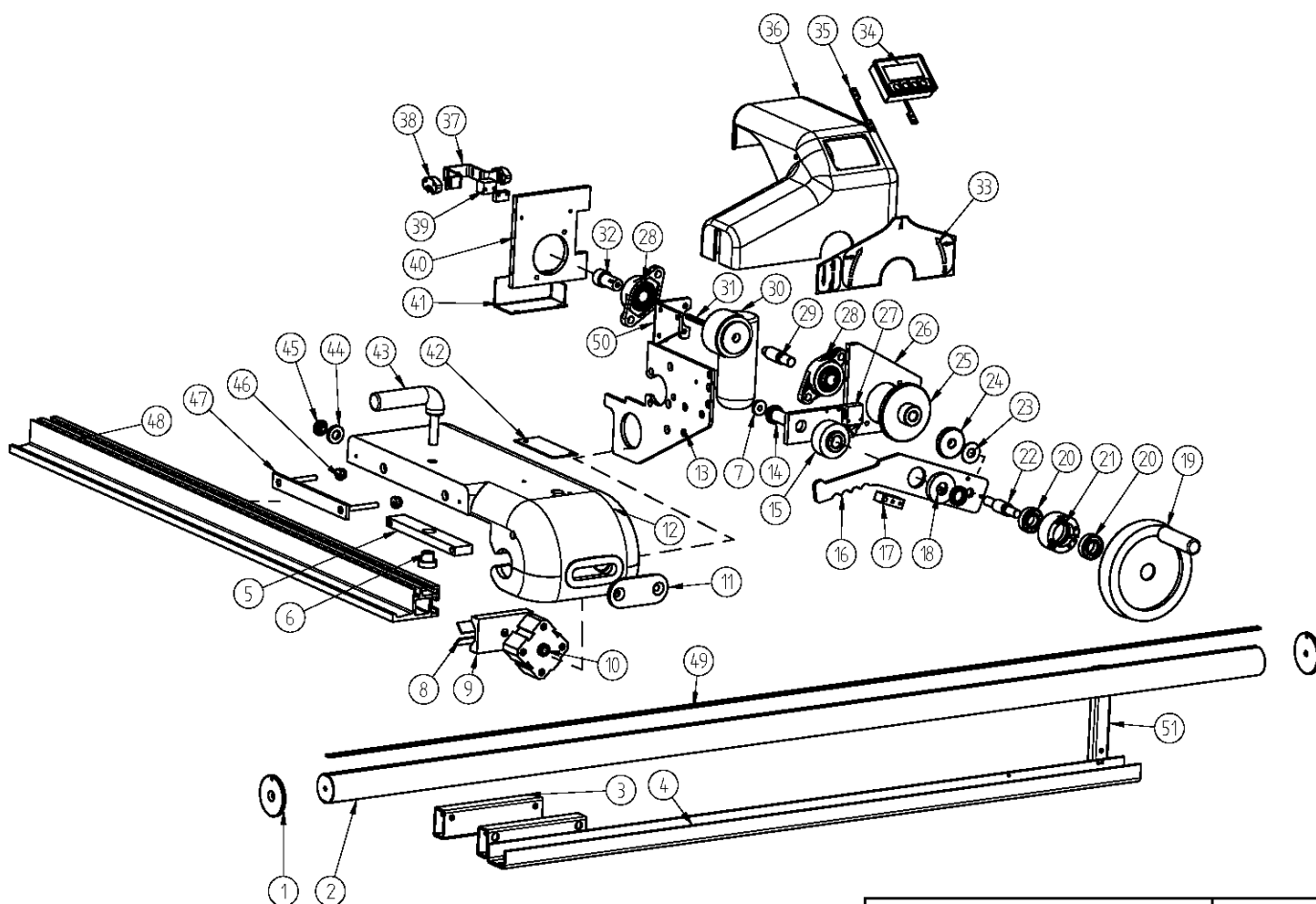


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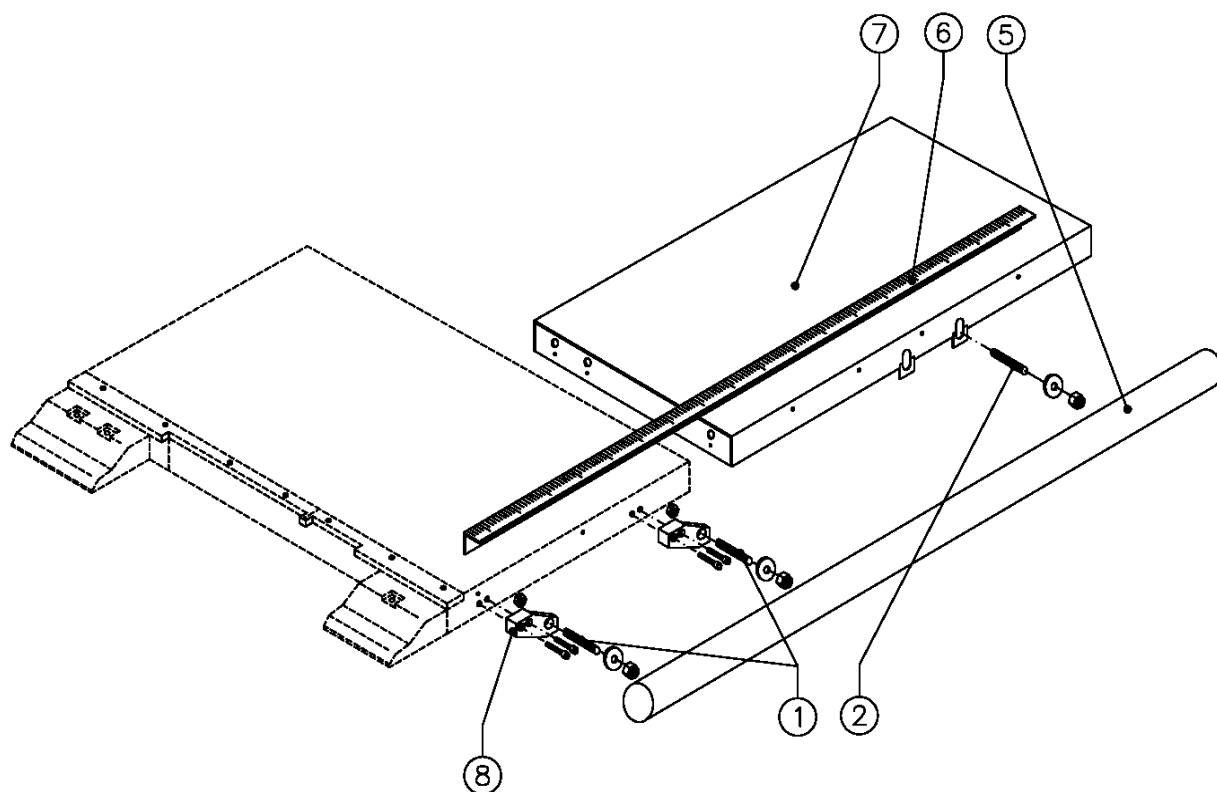


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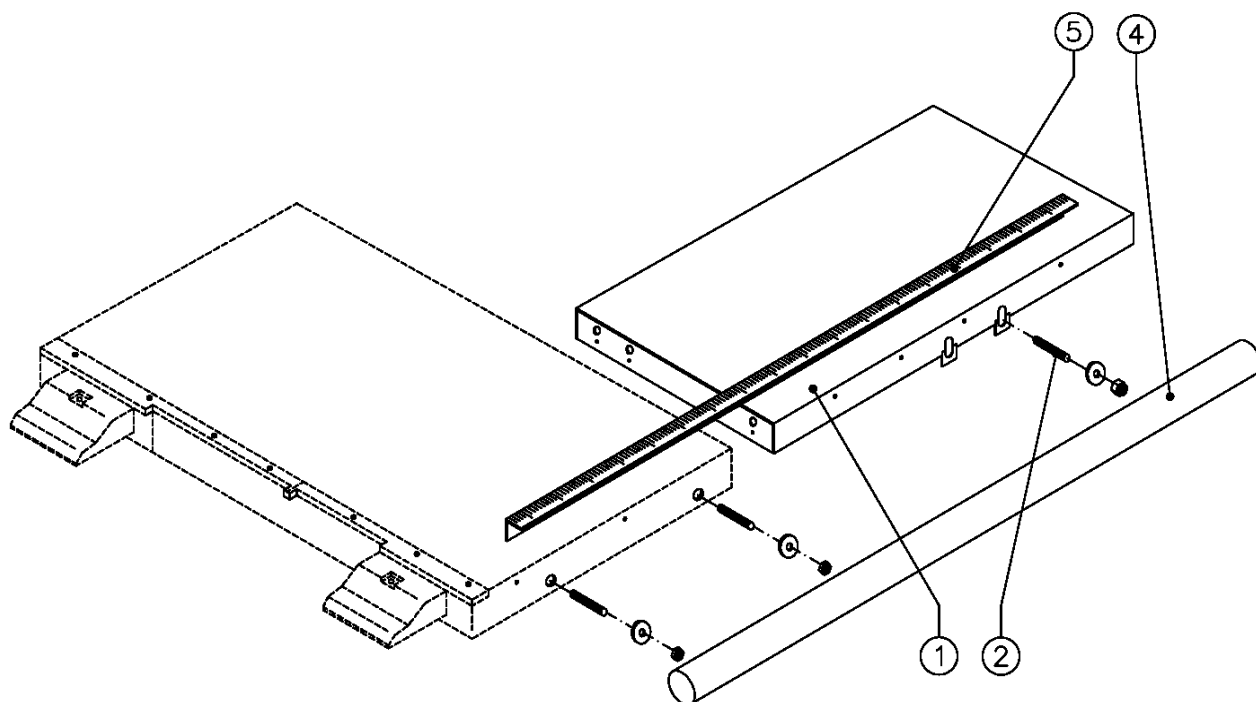
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00.06.175	GUIDA P. ELETTRICA CON POSIZIONATORE ELECTRIC RIPPING FENCE WITH POSITIONER		
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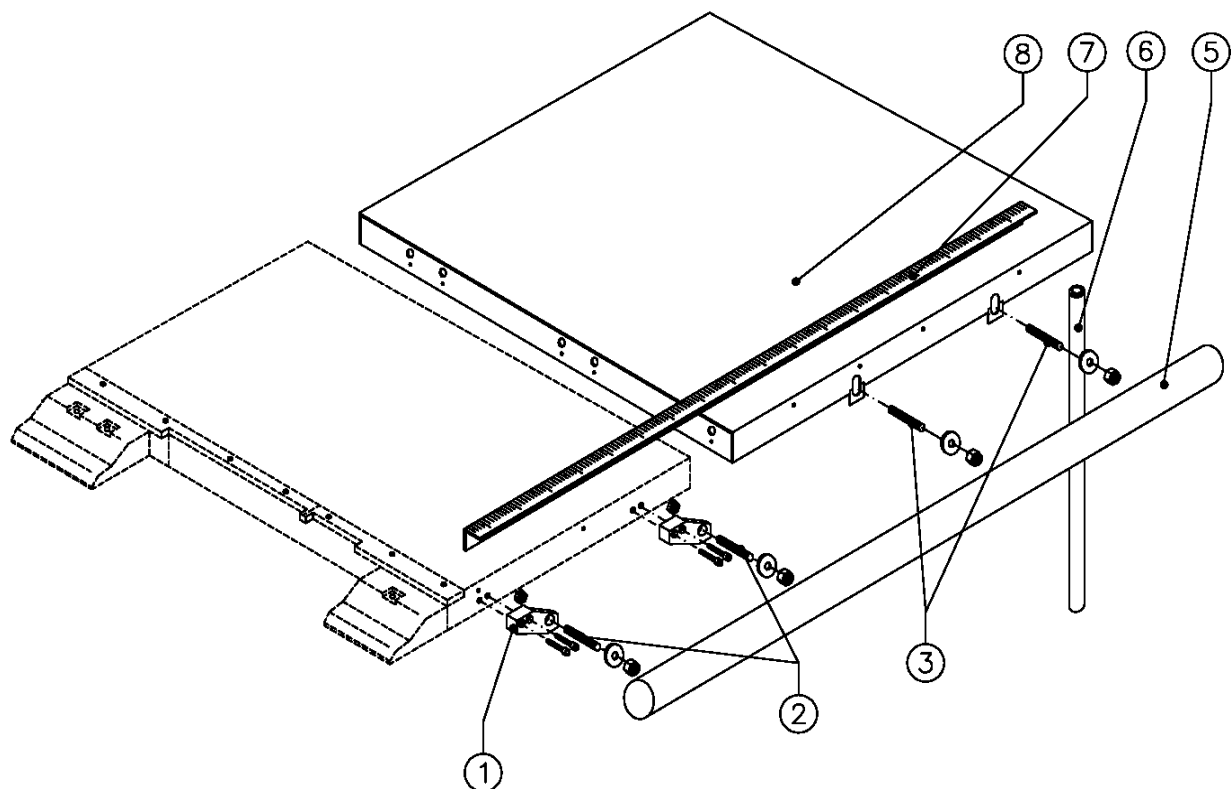


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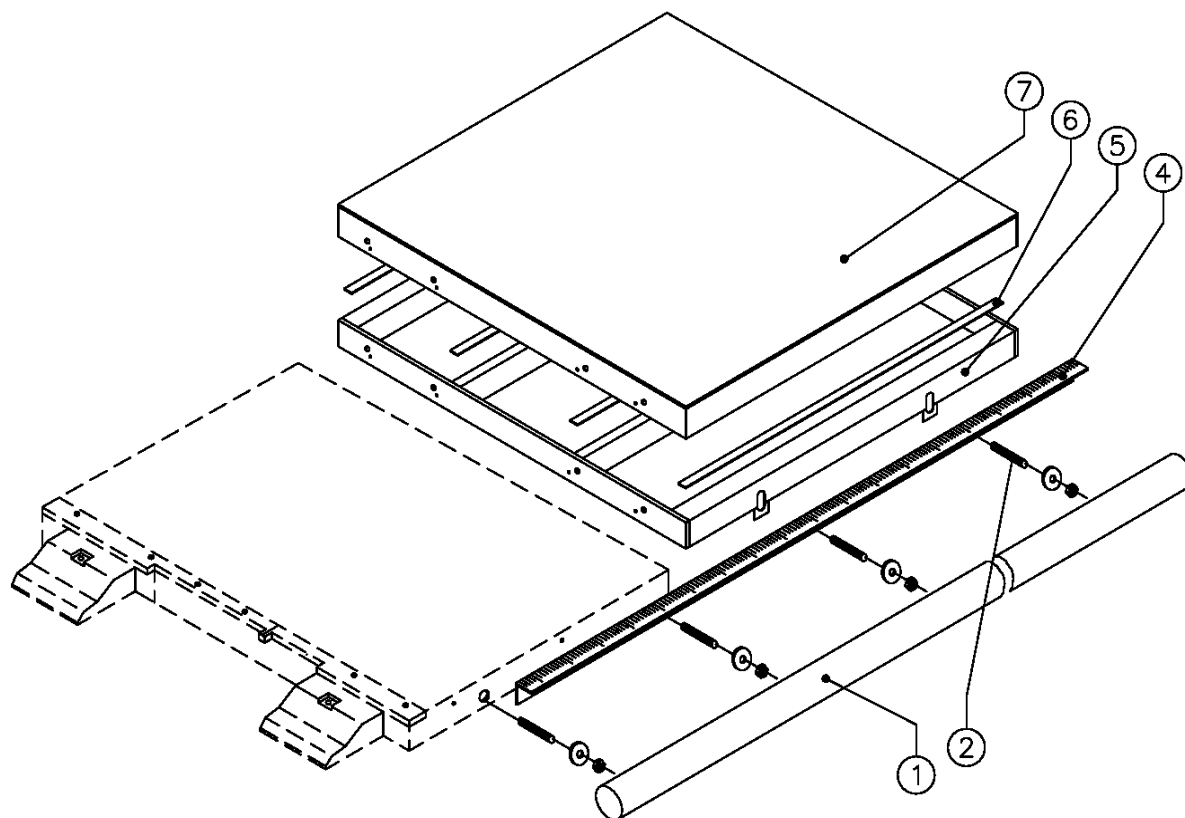
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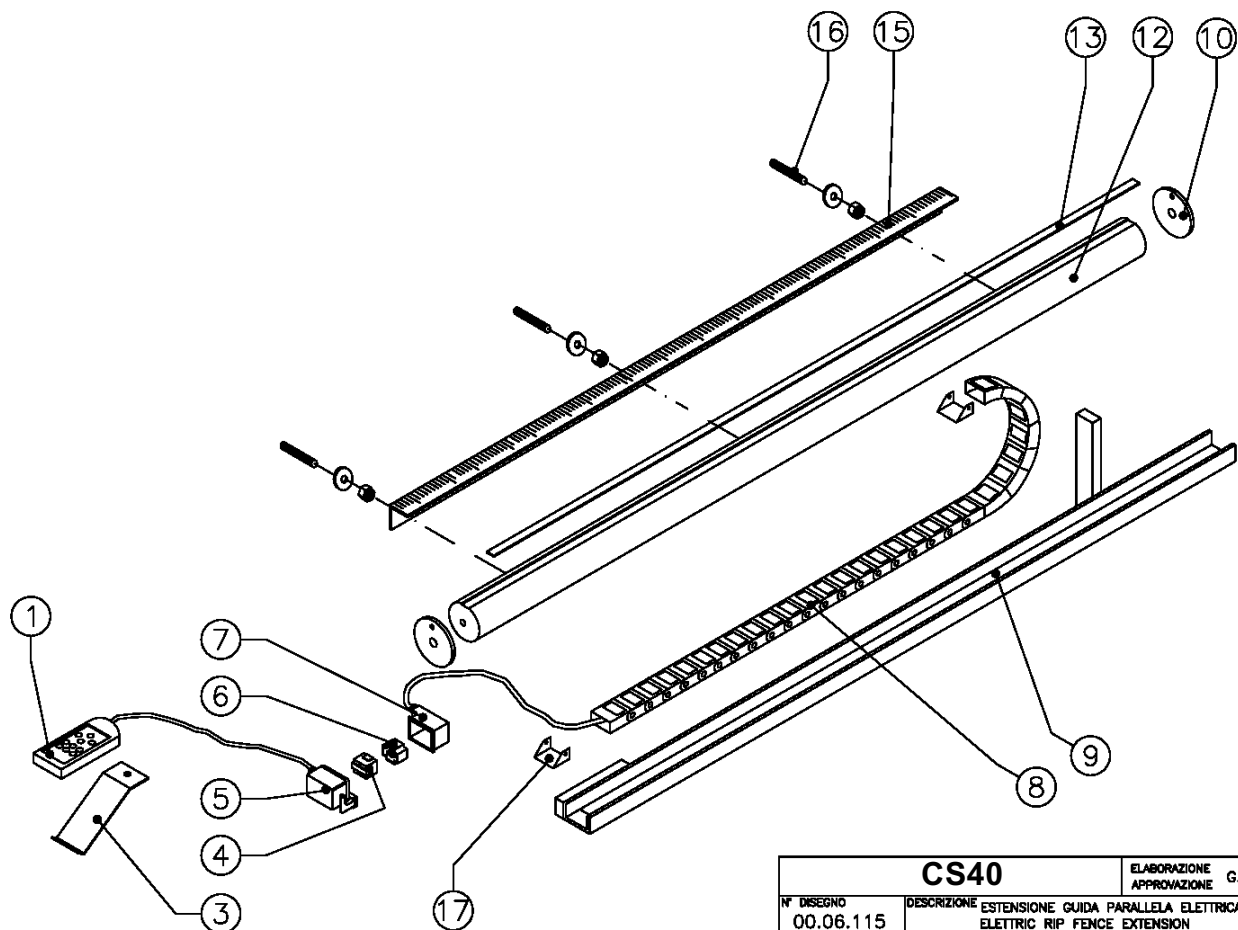
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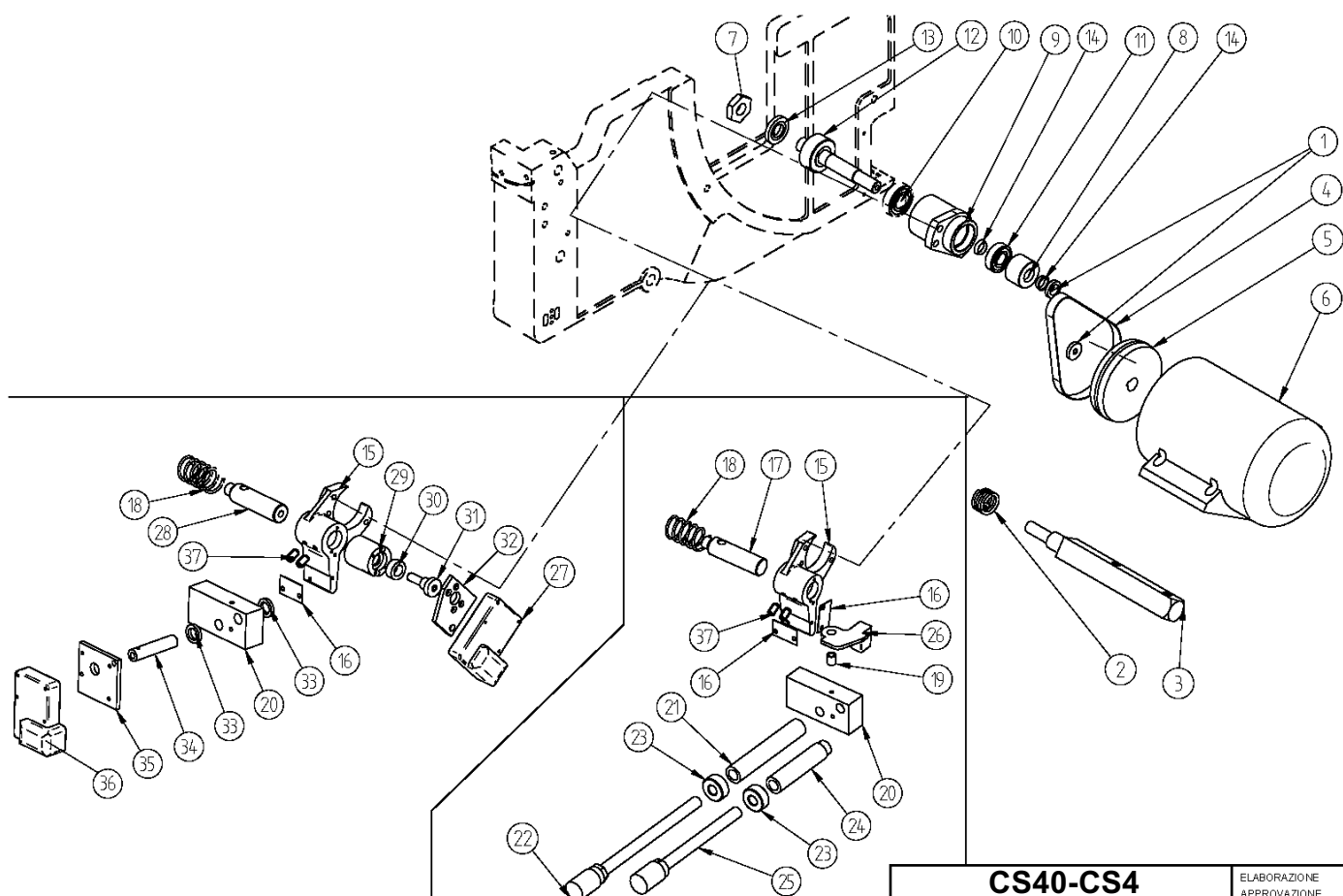


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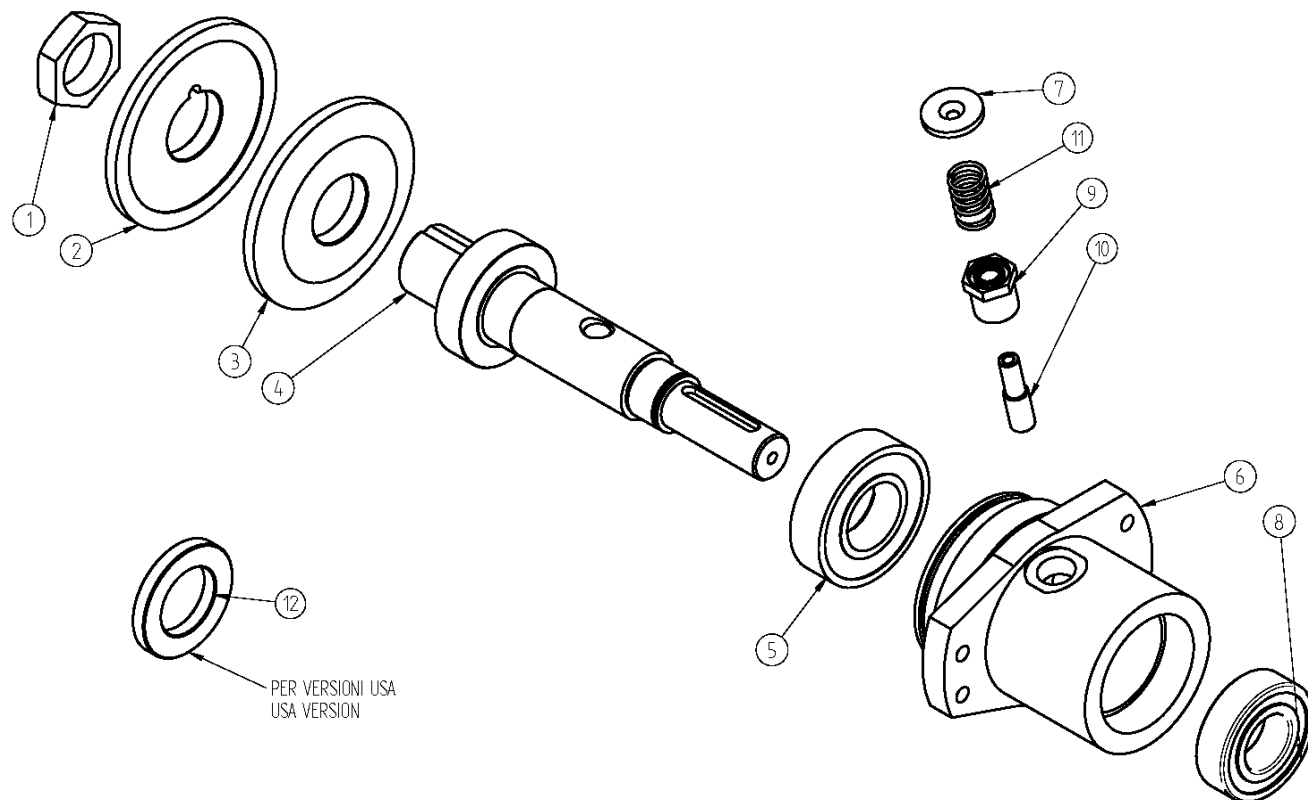
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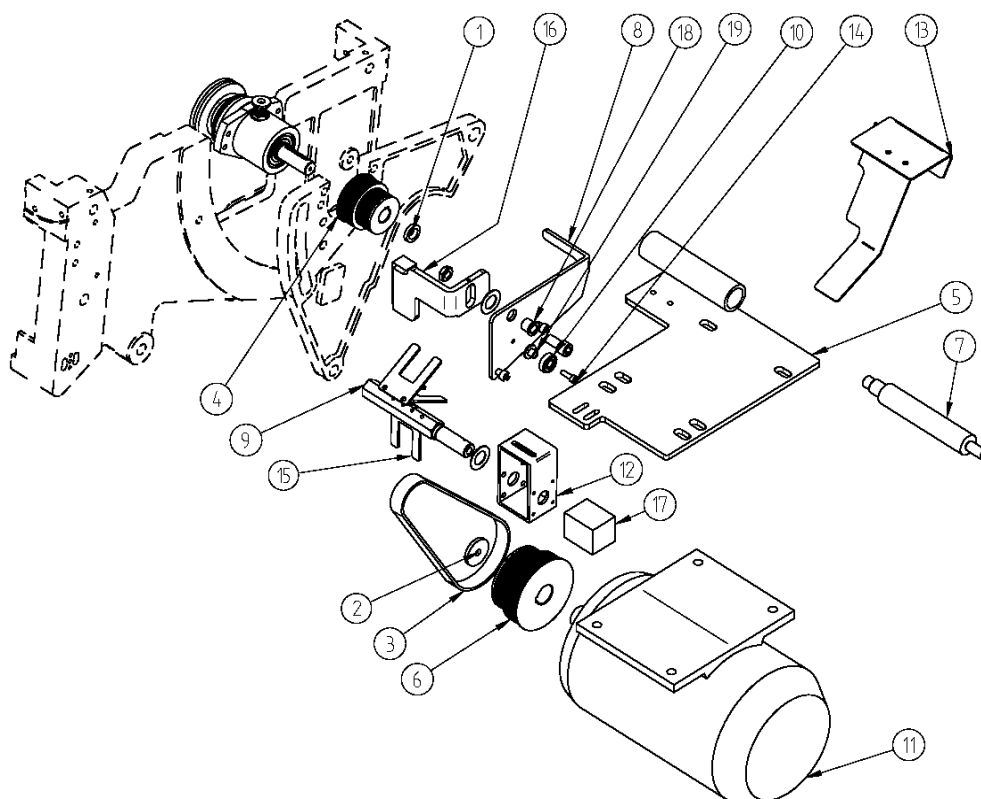
REGOLAZIONE ELETTRICA / ELECTRIC ADJUSTMENT

REGOLAZIONE MANUALE / MANUAL ADJUSTMENT

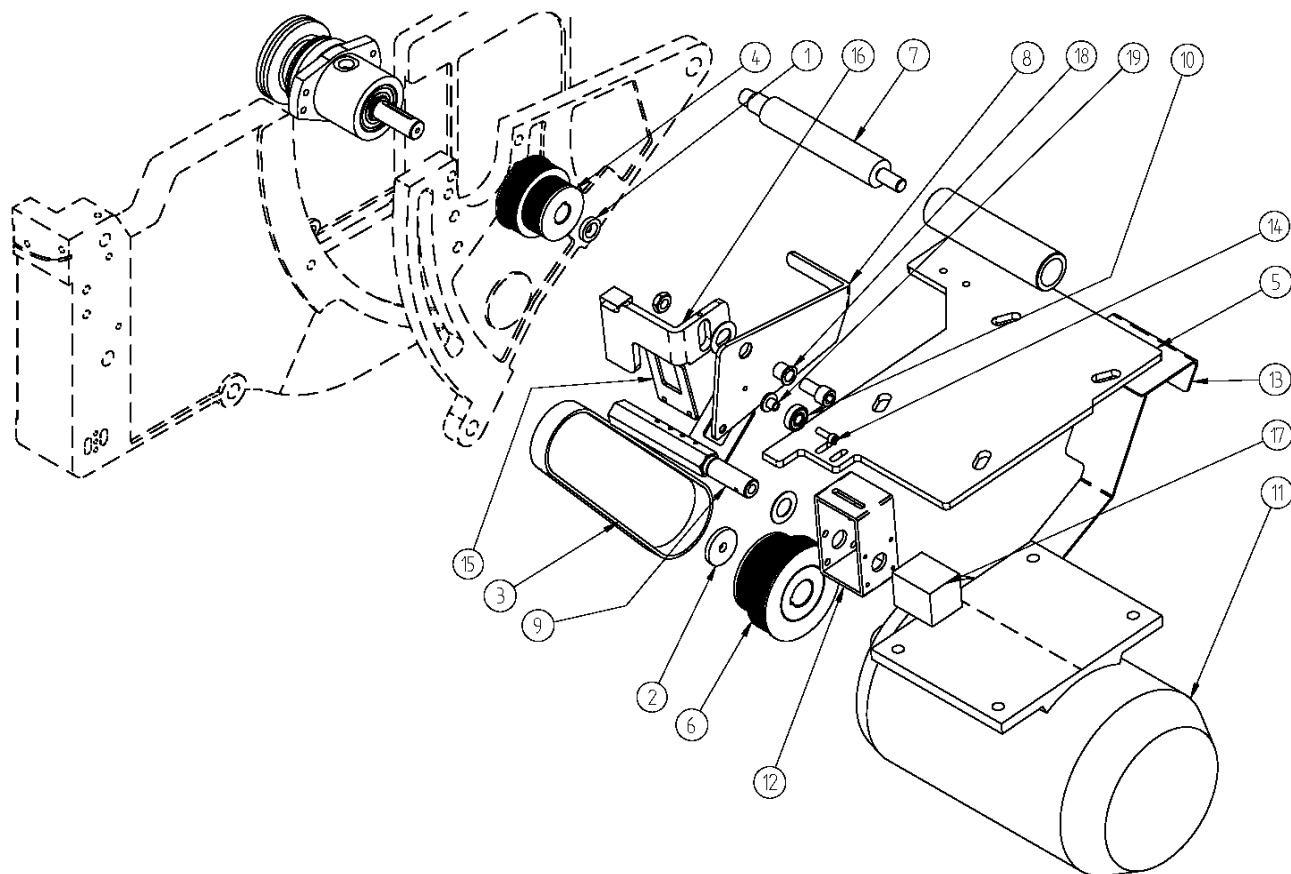
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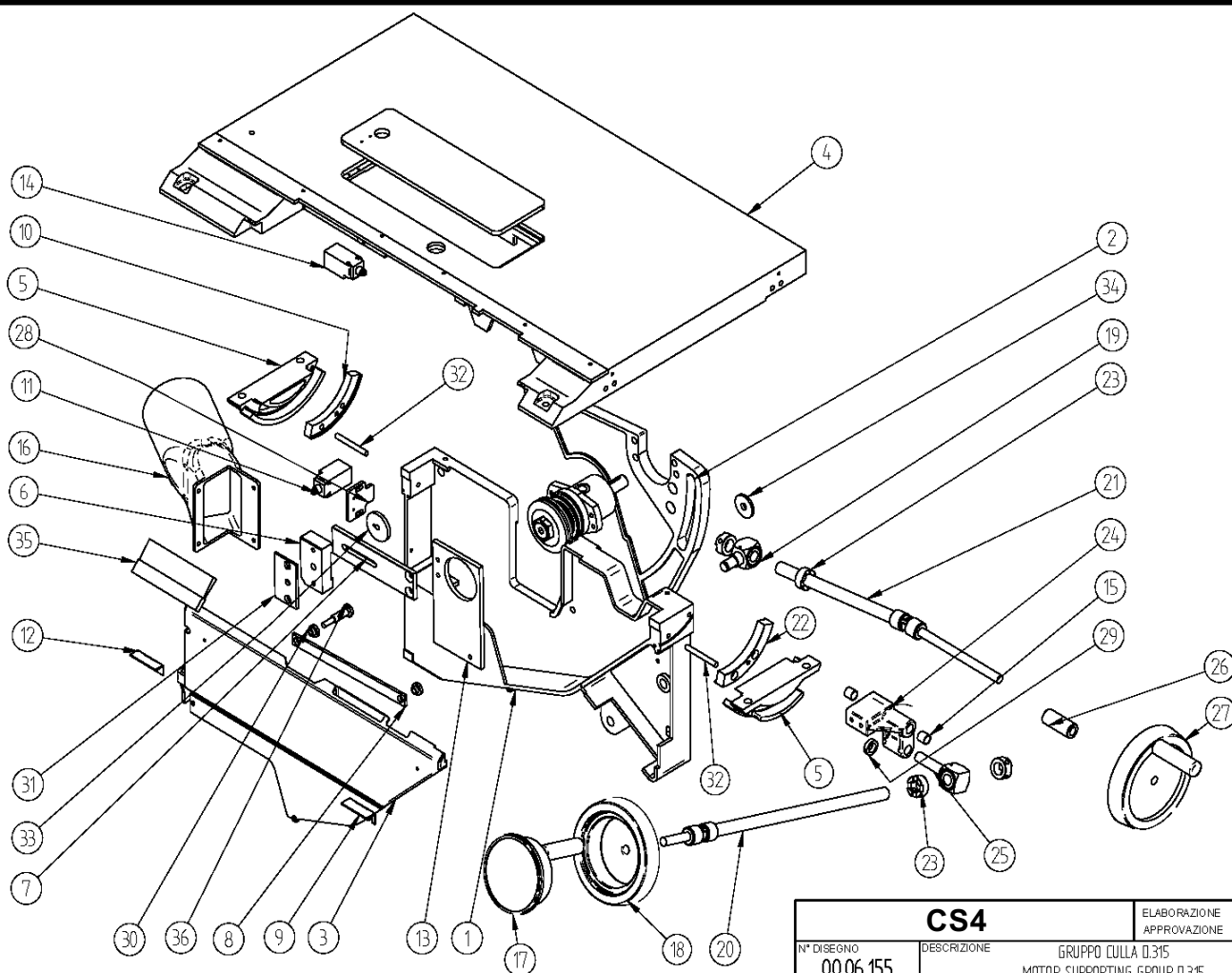
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00.06.151	GRUPPO ALBERO SEGA SAW SPINDLE GROUP		
REV. 0	DATA 06-05-2002	SETTORE 8	ISTRUZIONE PER MONTAGGIO N° 4



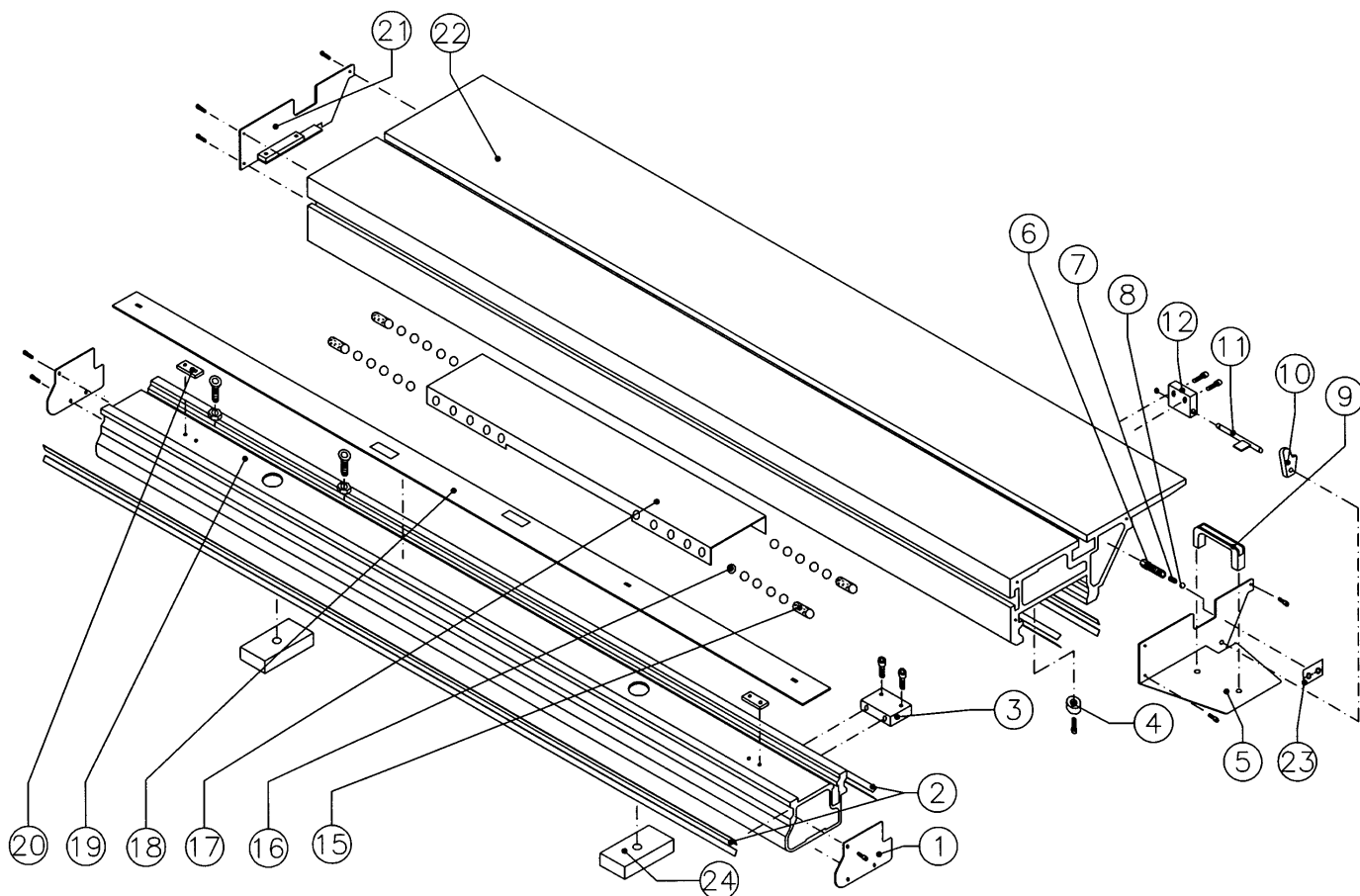
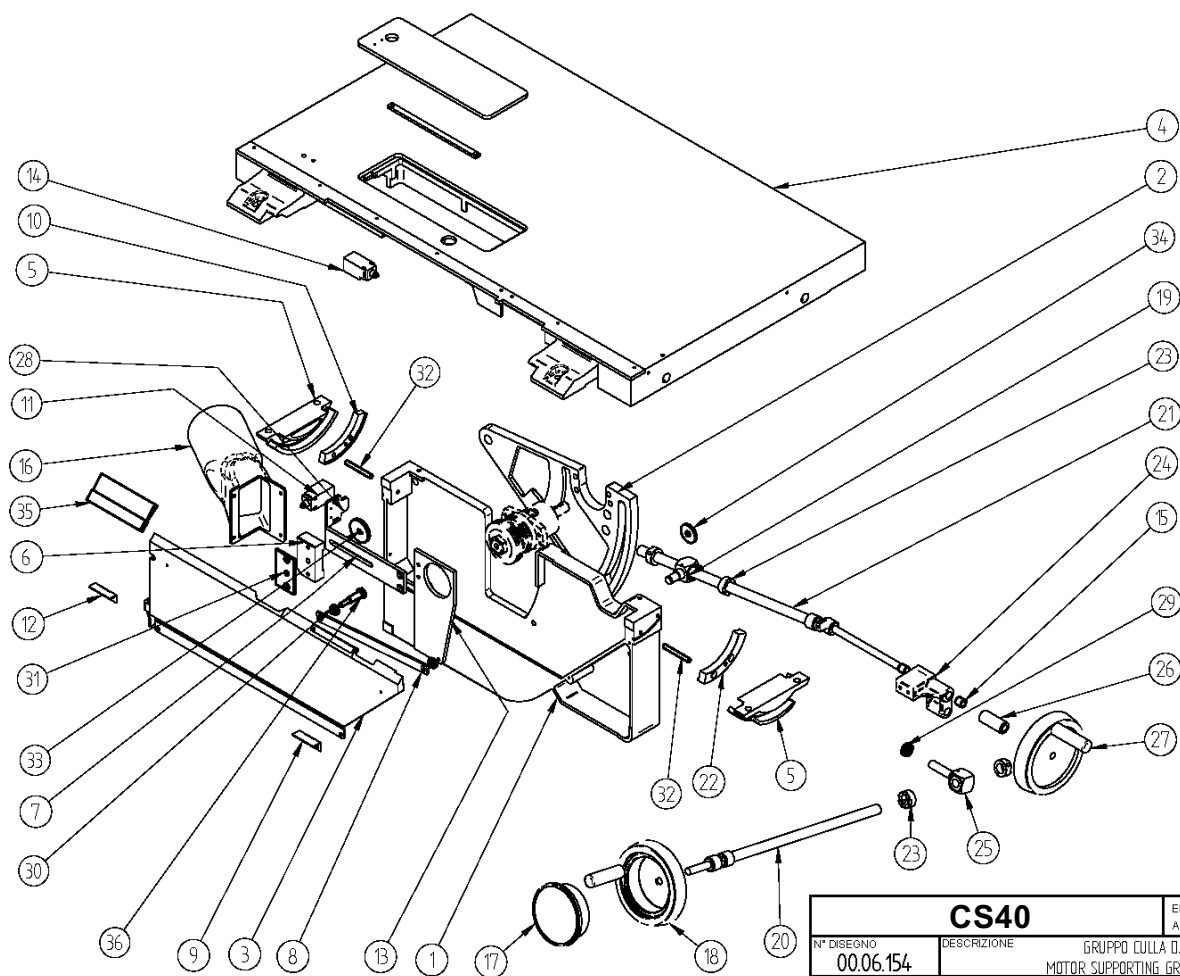
CS4		ELABORAZIONE	GE
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
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REV. 0	DATA 06-05-2002	SETTORE 8	ISTRUZIONE PER MONTAGGIO N° 4

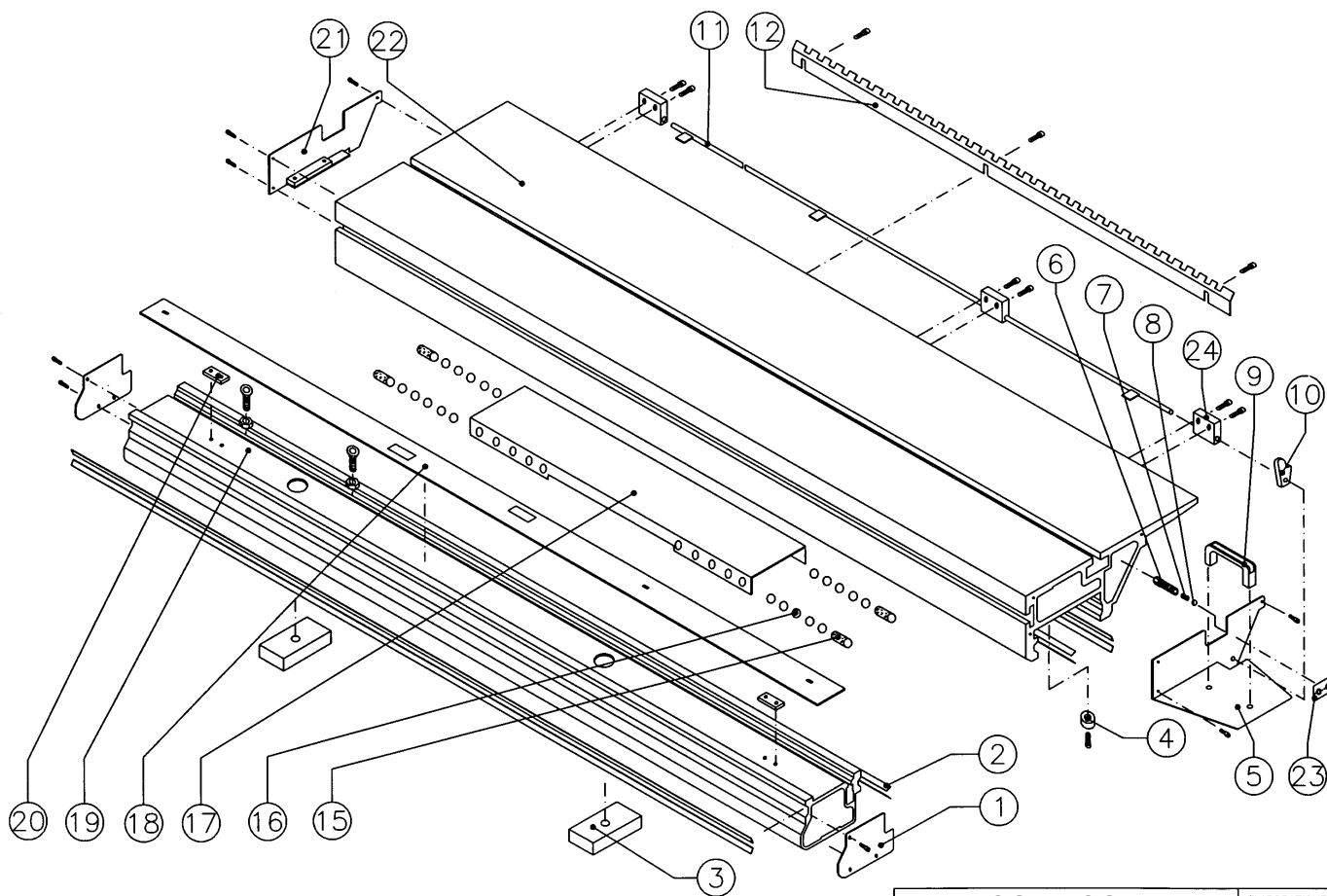


CS40		ELABORAZIONE	GE
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.152	GRUPPO MOTORE SEGA SAW MOTOR GROUP		
REV. 0	DATA 06/05/2002	SETTORE 8	ISTRUZIONE PER MONTAGGIO N° 4



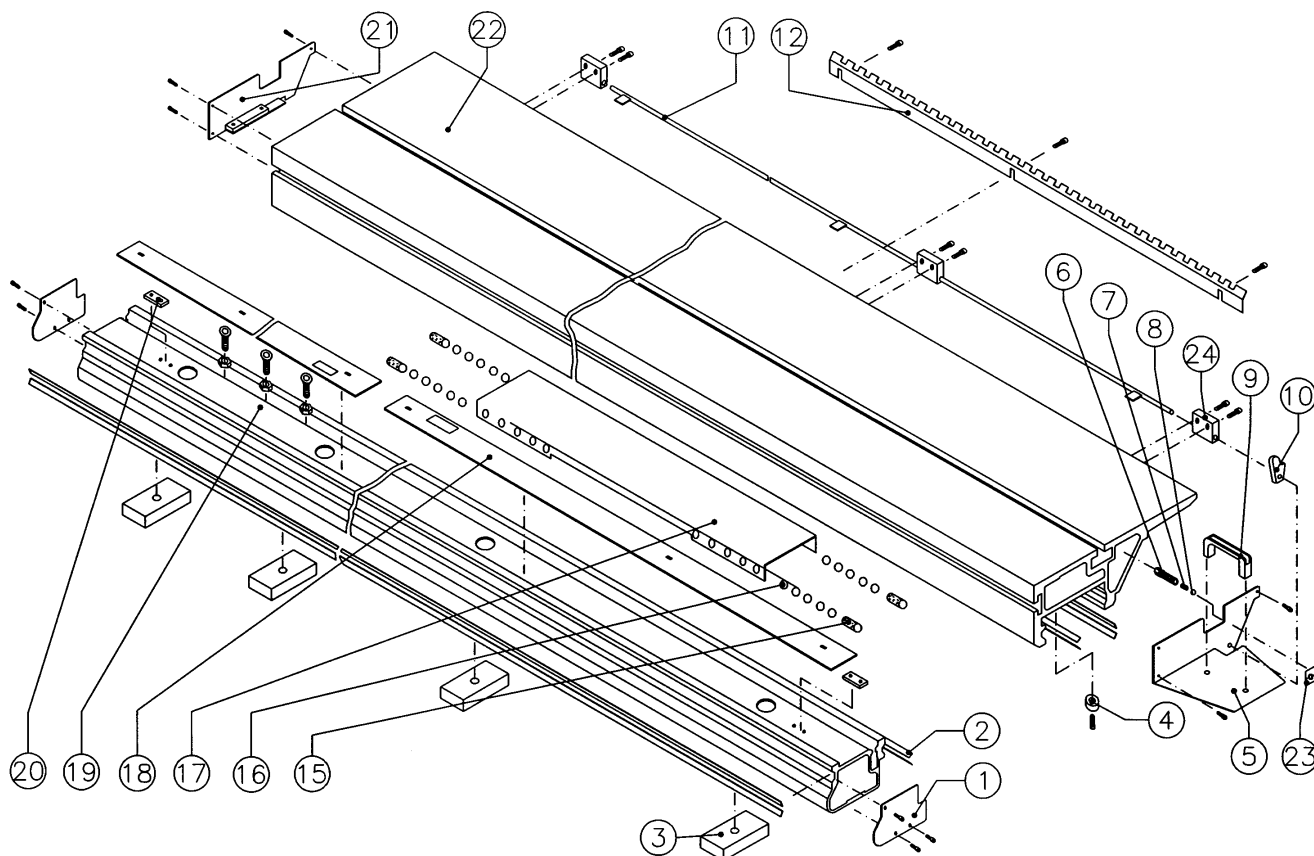
CS4		ELABORAZIONE	GE
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.155	GRUPPO CULLA 0.315 MOTOR SUPPORTING GROUP 0.315		
REV. 0	DATA 06/05/2002	SETTORE 8	ISTRUZIONE PER MONTAGGIO N° 6



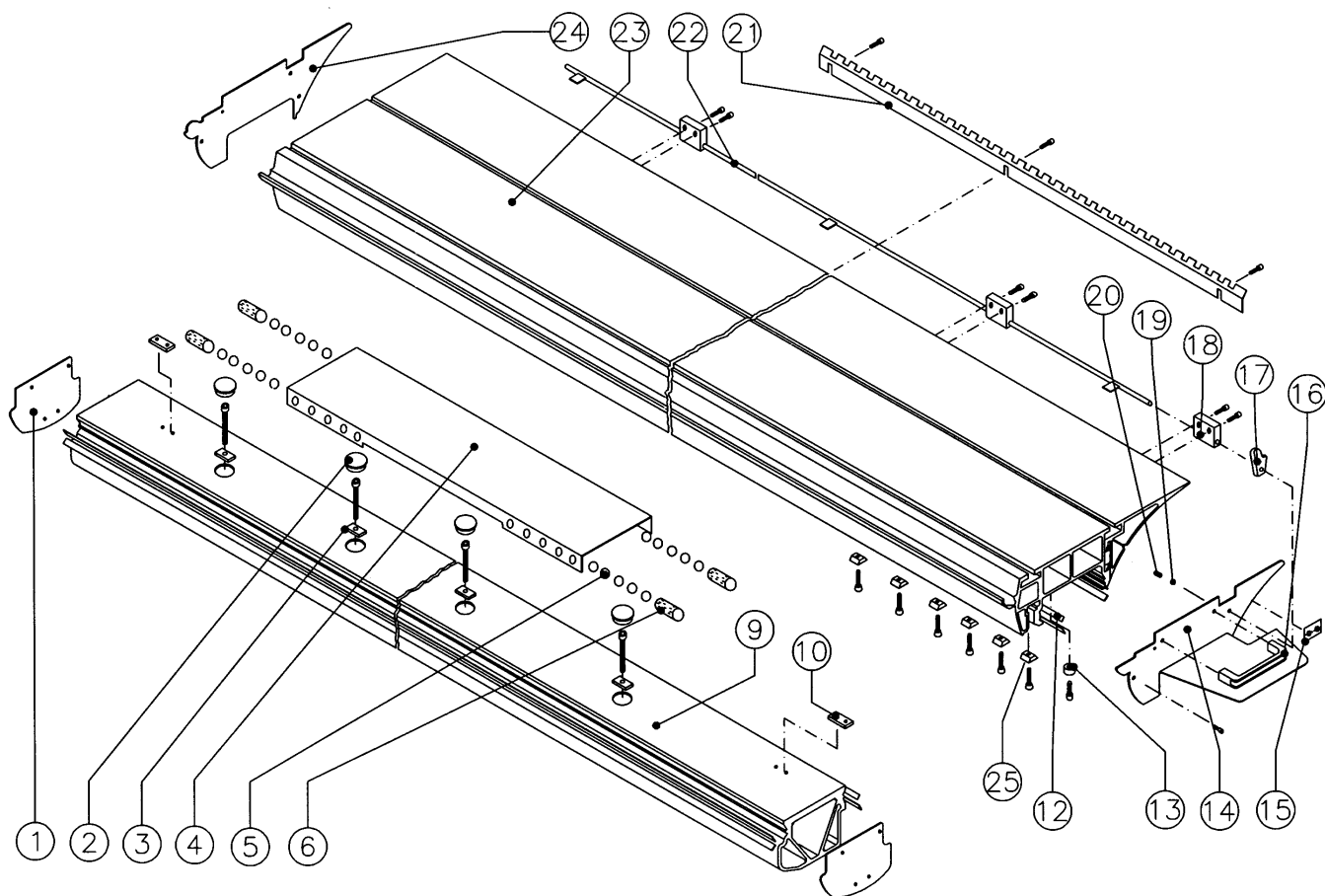


**OPTIONAL**

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.118	CARRO 330 L=1600-2600mm BTP SLIDING TABLE 330 LENGTH 1600-2600mm BTP		
REV. 3	DATA 01-06-2004	SETTORE G	ISTRUZIONI PER MONTAGGIO N° 5

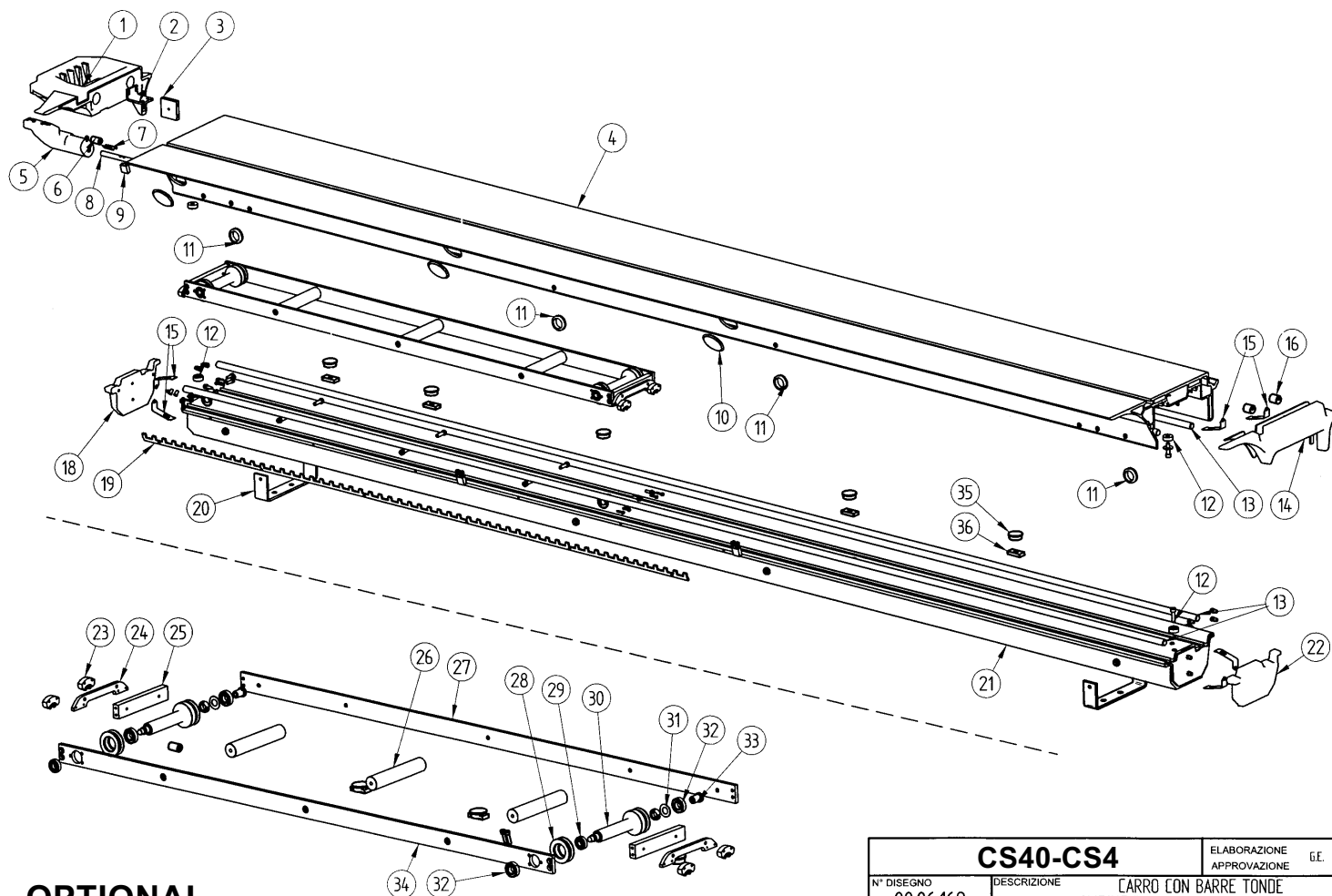


CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.117	CARRO 330 LUNGHEZZA 3200mm SLIDING TABLE 330 LENGTH 3200mm		
REV. 3	DATA 01-06-2004	SETTORE G	ISTRUZIONI PER MONTAGGIO N° 5



## OPTIONAL (CS4)

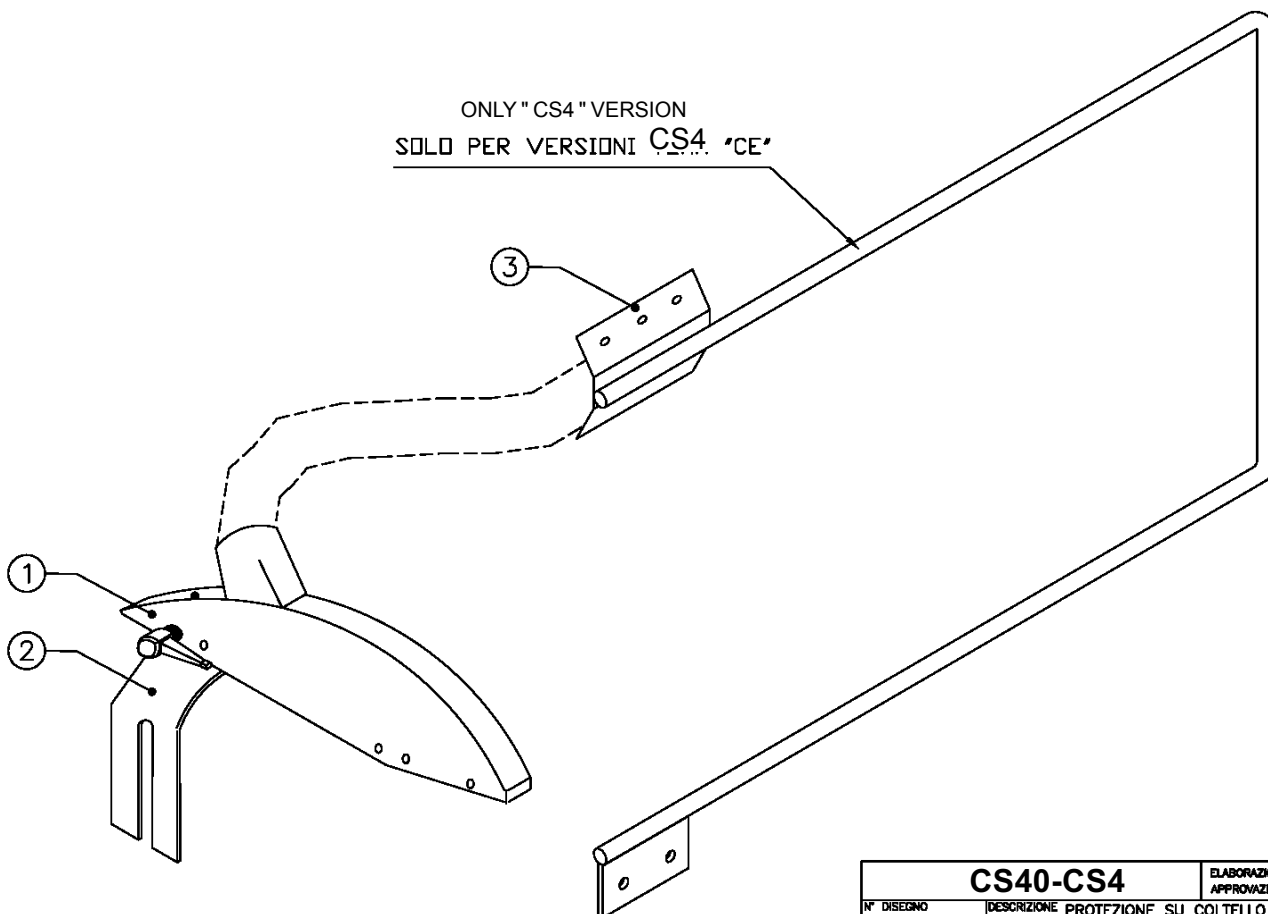
CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.080	CARRO 440 L=3200-3800mm SLIDING TABLE 440 LENGTH 3200-3800mm		
REV. 6	DATA 01-06-2004	SETTORE G	ISTRUZIONI PER MONTAGGIO N° 5



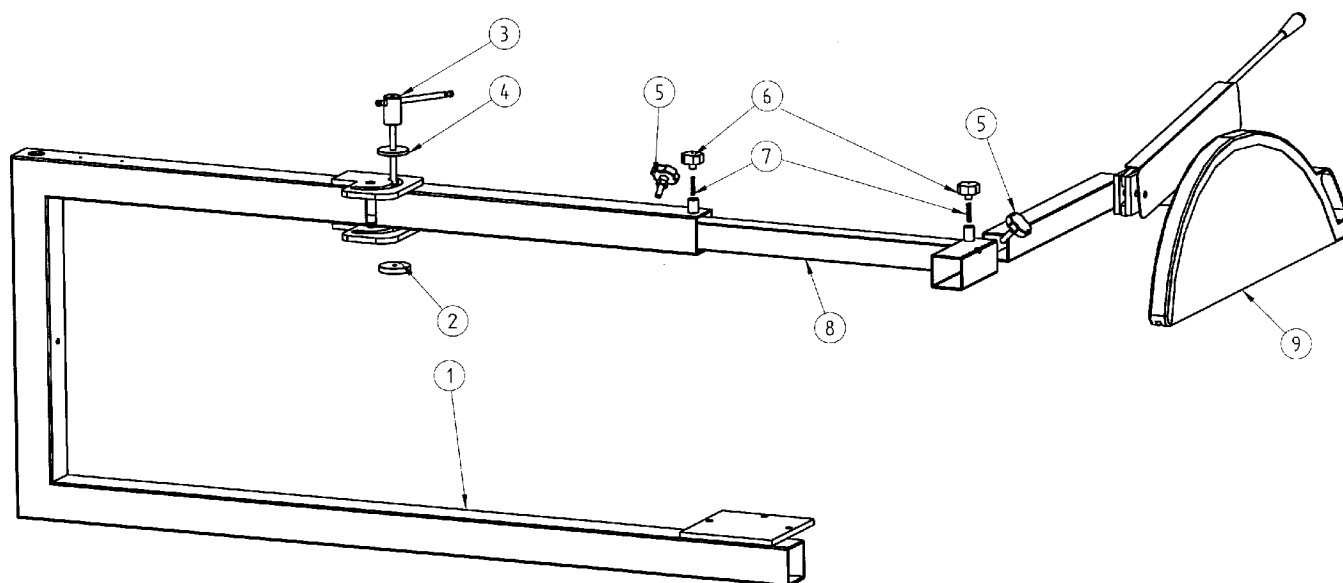
## OPTIONAL

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.169	CARRO CON BARRE TONDE SLIDING TABLE WITH ROUND RAILS		
REV. 1	DATA 01-06-2004	SETTORE	ISTRUZIONE PER MONTAGGIO N°

ONLY "CS4" VERSION  
 SOLO PER VERSIONI CS4 "CE"



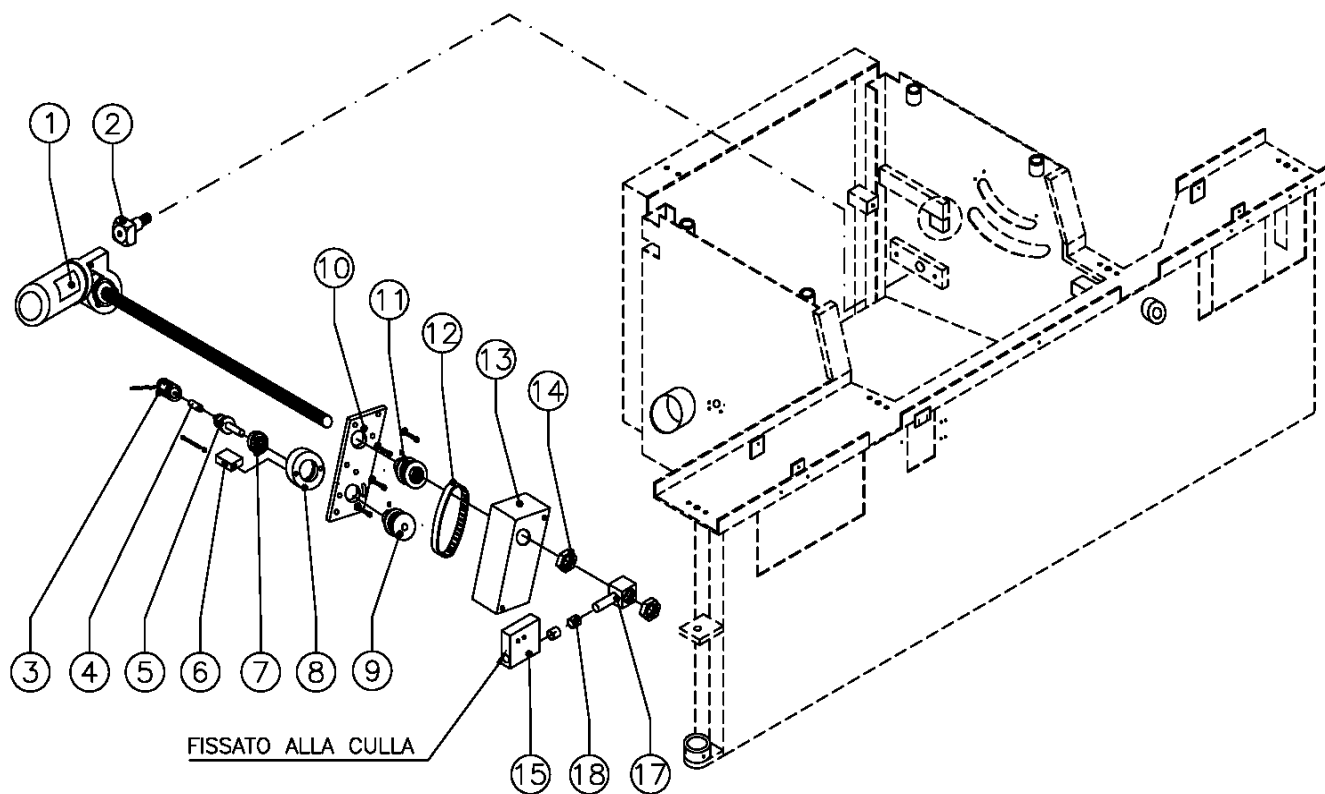
CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	PROTEZIONE SU COLTELLO DIVISORE	
00.06.046		RIVING KNIFE PROTECTION	
REV. 3	DATA 05-08-2000	SETTORE D	ISTRUZIONI PER MONTAGGIO N° -



CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	PROTEZIONE A PONTE	
00.06.168		PROTECTION	
REV. 1	DATA 28-02-2003	SETTORE	ISTRUZIONE PER MONTAGGIO N° -

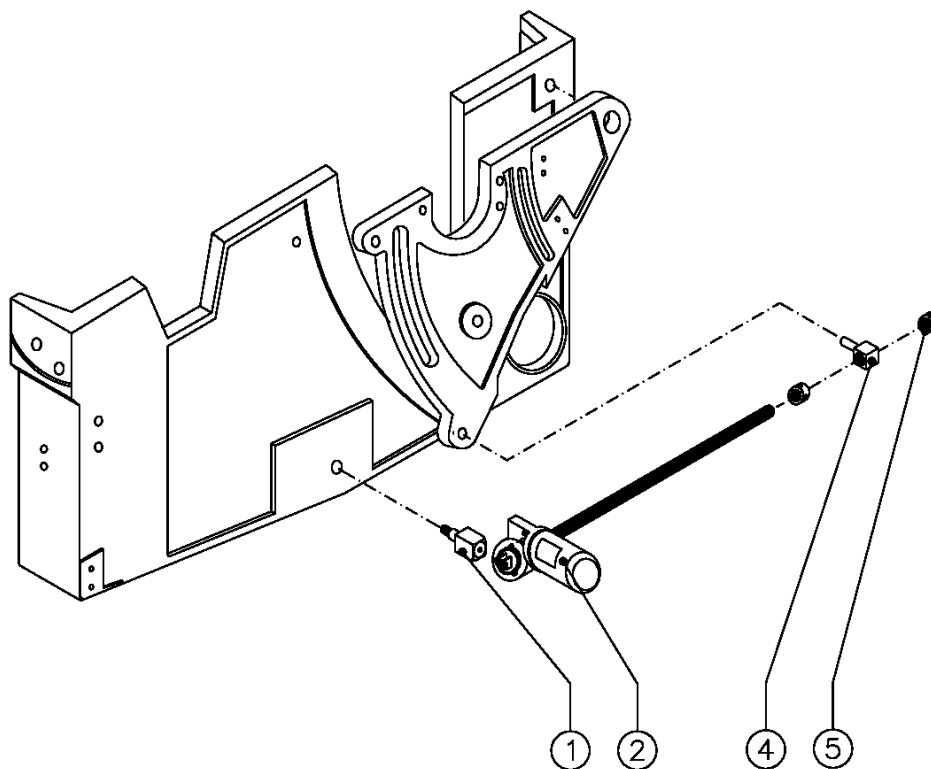
OPTIONAL





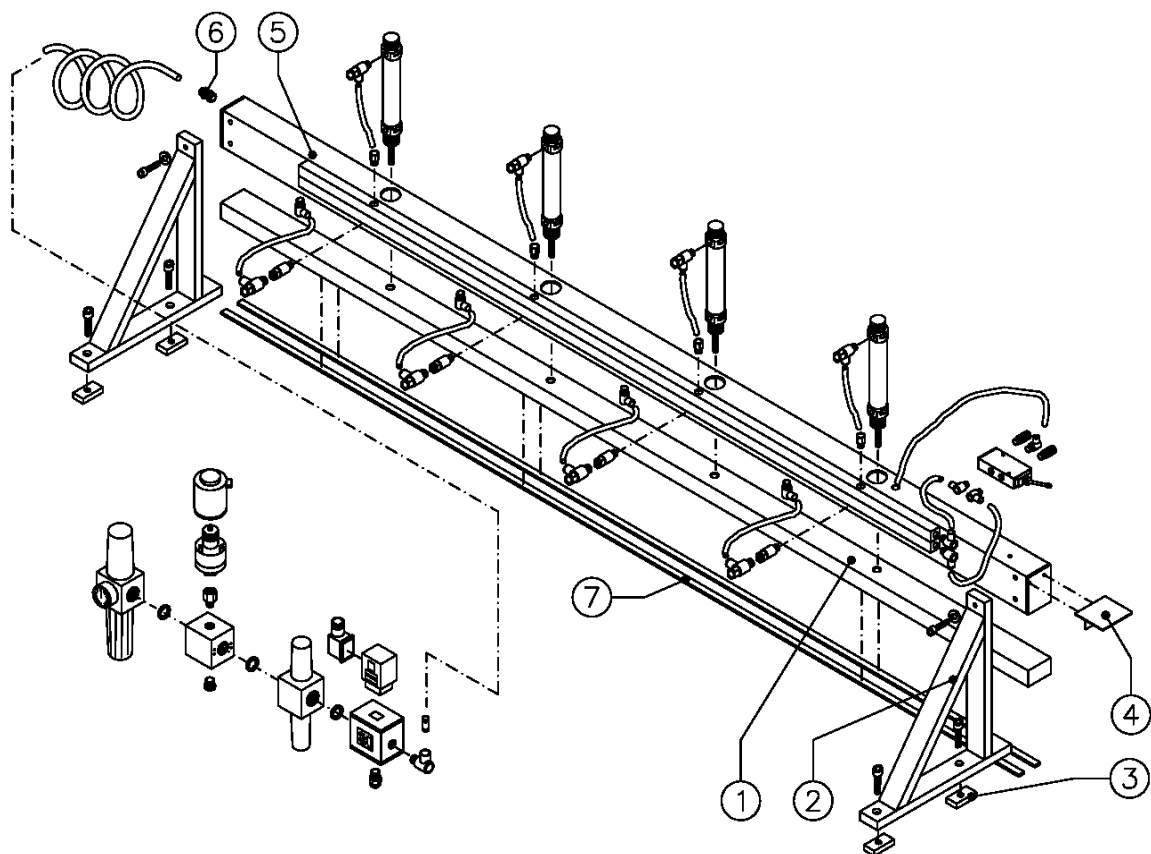
**OPTIONAL**

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N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
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REV. 6	DATA 28-02-2001	SETTORE E	ISTRUZIONI PER MONTAGGIO N° 12



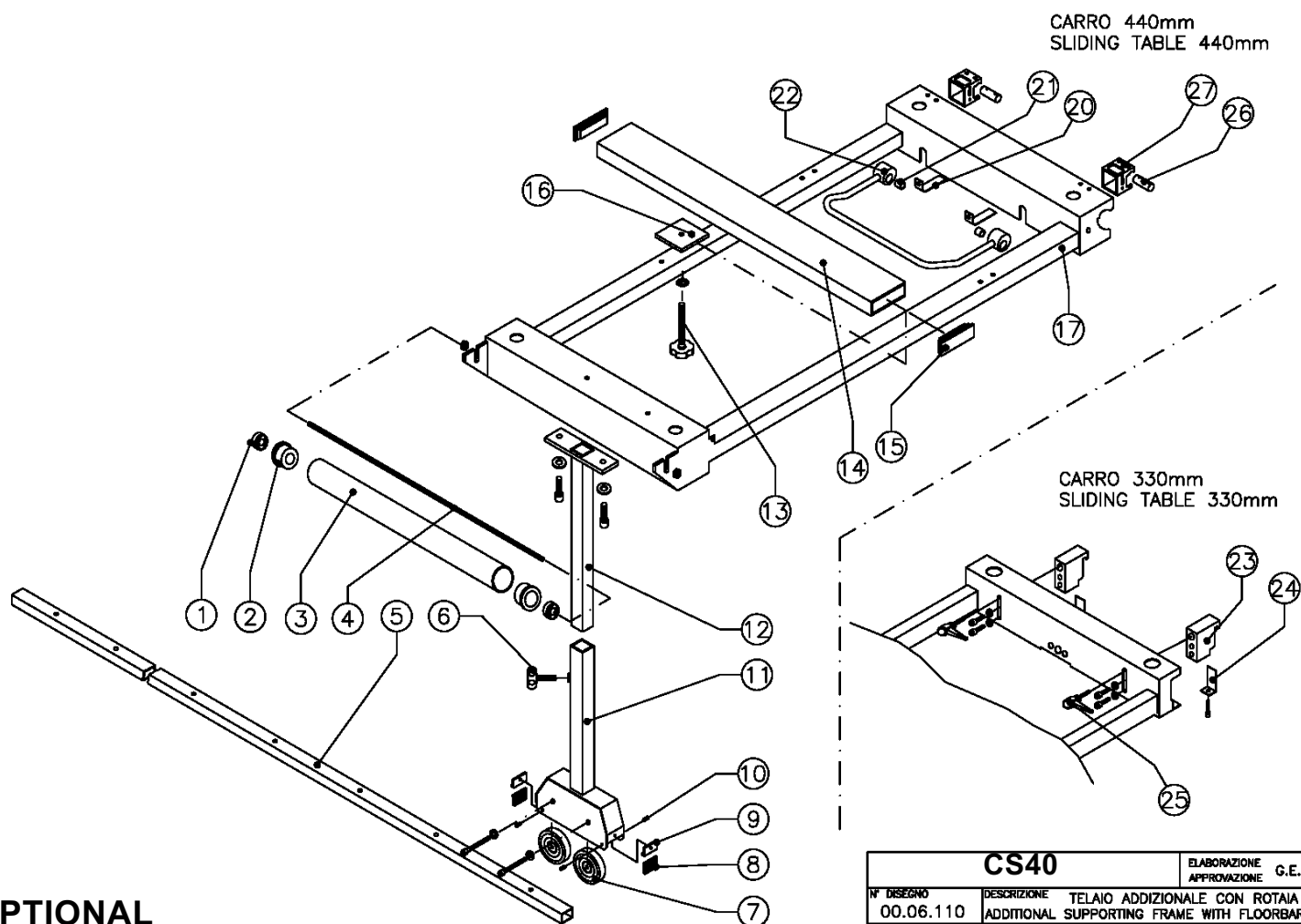
**OPTIONAL**

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.068	SOLLEVAMENTO ELETTRICO ELECTRIC LIFTING		
REV. 2	DATA 28-02-2001	SETTORE B	ISTRUZIONI PER MONTAGGIO N° 13



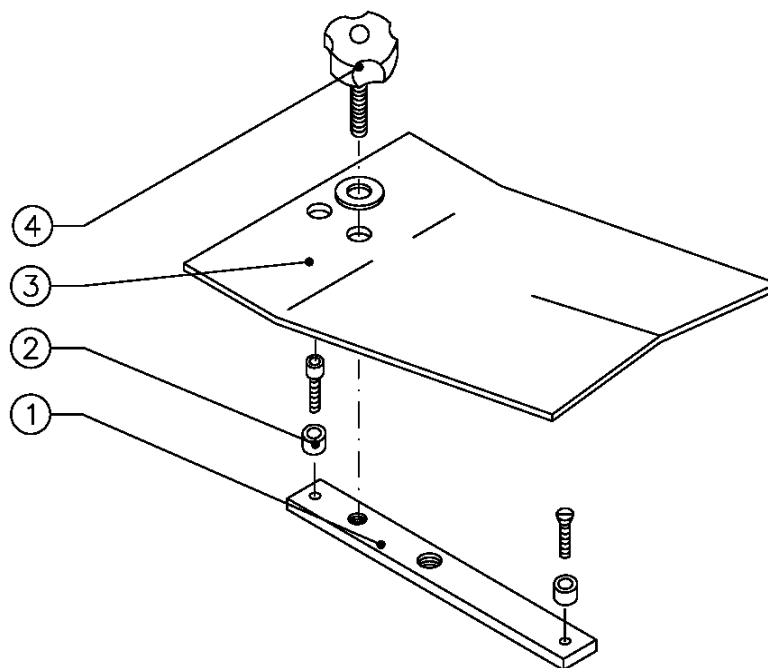
OPTIONAL

CS40		ELABORAZIONE	G.E.
N° DISEGNO		APPROVAZIONE	
00.06.060	DESCRIZIONE	BARRA PRESSANTE PNEUMATICA	
		PNEUMATIC CLAMPING BAR	
REV. 1	DATA	15-05-88	SETTORE E ISTRUZIONI PER MONTAGGIO N° 10



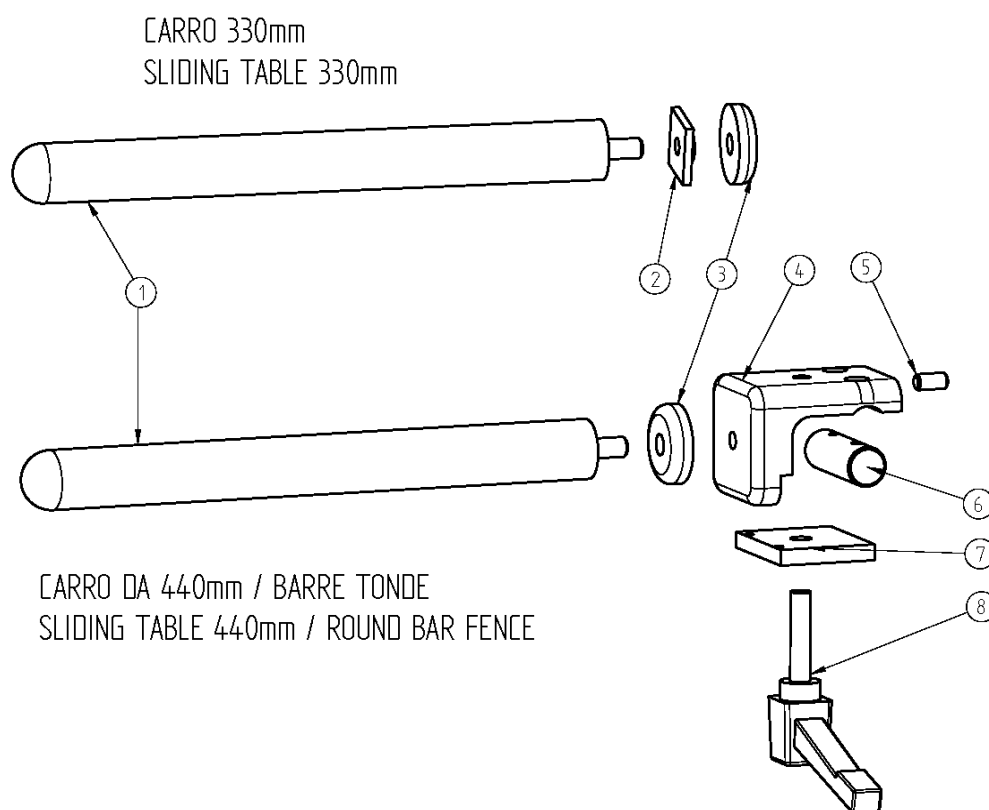
OPTIONAL

CS40		ELABORAZIONE	G.E.
N° DISEGNO		APPROVAZIONE	
00.06.110	DESCRIZIONE	TELAIO ADDIZIONALE CON ROTAJA	
		ADDITIONAL SUPPORTING FRAME WITH FLOORBAR	
REV. 3	DATA	19-09-2003	SETTORE E ISTRUZIONI PER MONTAGGIO N° -



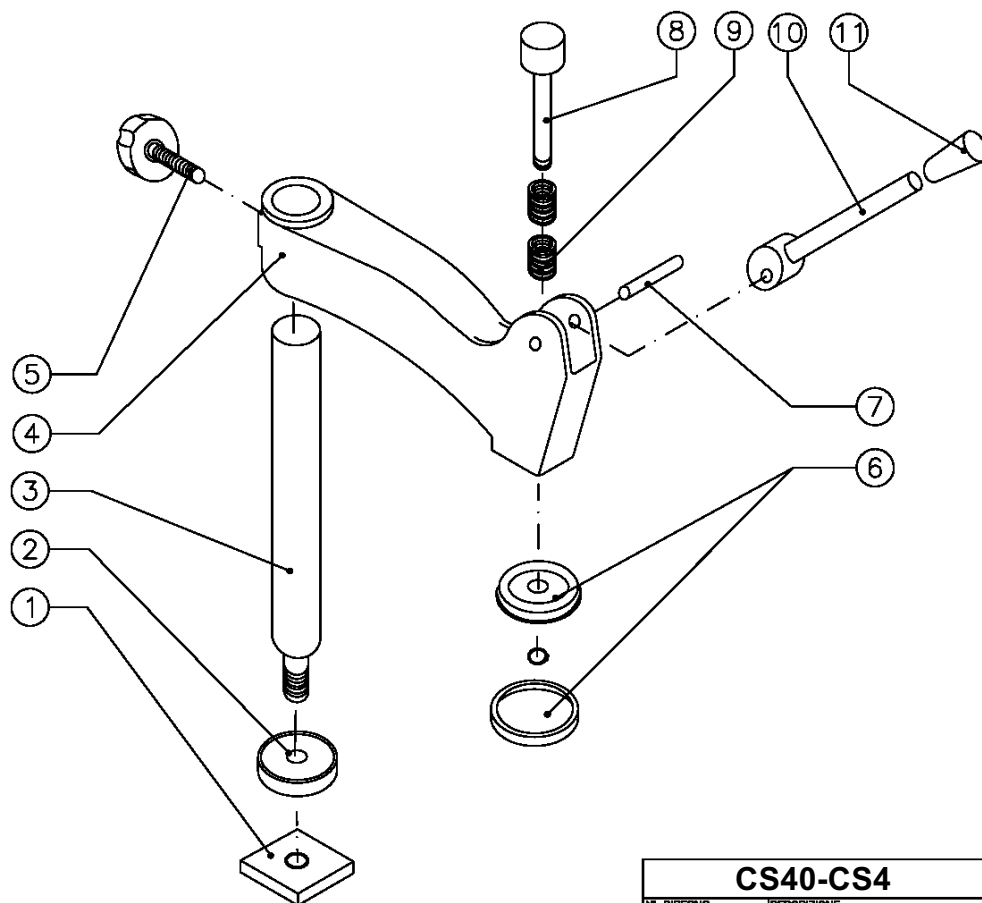
ONLY "CE VERSION"

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.043	CUNEO WOOD LOCKING PART		
REV. 1	DATA 30-01-88	SETTORE F	ISTRUZIONI PER MONTAGGIO N° -



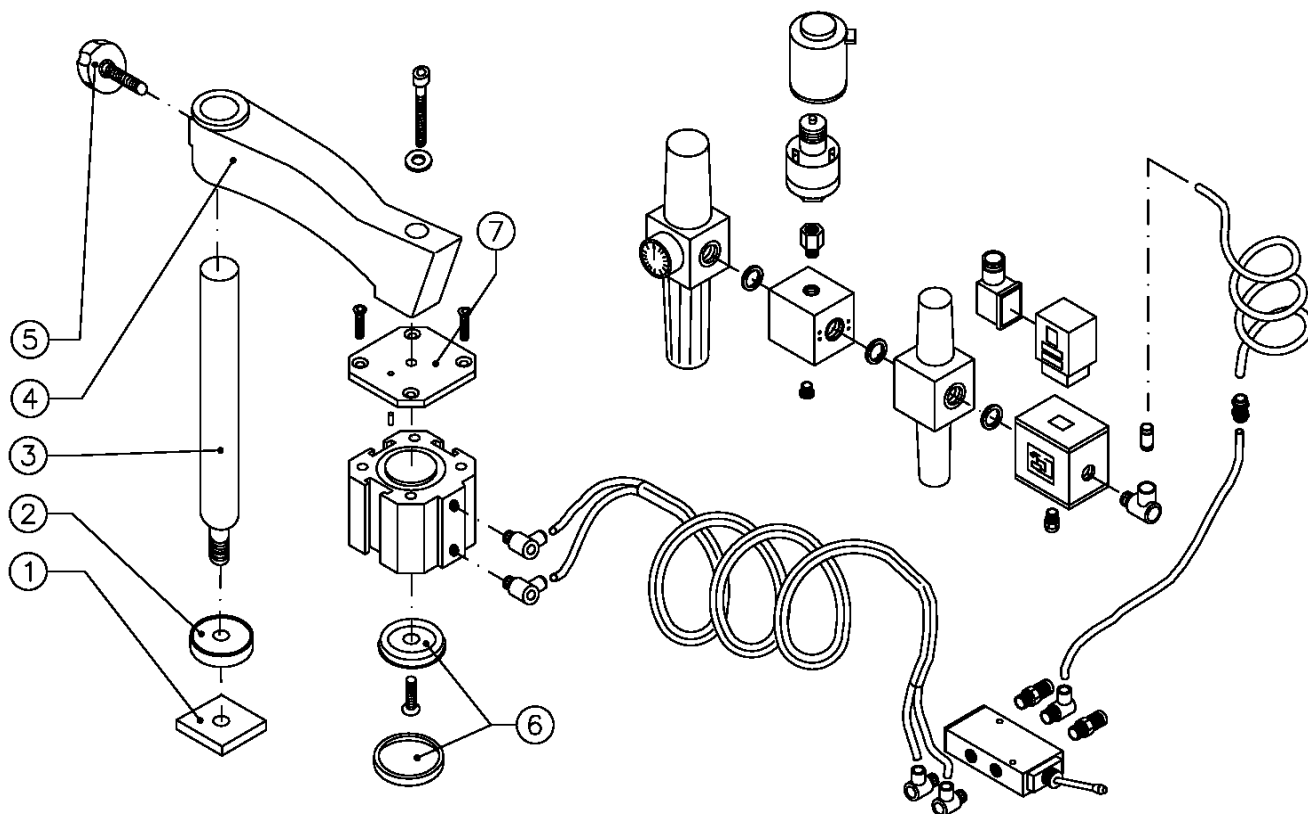
OPTIONAL

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.174	MANIGLIA LATERALE CARRO CARRIAGE SIDE HANDLE		
REV. 0	DATA 19-09-2003	SETTORE	ISTRUZIONE PER MONTAGGIO N°



OPTIONAL

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.000	PRESSORE ECCENTRICO ECCENTRIC CLAMP		
REV. 0	DATA 25-10-97	SETTORE F	ISTRUZIONI PER MONTAGGIO N° -

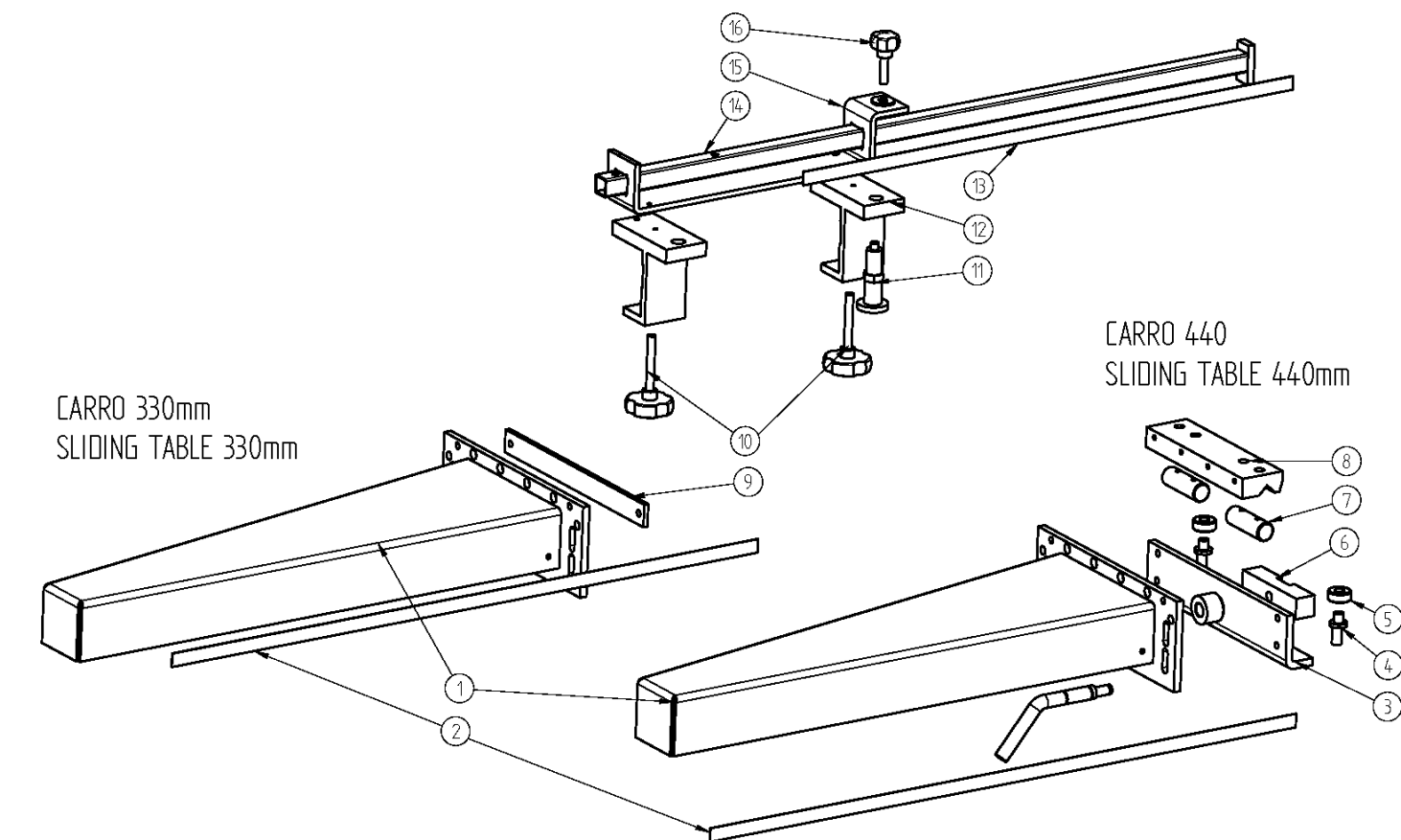


OPTIONAL

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.073	PRESSORE PNEUMATICO PNEUMATIC CLAMP		
REV. 0	DATA 25-10-97	SETTORE F E	ISTRUZIONI PER MONTAGGIO N° 17

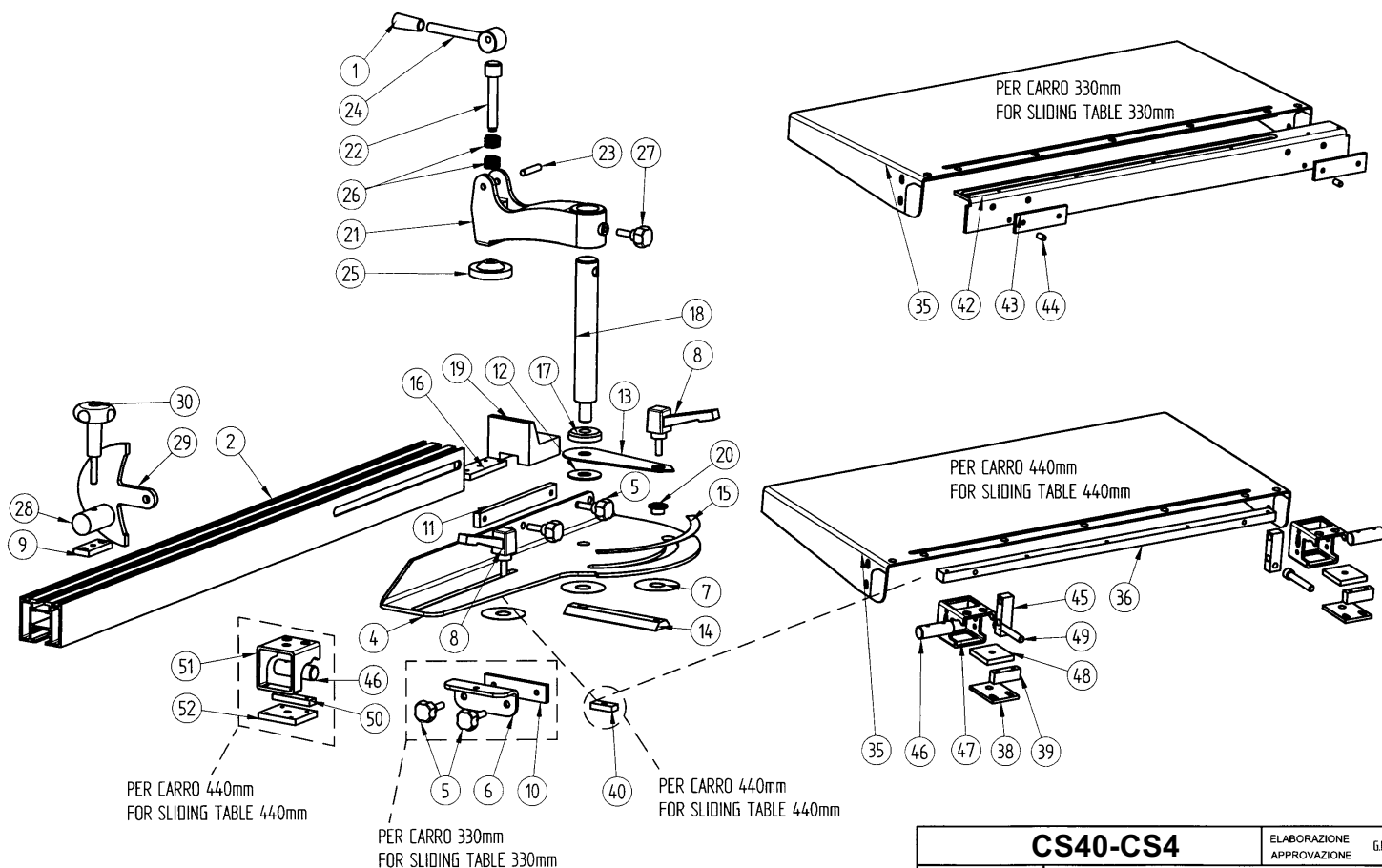
CARRO 330mm  
SLIDING TABLE 330mm

CARRO 440  
SLIDING TABLE 440mm



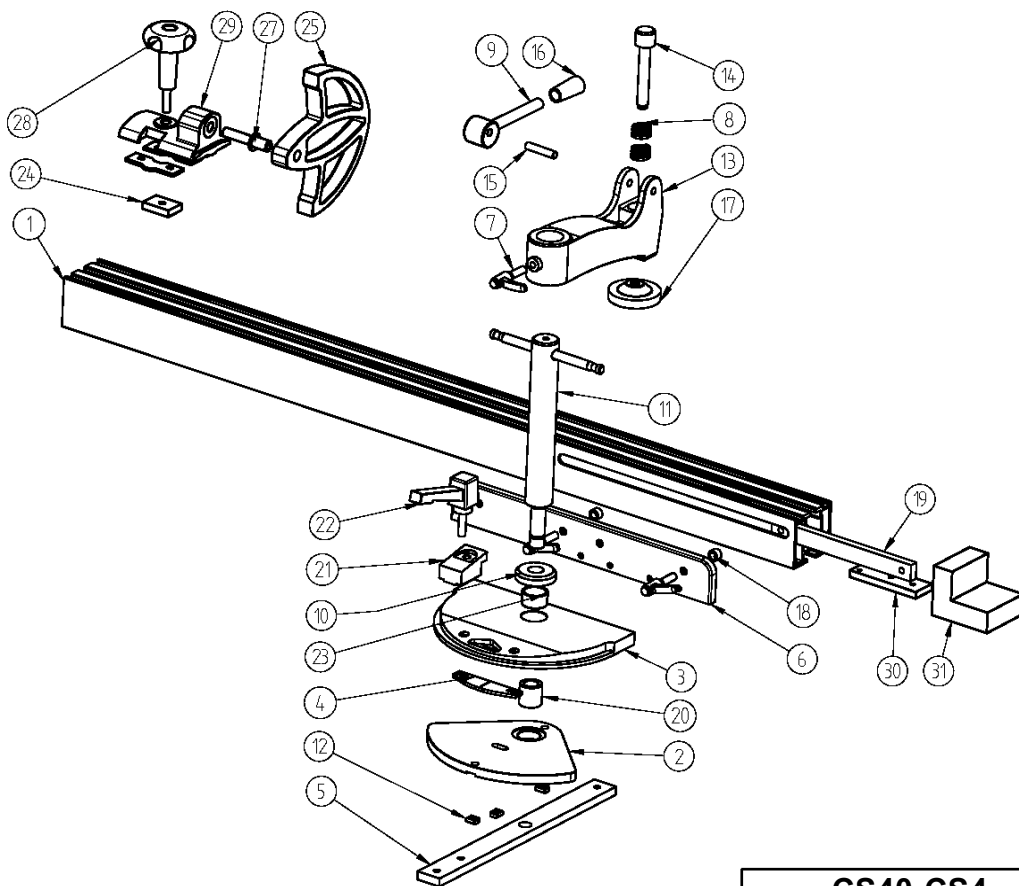
**OPTIONAL**

CS40-CS4		ELABORAZIONE	GE
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.156	PIANETTO PER TAGLI PARALLELI RIPPING TABLE		
REV. 1	DATA 21-07-2003	SETTORE F	ISTRUZIONE PER MONTAGGIO N° -



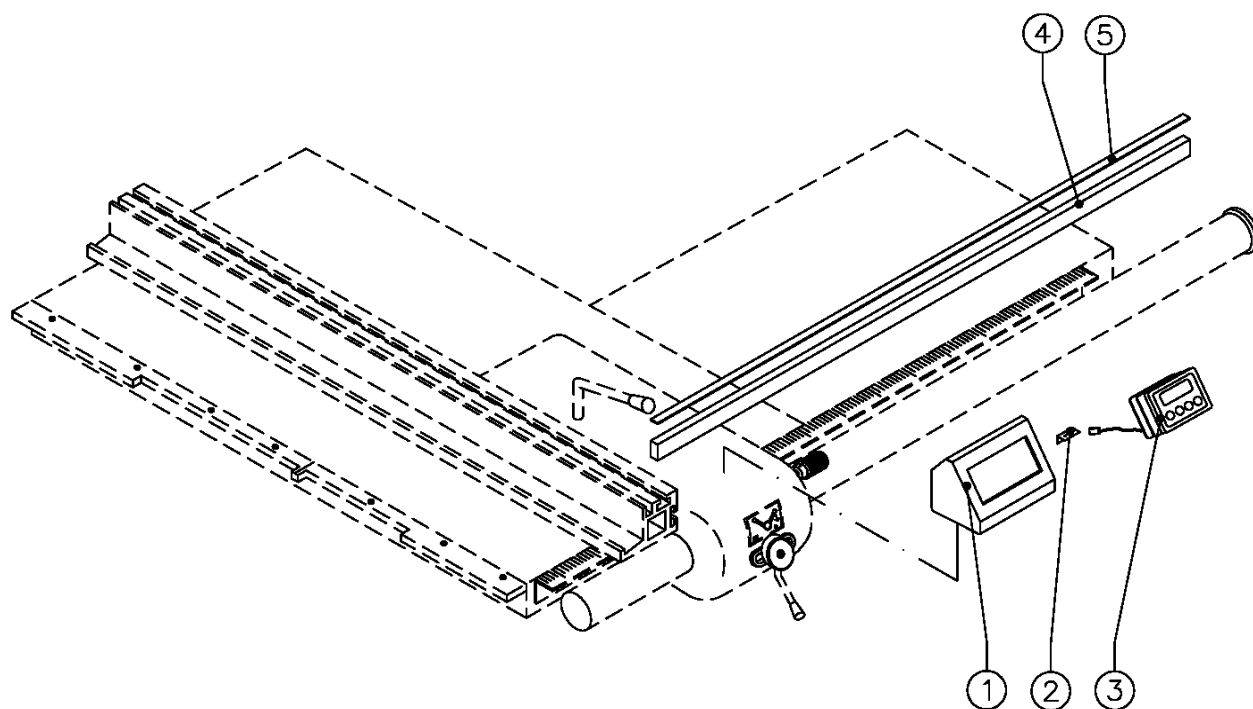
**OPTIONAL**

CS40-CS4		ELABORAZIONE	GE
N° DISEGNO	DESCRIZIONE	APPROVAZIONE	
00.06.157	RIGA IN ALLUMINIO 0-45° / PIANETTO / PRESSORE ALUMINIUM FENCE 0-45° / SMALL TABLE / CLAMP		
REV. 1	DATA 19-09-2003	SETTORE F	ISTRUZIONE PER MONTAGGIO N° F



OPTIONAL

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO		APPROVAZIONE	
00.06.136		DESCRIZIONE	
		SQUADRETTA ANGOLARE CON PRESSORE	
		SMALL FENCE FOR ANGULAR WITH ECCENTRIC CLAMP	
REV. 1	DATA 07-01-2002	SETTORE F	ISTRUZIONE PER MONTAGGIO N°



OPTIONAL

CS40-CS4		ELABORAZIONE	G.E.
N° DISEGNO		APPROVAZIONE	
00.06.114		DESCRIZIONE	
		VISUALIZZATORE DIGITALE GUIDA P.	
		DIGITAL READOUT FOR RIPPING FENCE	
REV. 0	DATA 08-02-99	SETTORE E	ISTRUZIONI PER MONTAGGIO N° 33







# Sliding Table Saw Machine Skills Class

Page 1 of 14

One of the major tools in most shops is the Sliding Table Saw, which is used for Ripping, Crosscutting, and Bevel cuts.

Safe operation of this tool is essential. We will discuss the best practices for each operation of the Sliding Table Saw. We will demonstrate these safe practices and help you practice them in this class. By the end of the class you will feel more comfortable in using this machine.

## Personal Safety Equipment (PSE)

Look around you before you start.

Clean area first and during use.

## Hazards and Safe Practices



## SAC CS4 Sliding Table Saw

**Note: Operation of this saw requires a separate class and qualification in addition to a Green Card. These safety instructions are for reference and project planning purposes.**

The sliding table saw is used primarily for cutting panels straight and square. Used properly, it can cut many pieces in an efficient and safe manner. By securing a panel to the sliding carriage and moving it through the blade, a straight line can be safely and accurately cut. This technique may also be used to straighten uneven, solid wood with a rip blade or combination blade. This sliding table saw has many features that are different from your personal table saw. In order to avoid accidents, the following operational safety rules must be strictly observed by anyone working with the Guild's sliding table saw.

The sliding carriage is parallel and in alignment to the saw blade. It holds and supports the work piece as the work piece is moved through the blade. The straight edge created is then placed against the crosscut fence to produce a square cut. Repeating this method can produce a piece with four square corners. Stops on the carriage can be attached to allow repeat cuts to the same length. A separate adjustable fence can be fastened to the carriage to make angled cuts. There is a scoring blade that can minimize tear out on the bottom edge of the cut when properly aligned. Besides coming into contact with a sharp, spinning blade, one potentially lethal hazard of the sliding table saw is binding of the work piece resulting in kick back. (Imagine a 5-pound ninja star hurtling towards your carotid artery.) This can happen during any of the operations and many of the safety rules and procedures are designed specifically to help prevent this from happening. **Failure to follow the safety rules will result in a loss of shop privileges.**

## **Definitions:**

Sliding carriage: A platform on which the material being cut is attached. It is used to move that material through the saw blade.

Scoring blade: A small saw blade that makes a shallow cut in the underside of a plywood panel prior to that panel reaching the main cutting blade. Refer to **attached 1 (FITTING AND ADJUSTMENT OF SCORER BLADE)**

Riving knife: A thin blade, located behind the saw blade that rises and falls with the movement of the saw blade. The riving knife keeps the material being cut from closing on the rear of the blade, thus avoiding kick back.

Kick back: The material being cut tends to close as it exits the blade and may be thrown back at the operator by the teeth of the saw blade rising up into the material.

Rip blade: The cutting blade has large, squared off teeth and deep gullets designed to cut along the grain of the wood.

Combination blade: Has more teeth than a rip blade has and an alternating top bevel to shear across the grain of a board. It is less aggressive in its cutting action than the rip blade but will make a smoother cut across the grain.

## **Start with a Risk Assessment to ensure a safe work area:**

1. Approach all work in the Guild Shop and on the sliding table saw with your focused attention to the task at hand.
2. Make sure the entire work area around the sliding table saw is clear of obstructions, especially the path through which the carriage will travel.
3. A perimeter around the area where you are using the saw should be kept clear of anything (including people) that might impair traction or footing, and cause slips or falls.
4. Remember, the area behind the saw blade is dangerous due to the constant possibility of kickbacks.

5. Eye and hearing protection are required, and dust protection is **strongly** recommended.
6. Remove loose fitting clothing, gloves, and jewelry. If you have long hair, make sure it is tied back so it can't fall into moving parts.

## Plywood Handling

1. Plywood sheets are heavy and cumbersome. The best way to mount them on the saw is to walk them across the floor by pivoting the bottom corners from side to side. Once in proximity to the saw carriage, lean the panel over on to the carriage and then lift the opposite end up aligning the panel with the fence. When squaring a sheet of plywood, begin with a crosscut and rotate the sheet counterclockwise, ending with a rip cut.
2. **Remember to protect your back and use your legs when lifting heavy materials.**

## Sliding Table Saw Safety and Operational Rules:

1. Keep yourself and other out of the risk zone when cutting.
2. Be aware of where your hands are as you cut and as you slide the carriage. Keep your eyes on the board against the fence.
3. **NEVER** put your hand in the guard area while the blades are spinning.
4. Make sure the work piece is behind the blade guard when starting the saw.
5. Make sure the scoring blade has been retracted below the surface of the table. If the scoring blade is to be used, test cuts should be performed to assure proper alignment with the cutting blade.
6. Make sure the work piece is flat against the work surface at the blade and maintain contact with the fence as you cut.
7. **NEVER** rip boards less than 10 inches in width on the sliding table saw. If you need to rip a board of that dimension, the Saw Stop will be the best and safest choice. If using the rip fence as a stop, make sure the surface of the fence is retracted behind the cutting blade to avoid catching material between the blade and the fence.
8. A cupped board may be ripped if the cup is facing down, and it is secured at both ends to the carriage. This allows for two surfaces to be supporting the board through the cut. **DO NOT** secure so tightly as to flatten the entire surface of the board.
9. Bowed lumber may be ripped with the curve facing down and the leading edge secured to the sled while the trailing end is held in place with an auxiliary hold down. If the bow is severe, it should be flattened first on the jointer before being placed on the sliding table saw.
10. **DO NOT REMOVE THE RIVING KNIFE.**
11. **Dado's** or **tenoning** operations are not to be performed on this saw.
12. Do **NOT** place objects other than the work piece on the carriage.
13. Do **NOT** leave the machine unattended while it is running.
14. Assess the cut to be performed. Make proper adjustments to the crosscut fence, support, stops, hold downs, and return handle. If making angled cuts, a special angle fence will be made available.

Long miters are best performed on the Saw Stop. Adjust the guard to the proper height as well. Make sure it will clear any hold downs or fences being used to make the cut. **MAKE SURE THAT THE SAW BLADE IS NOT TILTED INTO THE SAW GUARD. THE SAW GUARD/DUST HOOD CAN BE LIFTED OUT**

**OF THE WAY IF NEEDED OR THE WHOLE ARM MAY BE LOOSENEED, AND THE UNIT SWUNG OUT OF THE WAY. ALL ADJUSTMENTS MUST BE MADE WITH THE SAW TURNED OFF.**

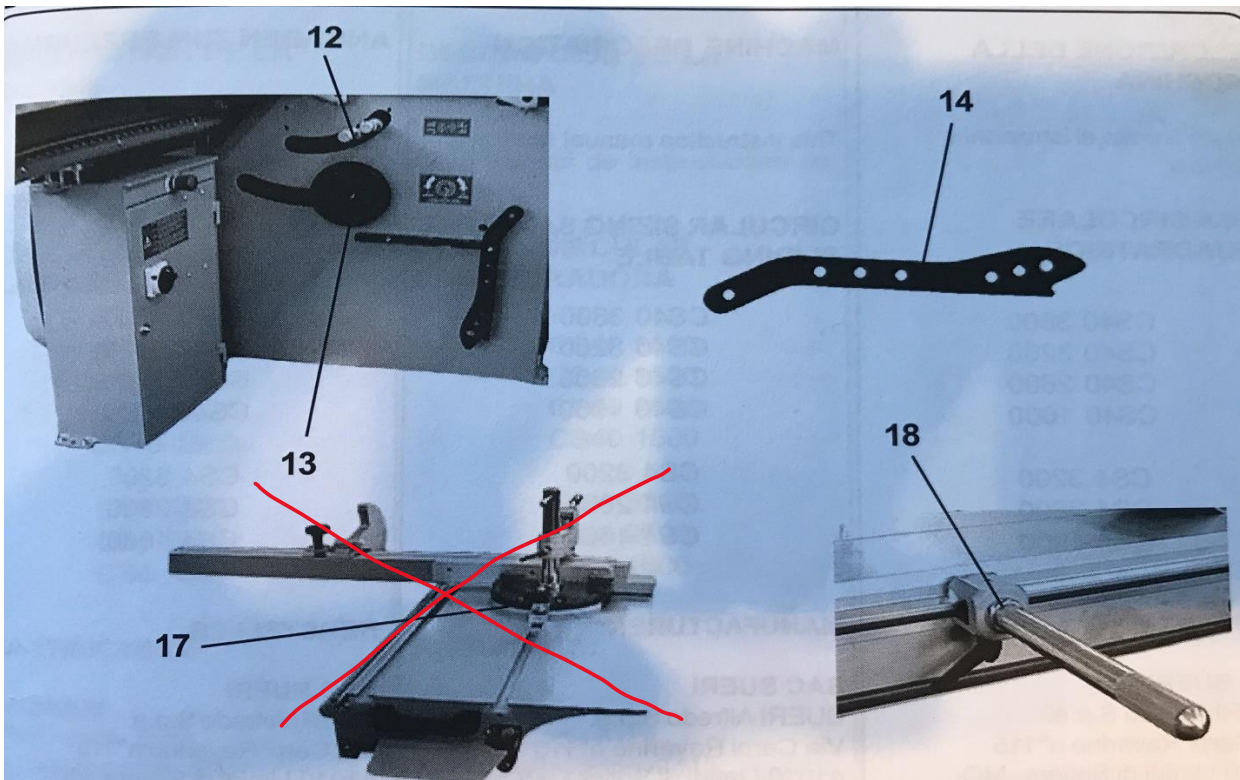
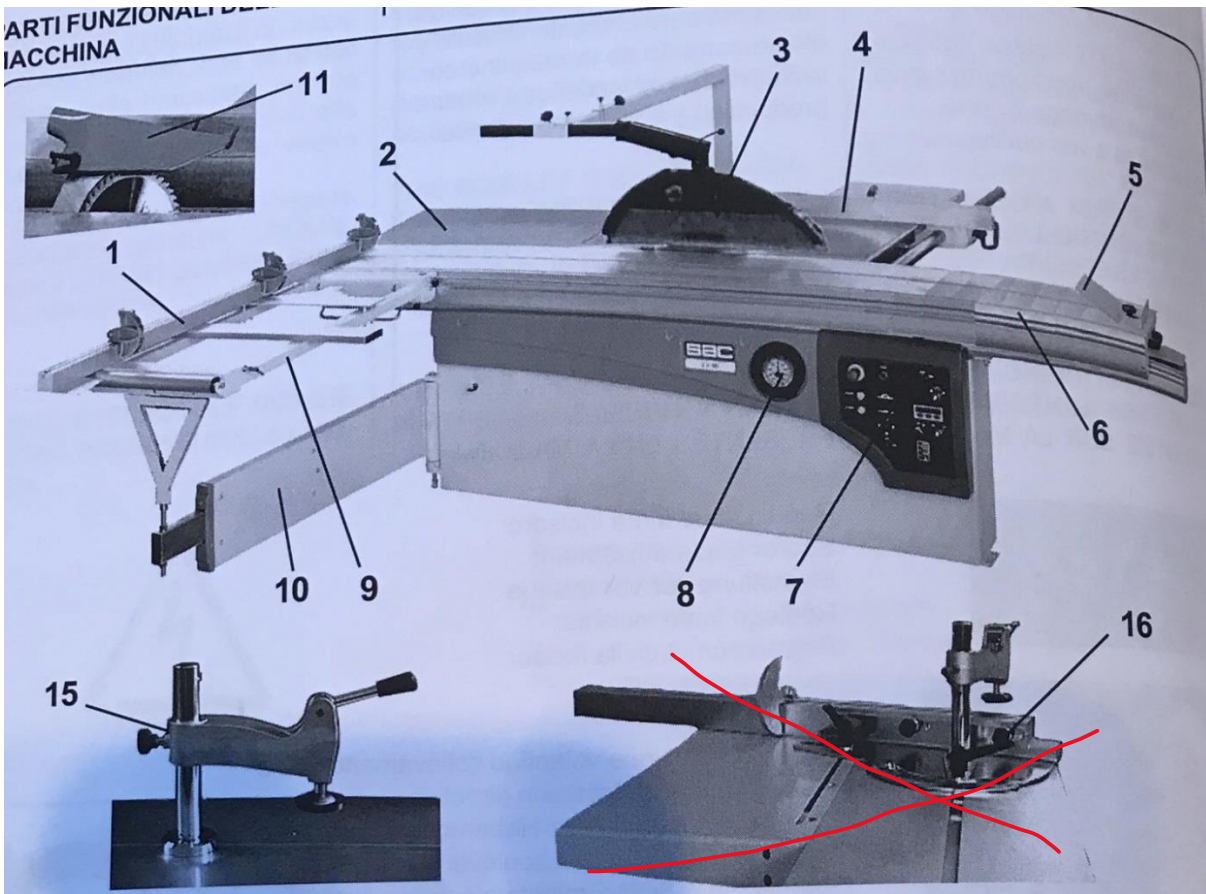
15. Turn on the main power. The switch is located on the opposite side of the cabinet from the operator's side.
16. Make sure the scoring blade is set below the table. If the scoring blade is to be used, test cuts will confirm the proper alignment and depth of cut. This must be checked each time the scoring blade is to be used and it is only to be set by a shop attendant trained on the saw.
17. If cutting plywood and a clean cut with no tear out is desired, a sacrificial piece of plywood can be placed beneath the primary piece and will act as a zero-clearance plate avoiding the need for the scoring blade.
18. Adjust the height of the main blade and confirm that it is set at 90 degrees.
19. Lock the sliding carriage (especially when loading large material) by engaging the lock. The lock is located on the end of the carriage and is activated by rotating the lever. Load the work piece onto the saw. Secure the work piece by using the hold down. Once the material is secured and properly supported, disengage the lock.
20. Turn on the dust collector. The blast gate should always be open during saw operation. Once finished, close the gate. Check that the work piece and any falloff are safely away from both blades. The guard can be a good reminder. Turn on the machine with the cabinet switch. Check that the work piece is properly referenced to the fence and carriage surface.
21. Press the work piece down on the carriage and against the fence while walking the piece through the blade. Your front hand should be at the area of the board which will pass through the blade first. Your back hand should push the work toward the fence and have your thumb hooked over the edge of the board and the carriage. Pay attention to the feed rate as you do this.
22. Move your work piece out of the way of the blade before moving the carriage back. Do **NOT** back pieces through the blade.
23. Remove any offcuts that may be in the way before making another cut. Never place hands in the blade area while the blades are spinning. Use a stick or stop the machine. To stop the machine, turn it off with the cabinet switch. **Do not use the emergency red button unless it is an actual emergency.**

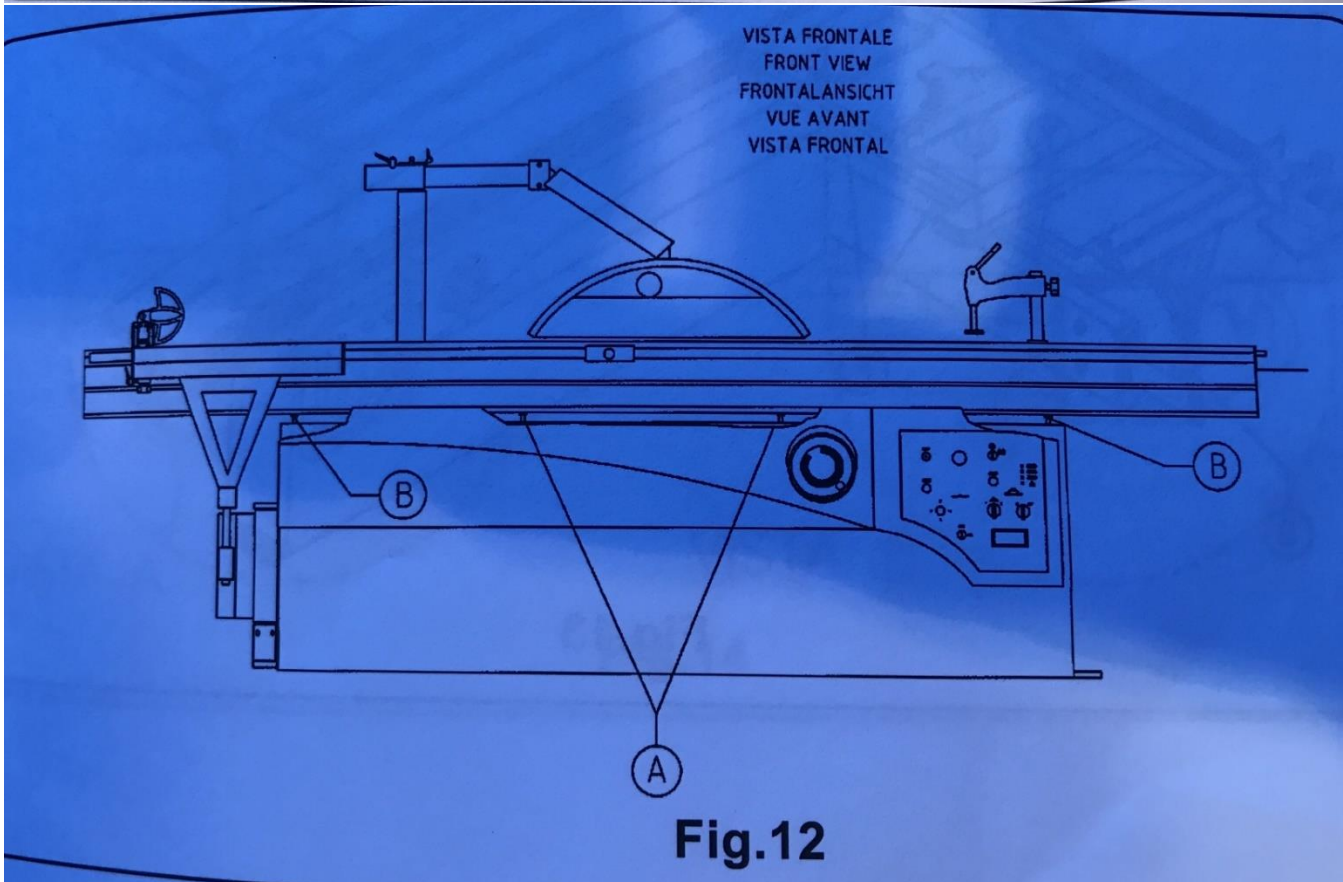
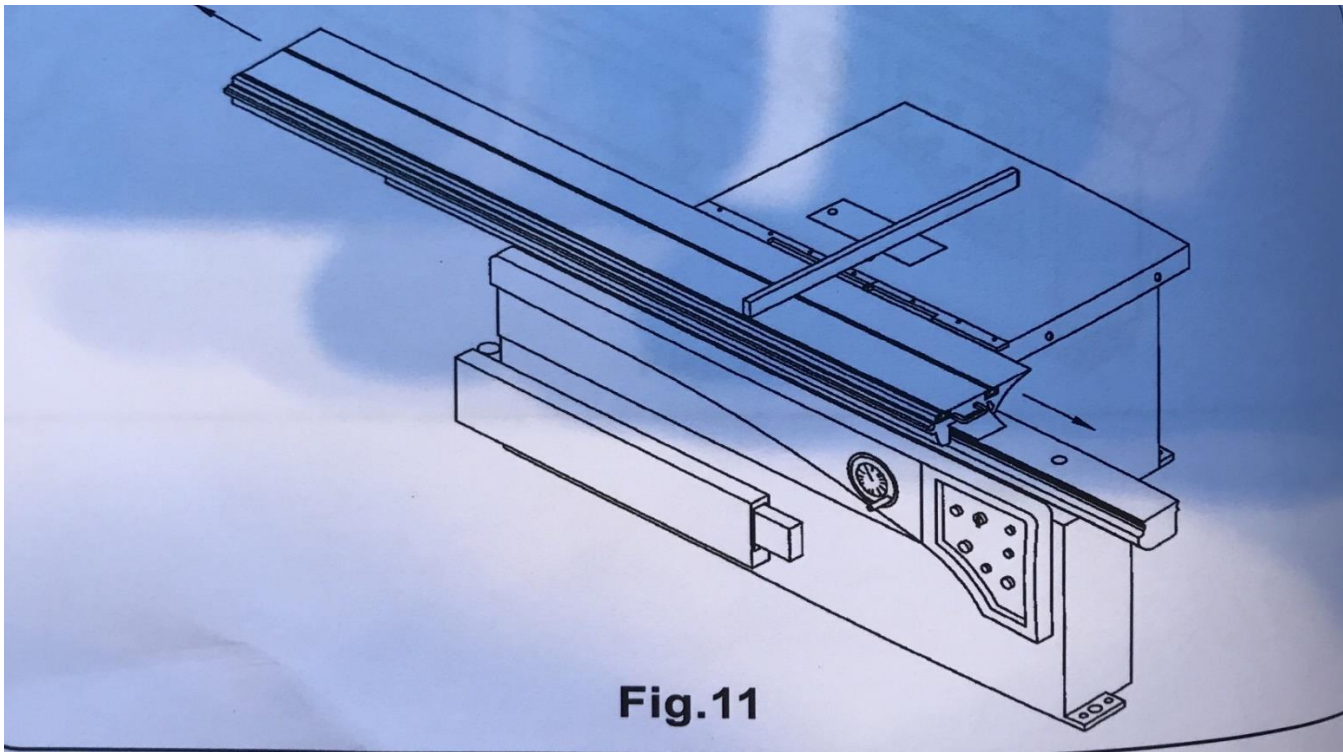
At any time that you have questions or uncertainties about performing an operation on the Sliding Table Saw, it is best to wait and ask questions later rather than risk a costly mistake.

1. Danger zones
  - a. Reaching
  - b. 3-inch Rule (Guild Rule)
  - c. Kick-Back
  - d. Riving Knife
  - e. Blade Guard Location. Important to not touch teeth of blade.
  - f. Body position/location
  - g. Obstructions behind table
  - h. Do not back up as you would with a sled. The carriage is not a sled!
  - i. Free Hand cuts... **NEVER!!!**
  - j. Placement of crosscut fence for blade clearance.
2. Before using Saw
  - a. Is correct blade installed for your use?
  - b. View blade for teeth damage and cleanliness.
  - c. Lower Blade
  - d. Place rollup door protection on door.
  - e. Double check fence's for square to blade. See **attached 2** (ALUMINIUM SQUARE ADJUSTMENT)
  - f. Look around. Is anyone behind you? Obstructions in front impeding work piece at its length of cut, past the blade?
  - g. Open dust gate if closed. This dust gate should always be open, even when not using saw!
  - h. Is the guard in place?
  - i. Is the riving knife in place, make sure it is secure and tight?
  - j. Check that the blade is square to the table and adjust if necessary.
  - k. Turn on saw (Start blade lowered first time)
  - l. Turn off saw
  - m. Wait for blade to stop
  - n. Raise blade to proper height
  - o. Turn Dust collector on.
3. Switch Locations
  - a. Go over locations at the machine as follows.

- 1) Aluminum profile for square cuts
- 2) Cutting outfeed extension
- 3) Guard for bridge blades (standard on versions JUNO "CE")
- 4) Profile for parallel cuts
- 5) Wedge (standard versions "CE")
- 6) Sliding carriage
- 7) Control panel
- 8) Blade tilt wheel with indicator
- 9) Panel support frame
- 10) Frame support banner
- 11) Guard for standard blades
- 12) Cutter blade adjustment knobs
- 13) Main blade lifting wheel
- 14) Wood pusher (only for versions CE-UL-CSA)
- 15) Cam presser (optional)
- ~~16) Aluminum scorer 0-45° with plane and presser (optional)~~
- ~~17) Small square for corner cuts with presser (optional)~~
- 18) Lateral handle (optional)









## **ALIGNING THE CARRIAGE WITH THE TABLE (Fig. 11-12)**

After installing the carriage, check proper alignment of the carriage with the cast iron table. Place a square on the table and slide the carriage first in one then in the other direction, checking the span underneath the square (Fig. 11).

Should alignment be incorrect, loosen the retaining screws and lower the two central rows of screws (A) (Fig. 12). Subsequently, sliding the carriage first in one then in the other direction, make the adjustments acting on the two outer rows of screws (B) until the carriage is level.

Then raise the two central rows of screws (A) until they rest on the lower part of the carriage and tighten the retaining screws.

## 4. Blades

- a. Blade Styles...
  - i. Ripping
  - ii. Crosscut
  - iii. Plywood
  - iv. Number of teeth
  - v. Combination blade is most used
- b. Care of Carbide
- c. Tightening & un-tightening the blade
- d. Cleaning, **NO** Simple Green, use Orange Cleaner, Ammonia, Soap & Water, Dove Dish soap. Dry very good and use Dri-Coat or T-9

## 5. Getting started

- a. Point out all device adjustment and switch locations one by one
- b. Height adjustment
- c. Placement of slider butt post
- d. Changing Blades (Demo – Individual Hands On)
- e. Clamping properly
- f. Ripping (Demo – Individual Hands On)
  - i. Stop Block
  - ii. Hold Down clamps
- g. Cross cutting (Demo – Individual Hands On)
  - i. Stop Block
  - ii. Hold down clamps
  - iii. Bump location
- h. Bevel Cut (Demo – Individual Hands On)
  - i. 30-degrees
  - ii. Remember the fence and pinching
- i. Push Block types

## 6. Useful Set-up tools

- a. Pencil, .5 mm
- b. Square
- c. Flat Ruler
- d. Set-up Blocks
- e. Digital Angle

## 7. Return saw to default position when finished! (Demo – Individual Hands On)

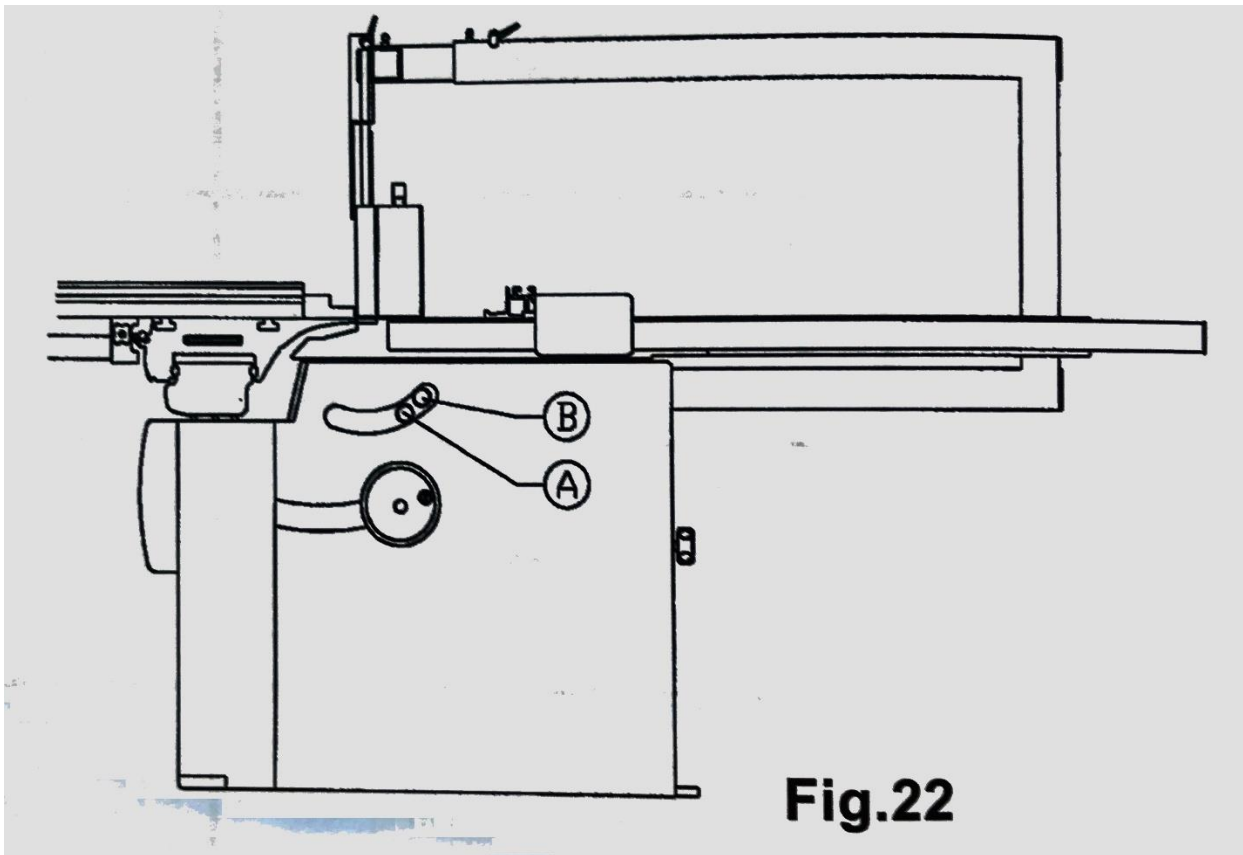
## **ATTACHMENT 1**

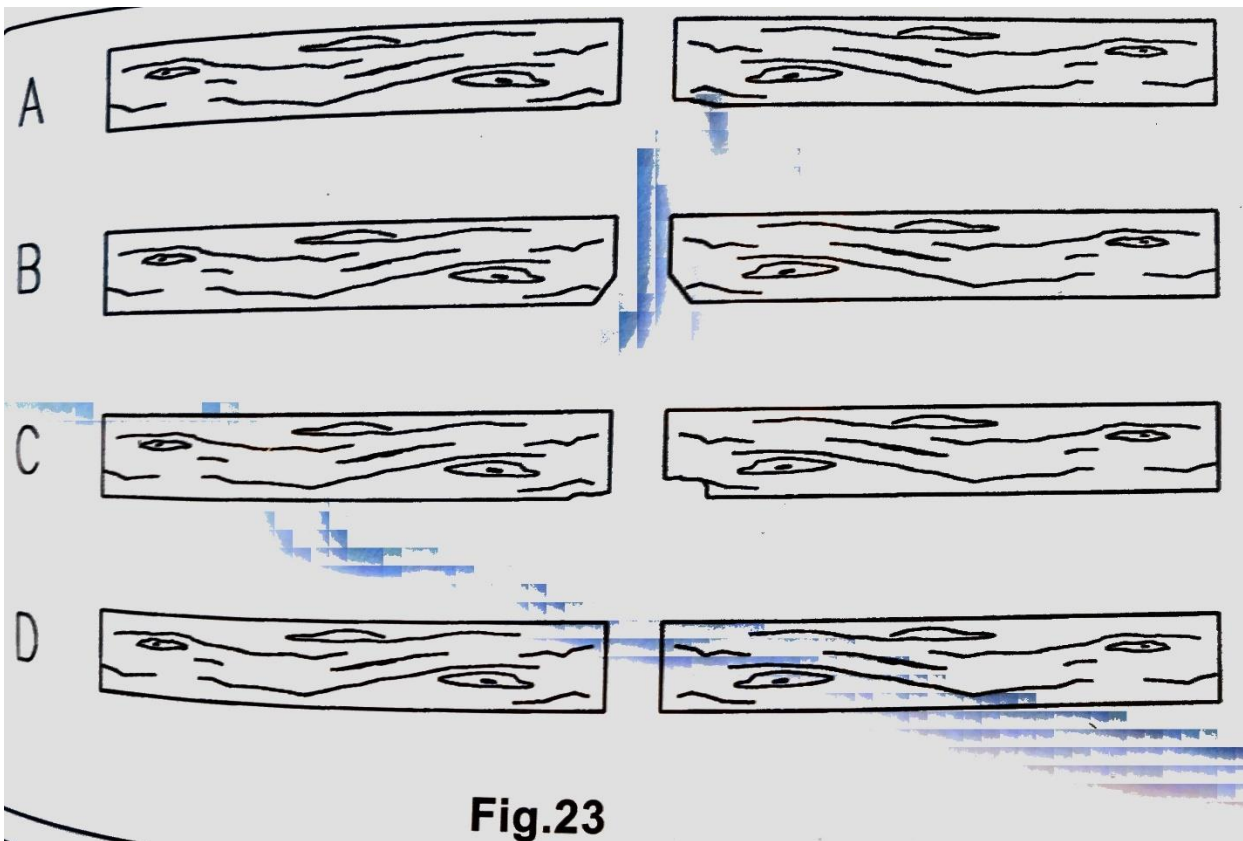
### **FITTING AND ADJUSTMENT OF SCORER BLADE (fig.22-23)**

Use the same spanners (36 and 10) used for fitting the main saw blade.

In this case the thread is RIGHTHANDED. The scorer assembly can be adjusted in height (A) and crossways (B) (fig.22). To obtain a clean cut without splintering in the lower part, the scorer blade must be perfectly aligned with the main saw blade. In Fig. 23 cutting conditions are represented:

- A The scorer blade is too low and does not score; the lower part of the panel will be splintered.
- B. The scorer blade is too high; the panel will not be splintered but, will be too chamfered on the sides.
- C. The scorer blade is moved too far to the side; the panel will have a step on one side and will be splintered on the other.
- D. The scorer blade is correctly positioned.





## ATTACHMENT 2

### ALUMINIUM SQUARE ADJUSTMENT (Fig. 14-16-17)

Exact positioning of the square is assured by a stop (G) fixed underneath the square (Fig. 14). For proper positioning this stop must rest against:

1) the side (X), thus guaranteeing exact measurement of the scale

2) the screw (Y), thus guaranteeing exact 90°-positioning with respect to the cutting axis. **WARNING: IF EVEN ONLY ONE OF THE ABOVE OPERATIONS IS NOT CARRIED OUT CORRECTLY, EXECUTION OF THE CUT WILL BE INCORRECT!** The aluminum square has been designed in such a way that it can execute inclined cuts from 90° to 45° (Fig. 16). The inclination is obtained by releasing the lever (F) and orienting the square to the desired angle, using the goniometer (L) located in the center of the frame. Lock the square at the desired inclination with the wheel (H). The square can be displaced at will on both sides of the frame. Before moving it to the desired side, release the lever and the knob (F-I), then insert the pin (M) in the hole (N). The operation is completed by locking the lever and the knob (F-I) after having fitted the pin (G) into place. If the adjustment needs to be checked, follow the procedure below (Fig. 17): Using a 1 x1 m panel, execute 4 cuts on the sides A-B-C-D. After having made the 4 cuts, make a fifth one on side A of the first cut. To check proper adjustment, measure the last strip of wood cut at the two ends H 1-H2.

