

# WB-51TB

## Hot blade welder for dowels on HabaSYNC type toothed belts



The WB-51TB is a semi-automatic welding tool for dowels on Habasit type HabaSYNC type toothed belts up to a maximum 50 mm width. Welding occurs by heating the two surfaces with a hot blade and subsequent coupling.

The main features are:

- ❑ Easy to use and versatile, including the creation of dowel support blocks.
- ❑ Automatic welding cycle controlled by a microprocessor.
- ❑ Limited size and weight.

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Noi We

**HABASIT ITALIANA S.p.A.**  
Via del Lavoro, 50  
I-31016 Cordignano (TV)  
ITALY

dichiariamo sotto la nostra esclusiva responsabilità che la macchina tipo: *declare under our sole responsibility that the machine type:*

**Saldatrice per tasselli a lama calda** *Hot blade welder for cleats*

Modello: *Series:*

**WB-51TB**

è conforme alle seguenti Direttive Europee: *is in conformance with the following EC Council Directives:*

2006/42/EC

Direttiva Macchine *Machinery Directive*

2004/108/EC

Direttiva Compatibilità Elettromagnetica *Electromagnetic Compatibility Directive*

2006/95/EC

Direttiva Bassa Tensione *Low Voltage Directive*

e conforme alle seguenti norme armonizzate: *and is in conformance with the following harmonized standard:*

UNI EN 12100-1/2004

UNI EN 12100-2/2004

CEI EN 60204-1/2006

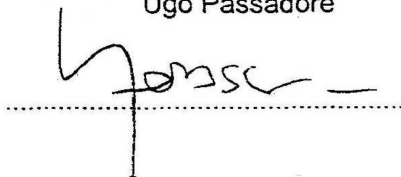
Dichiariamo che il Fascicolo Tecnico viene conservato presso il nostro stabilimento *The original Technical File is stored at our plant*

Cordignano, 14 gennaio 2010

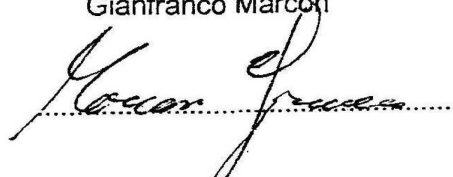
Il Direttore Generale  
*General Manager*

Il Responsabile Divisione Macchine  
*Head of Machines and Tools Department*

Ugo Passadore



Gianfranco Marcon



# 1 General information

## 1.1 Application

Hot blade WN-51TB welders were specifically designed to weld transport dowels (flights) on the surface of Habasit HabaSYNC type polyurethane toothed belts up to a maximum 50 mm width.

The WB-51TB series hot blade welder was exclusively developed for the applications described hereto. Other or unsuitable applications are prohibited. Habasit shall not be liable for unintended application consequences.

The WB-51TB hot blade welder was professionally manufactured in accordance with EC safety instructions.

All assembly, maintenance and repair work, as well as the operation of the equipment, is expected to be carried out by qualified personnel or staff under the supervision of responsible specialists and experts.

For space reasons, these instructions for use cannot cover all possible operating, maintenance and repair aspects. The indications provided concern normal machine use by qualified personnel. In the event of doubt or in need of further information, always contact the manufacturer (see chapter 1.4).

## 1.2 Safety indications

This manual includes the terms ATTENTION, CAUTION, NOTE, which indicate hazards or specific information to be kept in mind.

<b>ATTENTION</b>	Serious injury and/or serious material damages may ensue if ignored.
<b>CAUTION</b>	injury and/or material damages may ensue if ignored.
<b>NOTE</b>	Indicates important technical information that may not be known to even expert personnel.

Observe all the machine assembly, operating and maintenance indications as well as technical specifications!

This will prevent personal or property problems and/or damages.

**Expert personnel** means people authorized to perform the required operations. These people have been sufficiently trained and have acquired experience in their field that lets them recognise and avoid hazards and they are aware of specific safety provisions and regulations.

### 1.3 Standards and accessories

#### 1.3.1 Standard material

1. WB-51TB includes:
  - a. Nr. 1 WB-51TB machine
  - b. Nr. 1 belt support base for type T10
  - c. Nr. 1 belt support base for type T5
  - d. Nr. dowel support for rectangular profiles

#### 1.3.2 Optional accessories

The WB-51TB is sold with belt support bases for types T5 and T10. Support bases can be ordered for different belts, including the imperial measure version.

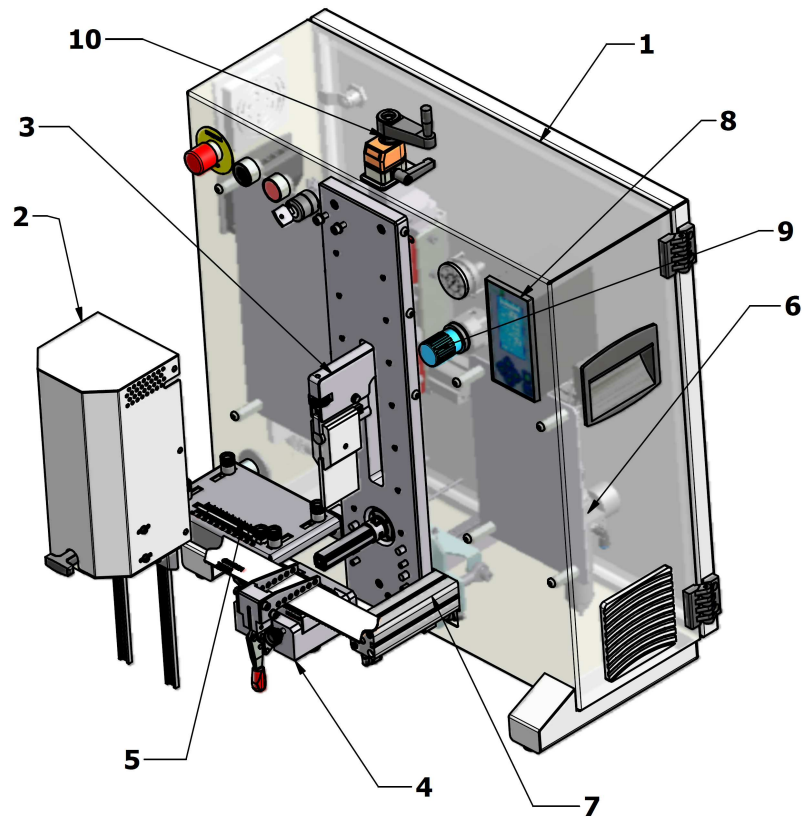
For any supply requests, refer to the following table that also lists consumption material:

Code	Description
	Support base for belt T5
	Support base for belt T10
	Rectangular dowel support



Toothed support base for belt T5

### 1.3.3 Main machine parts



ID	Description
1	Machine frame
2	Front dowel support movement and hot blade guard
3	Dowel carriage
4	Adjustable belt support base
5	Belt support surface
6	Pneumatic valve unit
7	Hot blade movement carriage cylinder
8	Welding cycle control unit
9	Applied pressure regulator during dowel welding on belt
10	Dowel base and hot blade distance regulator

## 1.4 Accessory/spare part orders

Spare parts and accessories can be directly ordered from the manufacturer.

Address: Habasit Italiana S.p.A.  
Via del Lavoro, 50  
I-31016 CORDIGNANO (TV)  
Tel ++39 438 91 13  
Fax ++39 438 91 2374

**Clearly specify the parts required indicating the product code.**

ATTENTION	The use of other branded spare parts that do not meet Habasit specifications is prohibited. Habasit is not liable to consequences derived from the use of non original Habasit spare parts.
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## 1.5 Warranty

All tools are subject to attentive final inspection. They are guaranteed free of material and factory defects for 1 year provided they are used correctly.

## 1.6 Technical consulting

Our experts are available for all consultations. For technical questions on cutting device operations and conditions, contact the manufacturer (for contact information, see 1.4).



## 2 Operating mode

- ❑ The WB-51TB uses a welding method based on heating two surfaces to a soft consistency and then joining them by applying pressure and cooling with pressure constantly applied.
- ❑ The two surfaces are heated by a hot blade through irradiation and not contact.

**ATTENTION** The WB-51TB welder is expressly designed to weld Habasit transport dowels. Habasit does not guarantee correct belt surface and dowel welding if dowels and belts with materials and/or sections other than those foreseen are used.

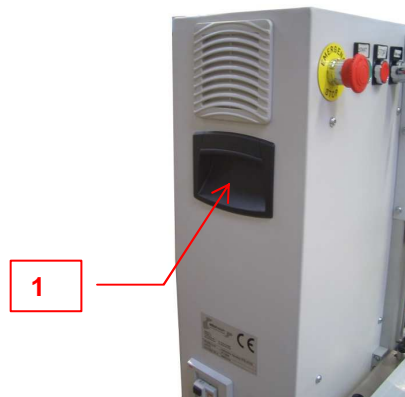
- ❑ The heating, coupling and cooling cycle is automatic and managed by an electronic controller.
- ❑ Dowel and belt positions are adjusted manually.

### 2.1 Transport

The WB-51TB is delivered in a wooden crate also suitable for shipping overseas.



WB-51TB wooden crate



(1) WB-51TB handling grips

**ATTENTION** Never use lifting points other than those specifically foreseen and indicated to lift the wooden crate.

Once the crate is opened, manually remove the WB-51TB tool grasping it by the specific handles (1). Before lifting the WB-51TB, close and evenly secure any mobile parts and/or auxiliary lifting systems such as belts, cables, etc.  
The transport box also contains a box with accessories.

## 2.2 Preliminary operations

Connect the machine to the electrical mains using a plug that complies with current regulations in the country of use and according to the indications in these technical specifications in terms of voltage (Volt) and absorbed current (Ampere). The socket must be equipped with an upstream circuit breaker, suitably calibrated according to current safety regulations.

Connect compressed air to the specific quick coupling; line pressure 6 kg/cm<sup>2</sup>

**ATTENTION** follow the safety instructions to connect the machine to the electrical mains.

The preliminary operations include:

- Installing the toothed belt support base.
- Installing the dowel support
- Adjusting the dowel/belt position crosswise
- Adjusting the vertical distance between the belt and dowel and hot blade.

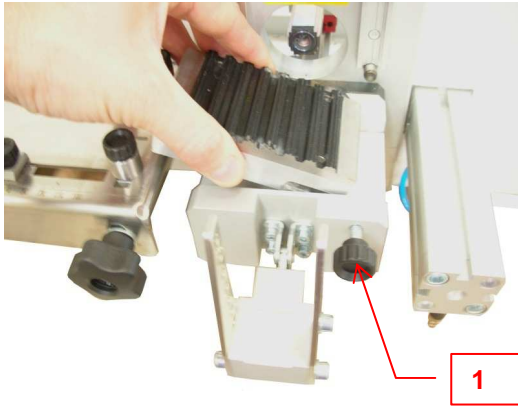
The WB-51TB tool is supplied with a set of two support bases for toothed belts: one for T10 and one for T5.

**CAUTION** The support bases may be damaged if not correctly handled and protected.

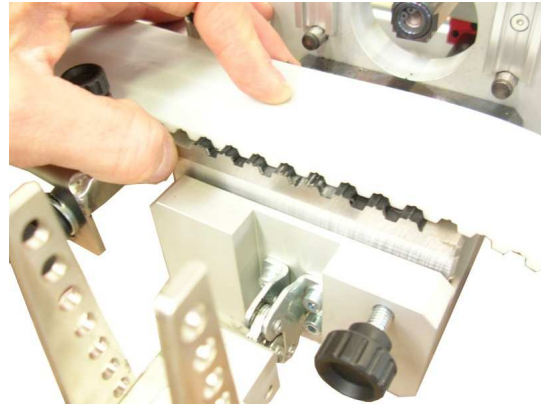
## 2.3 Installing the toothed belt support base

According to the type of belt to be processed, select the support base with the correspondent serration. The purpose of the toothed base is also to establish whether the dowel will be welded at the tooth or between two teeth. We suggest you use the manual control sequence (see chapter 2.4) to position the dowel on the belt and check the relevant position.

### 2.3.1 Support base assembly and adjustment



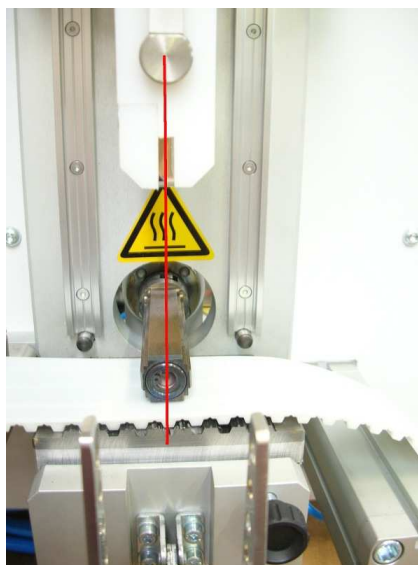
Unscrew the lock screw (1) and position the base on the housing



Place the toothed belt on the base and check alignment between the tooth and heating blade according to the application to be performed. Tighten the lock screw (1)

<b>CAUTION</b>	Make sure the base is correctly positioned, checking the position of the dowel using the manual controls (see chapter 2.4).
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Check belt serration alignment with the dowel.







Position the toothed base so that the dowel is welded in the required position on the lower belt serration.



## 2.4 Control panel


Description of the controls on the machine and automatic cycle control panel:

### Buttons and selectors

1		<p>Emergency button: Press this button to immediately return mobile parts to the stand-by position, cut-off pneumatic supply and turn off the machine</p>
2		<p>START cycle button Starts the automatic welding cycle</p>
3		<p>STOP cycle button Stops the automatic welding cycle returning mobile parts to the stand-by position. The cycle resumes when the START button is pressed.</p>
4		<p>AUTOMATIC or MANUAL operating mode selector In AUTOMATIC, it enables the automatic welding cycle In MANUAL, it enables access to the parameter menu and manual mobile part movements.</p>

Following are a list of commands on the cycle panel and their functions.

1		<p>"ENTER" key confirms entered data or menu selections.</p>
2		<p>"EXIT or CLOSE FOLDER" key closes the current page and returns to the main menu.</p>

3		Up, down, right, left cursor movement arrows.
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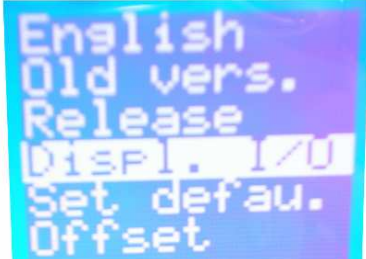
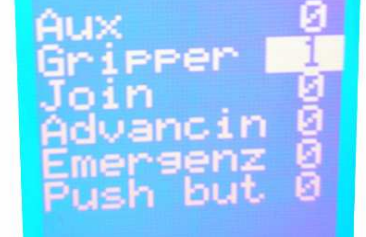
## 2.5 Manual welding cycle movements

The WB-51TB is equipped with a software function that allows for manual movements, activating the pneumatic valves. This function is helpful when calibrating and adjusting positions as described in the following paragraphs in order to perfectly weld the dowel to the belt surface.

### Manual control menu and descriptions (see also paragraph 1.8)

**ATTENTION** The manual control menu is enabled with the selector (4) is turned to **MANUAL**

**ATTENTION** Enabling the manual control menu using the key selector is reserved to specialised technicians.

<p>From the main screen, use the movement arrows to move the cursor to the "MENU" row. Press Enter The settings menu page opens.</p>	
<p>Settings menu:</p> <ul style="list-style-type: none"> <li>- Language – select a language using the right and left arrows</li> <li>- Old version (do not use)</li> <li>- Release = displays the software release version</li> <li>- Visual I/O = display/edit pneumatic actuator control signal status</li> <li>- Set defau. = Reset parameters</li> <li>- Offset = hot blade temperature offset</li> </ul>	
<p>Use the <b>key</b> to select item <b>Displ. I/O</b></p> <p>Press and hold down Enter for 5 sec.</p> <p>The list of pneumatic actuators appears with status:</p> <p>0 = idle position, the same as stand-by 1 = work position</p>	

Use the UP and DOWN arrows to scroll the WB-51TB movement list;

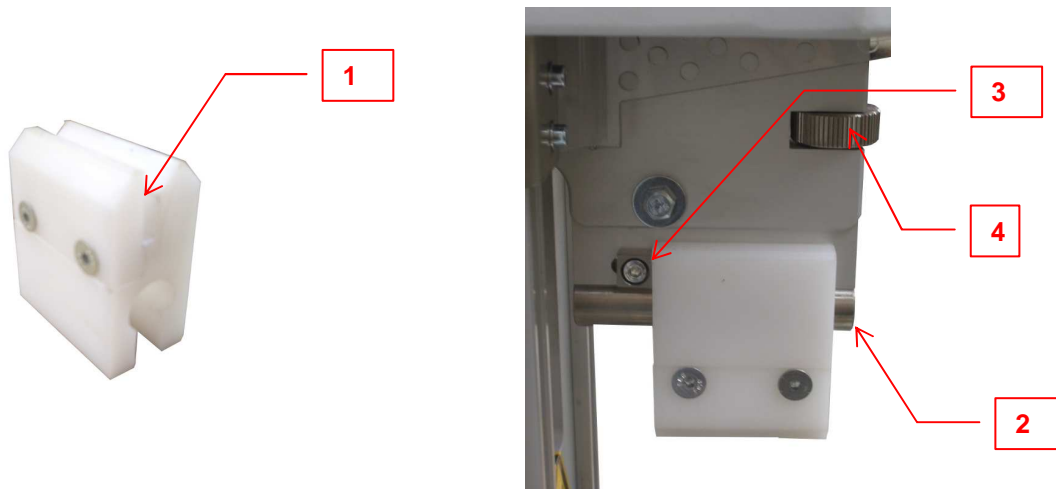
Press ENTER to switch actuator status from 0 to 1 and vice versa, enabling and starting the pneumatic control.

Press "CLOSE FOLDER" to return to the user interface screen with cycle management parameters.

## 2.6 Installing the dowel support

The dowel support (1) is usually custom-designed to contain the dowel to be welded. It is installed on a specific hook (2) and the dowel is cross-aligned to the belt using the mechanical stop (3)

- Insert the dowel carriage
- Insert a dowel and – using the manual controls – lower the dowel carriage until it comes into contact with the belt using the manual controls as described in paragraph 2.4.
- Check the position and, if necessary, move the rear stop (3) so the dowel is in the required position.
- If necessary, repeat this operation adjust the dowel position until the required position is reached.
- Now use the wheel (4) to align the hot blade surface with the dowel as shown in the following figure:



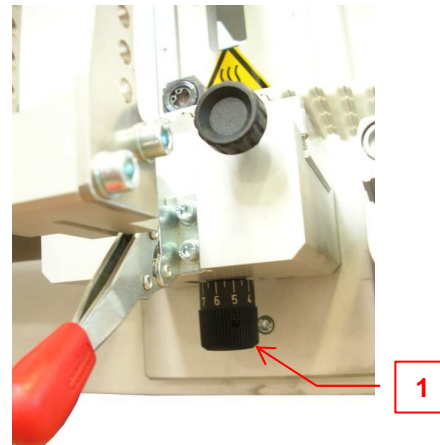
## 2.7 Calibrating the distance between the hot blade and the HabaSYNC belt surface and dowel

The distance between the hot blade and the toothed belt surface can also be calibrated using the precision screw with a graduated scale located under the belt support surface.

Turn the knob (1) to adjust the distance between the belt surface and the hot blade.  
The best calibration is 5, which corresponds to a distance of about 0.6 - 0.7 mm.

When the type of belt – and thus thickness – is changed, the distance must always be adjusted to about 1 mm.

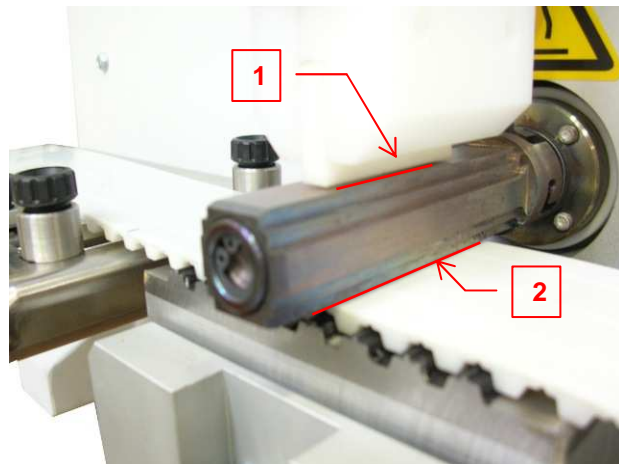
**1)** Distance regulation screw between hot blade and belt surface



Adjusting the distance between the hot blade and belt surface and dowel base.

**1:** distance between the hot blade and dowel. Approximately 1 mm.

**2:** Distance between the hot blade and belt surface, approximately 0.6 mm which corresponds to position 5 on the regulation screw.

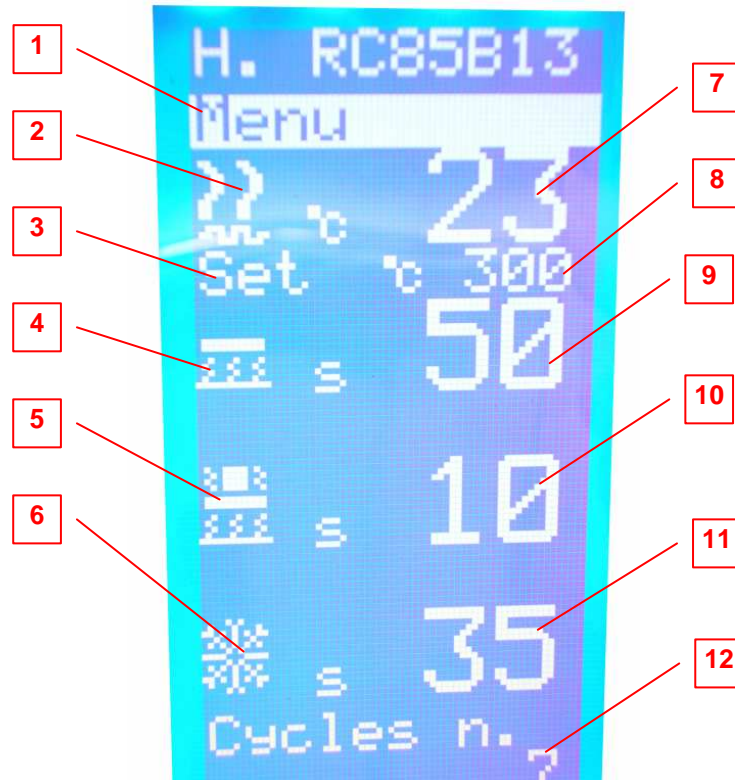


It is preferable to test distances from the belt and dowel to the blade starting with higher values and gradually reducing the distance until the best distance is found.



## 2.8 Entering dowel welding cycle settings

How to enter welding settings in the control unit:



Pos.	Description
1	Opening the settings menu. When the cursor is on the row, the MENU automatically opens. Press ENTER to open the settings window.
2	Heating phase symbol. If displayed (blinking) this means that the hot blade heater is on.
3	Set temperature set point label
4	Belt heating time symbol in seconds
5	Belt and dowel heating time symbol
6	Joined dowel and belt cooling time symbol
7	Real hot blade temperature
8	Set point temperature
9	Belt heating time in seconds
10	Belt and dowel heating time in seconds
11	Cooling time
12	Number of completed welding cycles



### 3 Welding the dowel to the belt

- ❑ Insert the dowel carriage and align the position crosswise and in parallel.
- ❑ Make sure the distance between the hot blade, belt and dowel is correctly adjusted.
- ❑ Enter welding parameters. The following values are exemplary and refer to a T10 belt with 50x8 mm dowel base:
  - Blade temperature: 300°C
  - Belt heating time: 45sec
  - Dowel heating time: 12sec
  - Cooling time: 35sec
  - Welding pressure: 4.5 – 5 Kg/cm<sup>2</sup>

#### 3.1 Setting and parking dowel positions on the belt

First mark dowel positions on the smooth side of the belt. We suggest you proceed as follows:

- ❑ Generally, the belt tooth step is used to set step between the dowels to be applied. This is because the dowel is usually applied on the belt tooth.
- ❑ Next place the toothed belt on the toothed base so that the first dowel is aligned with the relevant belt tooth (1).
- ❑ Use the surface's ruler to mark the next dowel positions to be welded. If step is under minimum ruler measurement, marks its multiples (2).
- ❑ Position the dowel carriage as indicated in the paragraph and adjust the distance from the hot blade.



### 3.2 Welding the dowel to the belt

- Enter the welding parameters in the control unit.
  - Wait until the hot blade reaches the set temperature.
  - Insert the dowel in the dowel carriage as indicated in the paragraph.
  - Close the front guard.
  - Start the cycle by pressing the START button.
- 
- The cycle starts with the hot blade moving forward and the belt heating time starting:
  - At the end of this time, the dowel carriage lowers for the lower dowel surface to be heated.
  - After dowel heating time, the hot blade retracts and the dowel is pressed on the belt with the relative pressure given by the difference between mains pressure and the counter-pressure set on the panel gauge.
  - Welding pressure is kept for the set cooling time.
  - When finished, the dowel carriage rises and the guard can be opened to apply a new dowel.
- 
- Press the STOP button ( ) to stop the work cycle returning all movements to their initial position and resetting cycle times.
  - The cycle resumes when the START button is pressed.

## 4 Assistance

### 4.1 Faults

**ATTENTION** Maintenance and/or repairs on freely accessible electrical parts must be performed by skilled specialized personnel

Generally, only the two electrical appliances are subject to fault. They are covered by the manufacturer's official warranty valid for two years.

- For faults of this or other types, inform the manufacturer, clearly indicating:
  - Model
  - Serial number
  - Date of purchase
  - Defect found: detailed description and photographs, if possible.

### 4.2 Maintenance

**ATTENTION** Maintenance personnel must be aware of the mechanical and electrical safety devices.  
Maintenance personnel must be authorized

**ATTENTION** Before performing any maintenance, make sure electrical supplies are disconnected.

**Table 5.3.1 Periodic maintenance**

Operation	Period	Personnel	Method
General cleaning	Daily	Operator	Clean the machine after use removing residue deposits
Hot blade cleaning	Daily	Operator	In the event of deposits, clean the hot blade with a brass bristle metallic brush.
Dowel carriage check	Daily	Maintenance worker	Check dowel carriage wear and replace if needed
Toothed base check	Weekly	Maintenance worker	Check surface and welding hollow integrity
Movement part check	Monthly	Maintenance worker	Check part integrity and correct carriage movement

If necessary, contact the Tools division at:

Habasit Italiana S.p.A.  
Via del Lavoro, 50  
Zona Industriale  
I - 31016 Cordignano (TV)  
Tel.: 0039. (0) 438.9113  
Fax: 0039. (0) 438.200545

## 5 Technical Specifications

<b>Power</b>	1600W
<b>Supply voltage</b>	120 V ~ o 230 V ~ according to tools installed
<b>Frequency</b>	50-60 Hz

**TABLE 1 - ELECTRICAL SPECIFICATIONS**

<b>Dimensions (LengthxWidthxHeight)</b>	1100x200x260 / 415 mm 43.3 x 7.87 x 10.23 / 16.33 in
<b>Total Weight</b>	27 kg / 59.52 lbs.
<b>Noise level</b>	< 70 db
<b>Working temperature</b>	Between 5°C – 40°C
<b>Humidity tolerance</b>	Between 45 – 70%

**TABLE 2 - DIMENSIONS AND ENVIRONMENTAL CHARACTERISTICS**

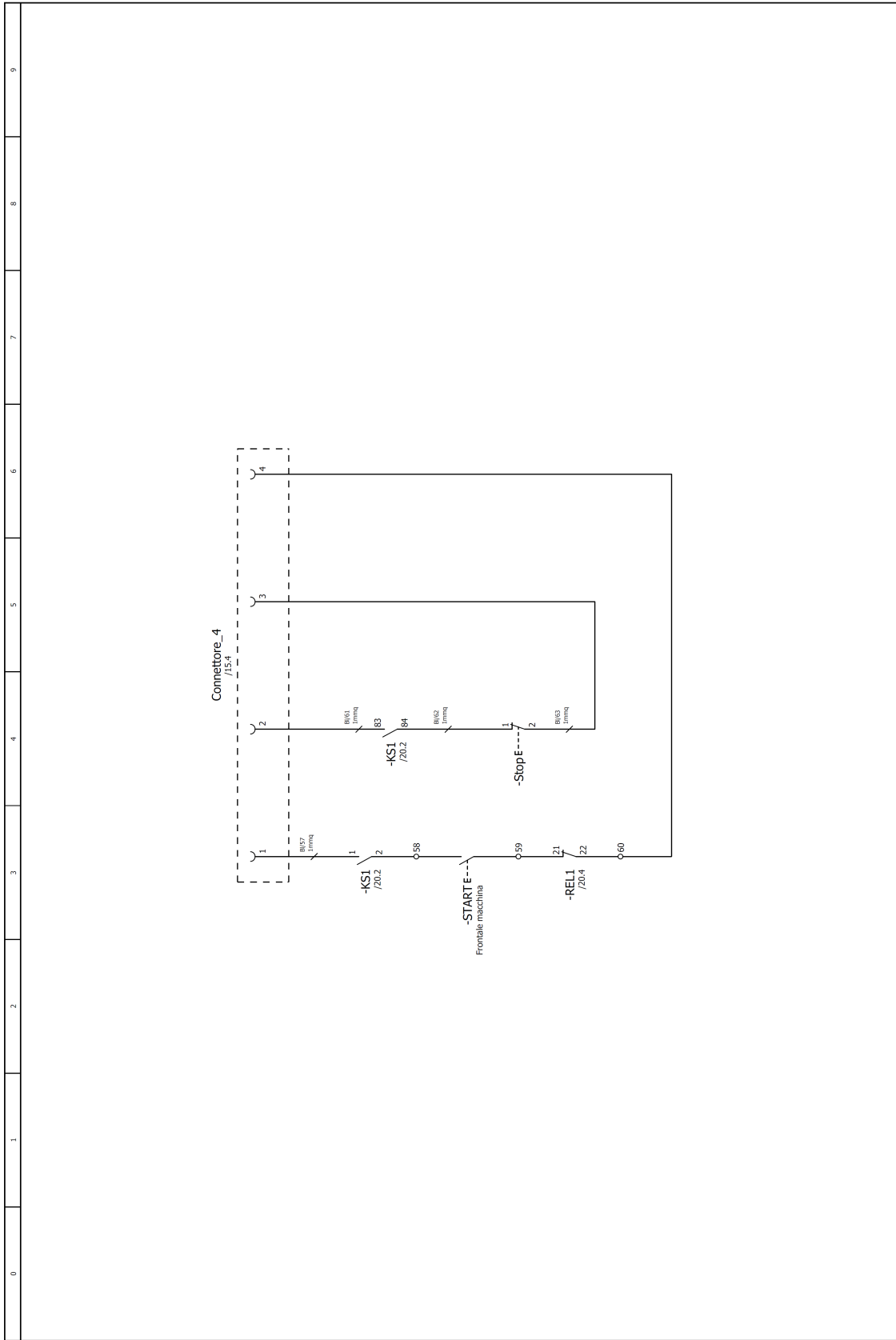
<b>Max HabaSYNC belt width</b>	50.8 mm / 2 in
<b>Max dowel height</b>	70 mm / 2.75 in
<b>Max dowel length</b>	50.8 mm / 2 in
<b>Max dowel width</b>	

**TABLE 3 - PROCESSED PRODUCT SPECIFICATIONS**



0	1	2	3	4	5	6	7	8	9
<h3>Controllo Habasit</h3> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>Connettore_1 /10.4</p> <p>Connettore_2 /25.7</p> <p>Connettore_3 /25.0</p> <p>Connettore_4 /22.3</p> </div>									
<p>Nome file: HABE_00025_04</p>									
<p>eliotech AUTOMAZIONE E ROBOTICA</p>									
<p>Attrezzatura per saldatura facchini WB-51TB Progettista: Gian Attilio Valido   Disegnatore: G.A.Naldo</p>									
<p>Ditta committente: Habasit Italia Spa Via Melchiorri, 8 31029 Vittorio Veneto</p>									
<p>Controllo Habasit</p>									
<p>Commissa: 00025_04</p>									
<p>N° Disegno:</p>									
<p>=</p>									
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<p>Pag. prec.: 10 - Pag. succ.: 20</p>									
<p>Pag. cor.: 15 - Pag. tot.: 7</p>									





Nome file:HAB_00025_04		Disegnato: C.A.Naldo		Attrezzatura per saldatura facchini WB-51TB		Ditta committente: Habasit Italia Spa 31029 Vittorio Veneto		Commissa: 00025_04		Pag. prec.: 20		Pag. succ.: 25	
				Progettista: Gian. Attilio Naldo		Ingressi		N° Disegno:		Pag. cor.: 22		Pag. tot.: 7	

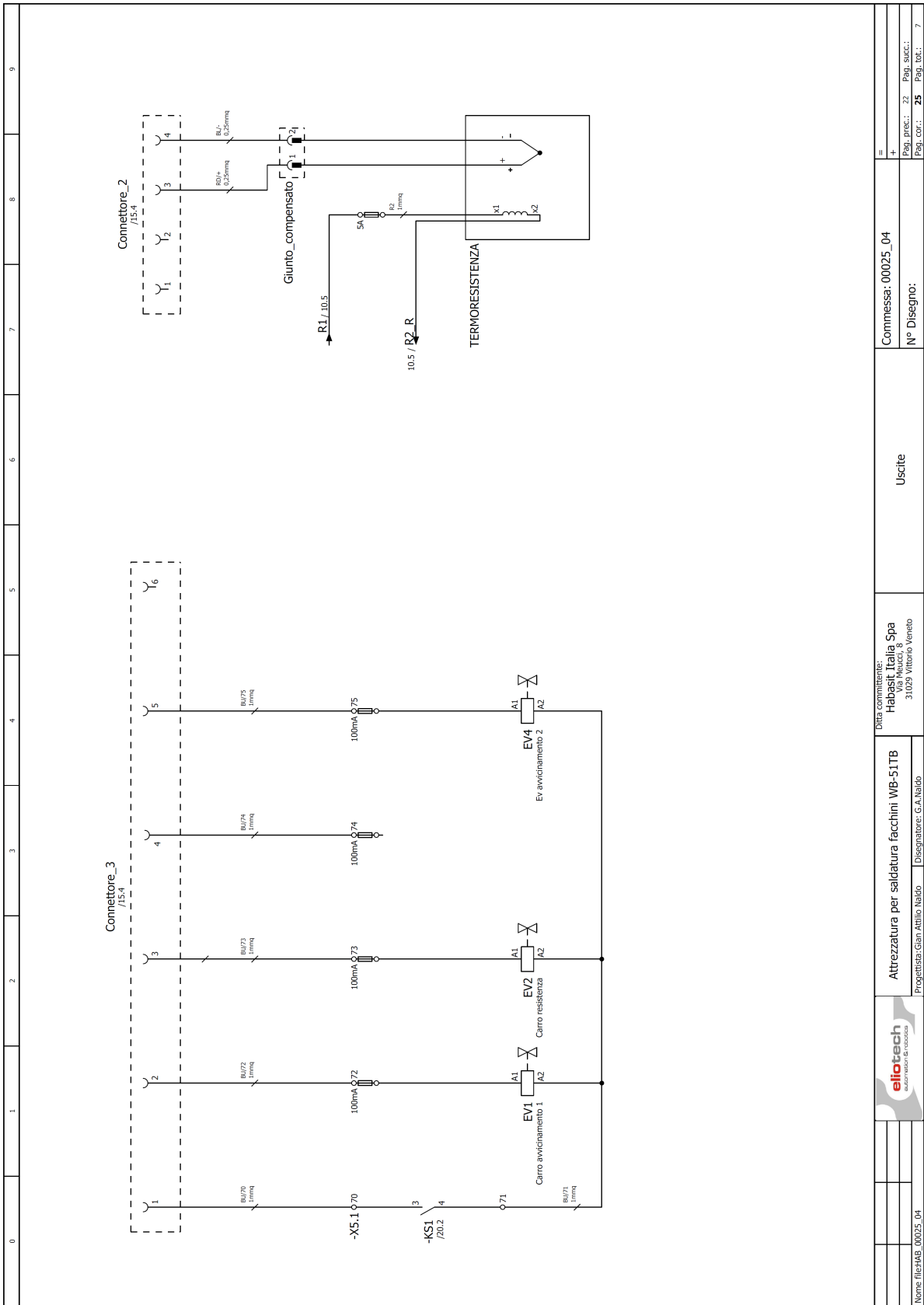


# Use and maintenance manual WB-51TB



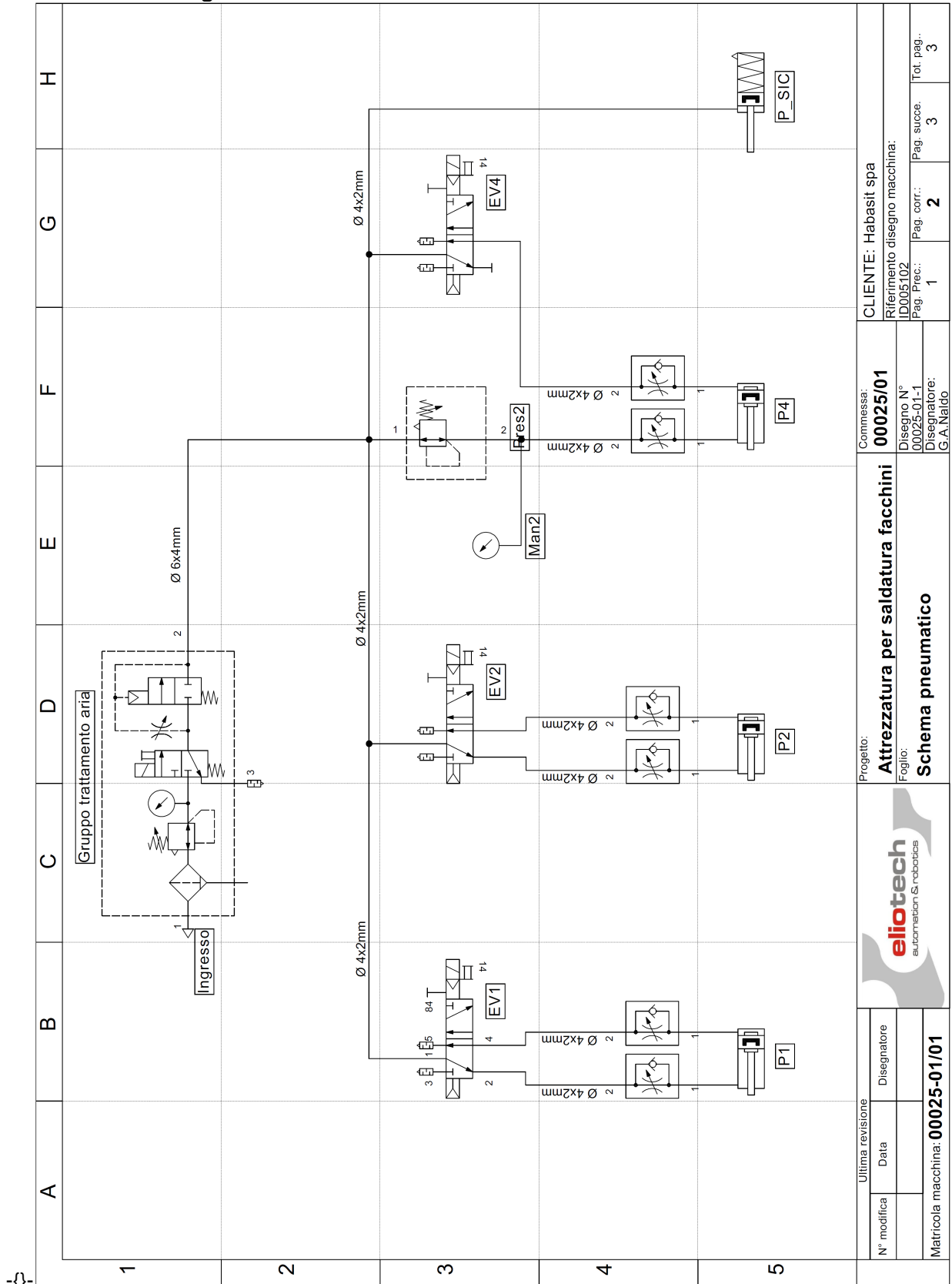
Author: AA  
Edition: 12/2009  
Substitutes:

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Nome file:HAB_00025_04		Progettista:Gian Attilio Naldo		Disegnatore: G.A.Naldo	
<b>Attrezzatura per saldatura facchini WB-51TB</b>					
Ditta committente: <b>Habasit Italia Spa</b> 31029 Vittorio Veneto					
Uscite			Commissa: 00025_04		
Peg. prec.: 22		Peg. succ.: 25		Peg. tot.: 7	
N° Disegno:		Peg. cor.:			

## 5.2 Pneumatic diagram



CLIENTE: Habasit spa  
Riferimento disegno macchina:  
ID005102  
Pag. Prec.: 1  
Pag. succ.: 3  
Tot. pag.: 3

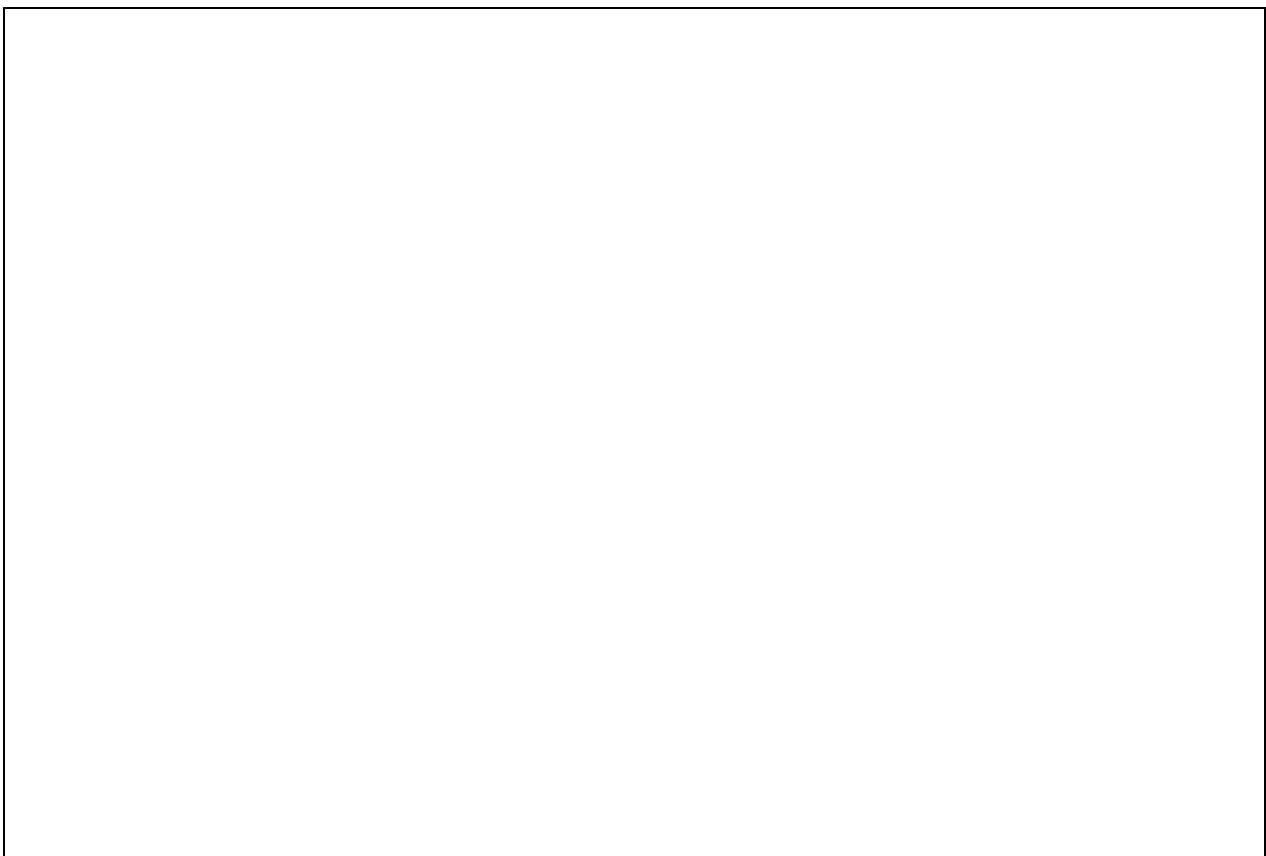


A		B		C		D		E		F		G		H			
N. corr.	Posizione	Identificazione	Codice prodotto	Tipo	Movimentazione	Denominazione dell'articolo	Fornitore										
1	2IB3	EV1	196941	CPE14-M1BH-5L-1/8	Carro avvicinamento facchino	Elettrovalvola	Festo										
	2IB4	R1_B	193143	GRLA-1/8-QS-4-D		Regolatore di portata unidirezionale	Festo										
	2IB4	R1_A	193143	GRLA-1/8-QS-4-D		Regolatore di portata unidirezionale	Festo										
	2IB5	P1	536286	ADN-32-60-I-P-A	Carro avvicinamento facchino	Cilindro compatto	Festo										
	2IC4	R2_A	193143	GRLA-1/8-QS-4-D		Regolatore di portata unidirezionale	Festo										
	2ICD1	Gruppo trattamento aria	185743	LF8-1/8-D-MINI-KD		Combinazione di unità di manutenzione	Festo										
	2ICD3	EV2	196941	CPE14-M1BH-5L-1/8	Carro resistenza	Elettrovalvola	Festo										
	2ICD5	P2	536286	ADN-32-60-I-P-A	Carro resistenza	Cilindro compatto	Festo										
	2ID4	R2_B	193143	GRLA-1/8-QS-4-D		Regolatore di portata unidirezionale	Festo										
	2IE3	Man2	159596	FMA-40-10-1/4-EN		Manometro a flangia	Festo										
	2IE4	R4_B	193143	GRLA-1/8-QS-4-D		Regolatore di portata unidirezionale	Festo										
	2IE4	R4_A	193143	GRLA-1/8-QS-4-D		Regolatore di portata unidirezionale	Festo										
	2IE5	P4	536281	ADN-32-20-I-P-A	Carro contatto cinghia-facchino	Cilindro compatto	Festo										
2	2IEF3	EV4	196941	CPE14-M1BH-5L-1/8	Carro contatto cinghia-facchino	Elettrovalvola	Festo										
	2IF3	Pres2	159505	LR-1/8-G		Riduttore di pressione	Festo										
	2IH5	P_SIC	536417	AEN-25-10-I-P-A-Z-6-01	Sicurezza assenza pressione	Cilindro compatto	Festo										
3																	
4																	
5																	
Ultima revisione																	
N° modifica	Data	Disegnatore															
Matricola macchina: 00025-01/01		Progetto: <b>Attrezzatura per saldatura facchini</b> Foglio: <b>Distinta pezzi</b>															
		Commissa: <b>00025/01</b>				CLIENTE: Habasit spa				Riferimento disegno macchina:				Pag. Prec.: <b>2</b>   Pag. succe.: <b>3</b>   Tot. pag.: <b>3</b>			
		Disegno N°				Disegnatore:				C.A. N.14.14							



# **WB-51TB**

Hot blade welder for dowels on HabaSYNC type  
toothed belts



Spare parts manual and machine diagrams

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## 6 Preface

Habasit thanks you for purchasing the PQ-601 welding unit for HabaTRAC series belts.  
If treated with care, the PQ-601 welder is able to guarantee reliability and junction quality for many years.

### **ATTENTION**

**In order to ensure correct and safe machine use, the user must carefully read this manual and strictly follow the instructions before installation and use.**

For any question or problem concerning your machine, please contact Habasit Customer Care.  
You can find the Habasit branch or dealer near you at [www.habasit.com](http://www.habasit.com).

### **6.1 Manufacturer's address**

For further information, contact our headquarters at the following address:

Habasit Italiana S.p.A.  
Via del Lavoro, 50  
I - 31016 Cordignano (TV)

Tel.: 199 199 333  
Fax: 199 199 555

For international calls only:  
Phone: +39 0438 911444  
Fax: +39 0438 912374

### **6.2 Technical consulting**

Our experts are available for all consultations.  
For technical questions regarding equipment operations and conditions, please contact the manufacturer (paragraph 6.1).

## 7 Regulations and general warnings

### 7.1 Manual layout criteria

This manual observes the organizational rules and requirements of Directive 98/37/CE, duly amended, being the Directive of the Council of the European Community of 14 June 1989, concerning the reconciliation of the laws of member states regarding machines, also known as the «Machine Directive», and also all the other Directives and Regulations referred to in the said Machine Directive, inspired by criteria which, in addition to illustrating the technical characteristics of the machine and its use, maintenance and troubleshooting methods, also clearly indicate the following:

- All the protection measures adopted on the machine, fully integrating design safety planning and construction safety
- All protection measures to be adopted to meet those risks that cannot be completely eliminated
- All indications for the training of personnel using the machine, while indicating where it is necessary to provide for individual safety protection devices.
- The manual is divided up into sections. Each section deals with a specific subject in which every aspect of safety is considered and clearly highlighted in the text.

### 7.2 Manual use criteria

HABASIT encourages the reader to fully read this manual when receiving the equipment it comes with and, in any case, before handling the equipment. This manual is designed to provide all the instructions, indications and warnings needed by the user to learn about the equipment, understand its main operating principles and be suitably informed for safe use.

In addition to the instructions in this manual, we would ask users to observe any specific current laws.

This manual must be considered as an essential part of the equipment. Its contents must be made known to the entrusted maintenance persons and users.

The purpose is to provide all the information required for good, correct use of the equipment.

The manuals must be kept throughout the equipment's life and must be updated in the event of modifications aimed at improving the equipment's performance.

The manuals must be available to qualified personnel.

Consultation of this manual is facilitated by the general index on the first page, which makes it possible to immediately find the subject of interest.

If the subject dealt with is particularly important it is highlighted with references to the type of technical personnel required to intervene.

All updates HABASIT considers necessary to improve the quality of the equipment will be communicated by way of sending of further specific documentation or a new manual to replace the previous one.

Should the equipment be transferred to another customer, manuals must be included and HABASIT informed in order to provide future modifications or updates.

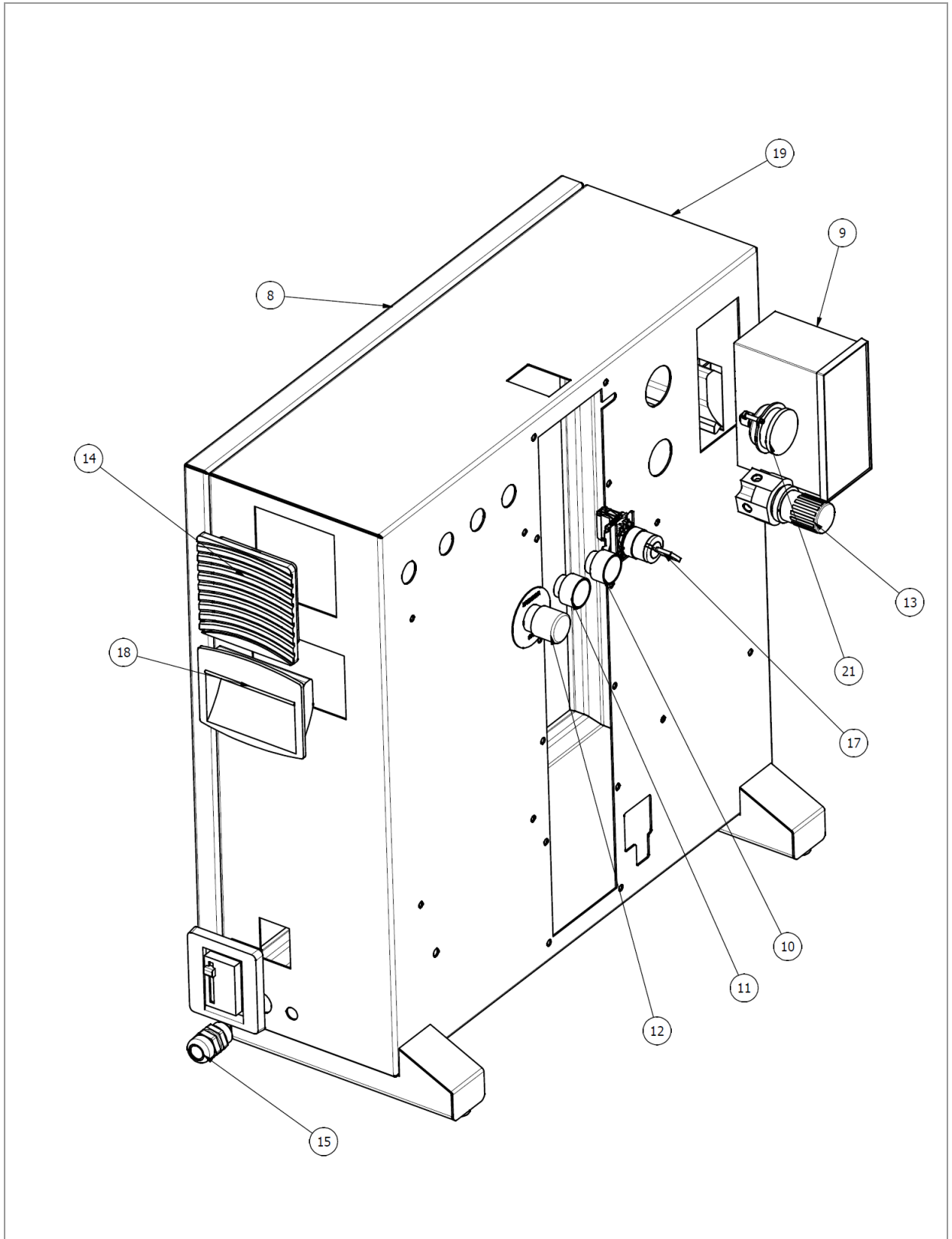
A copy of this manual, delivered with the equipment, is meant for the maintenance operators, who shall read and keep it near the equipment, and consult it before undertaking any action on the equipment.

### **7.3 Dimensions**



## 8 Exploded drawings and spare parts list

### 8.1 H08D005002 – Machine frame unit and controls



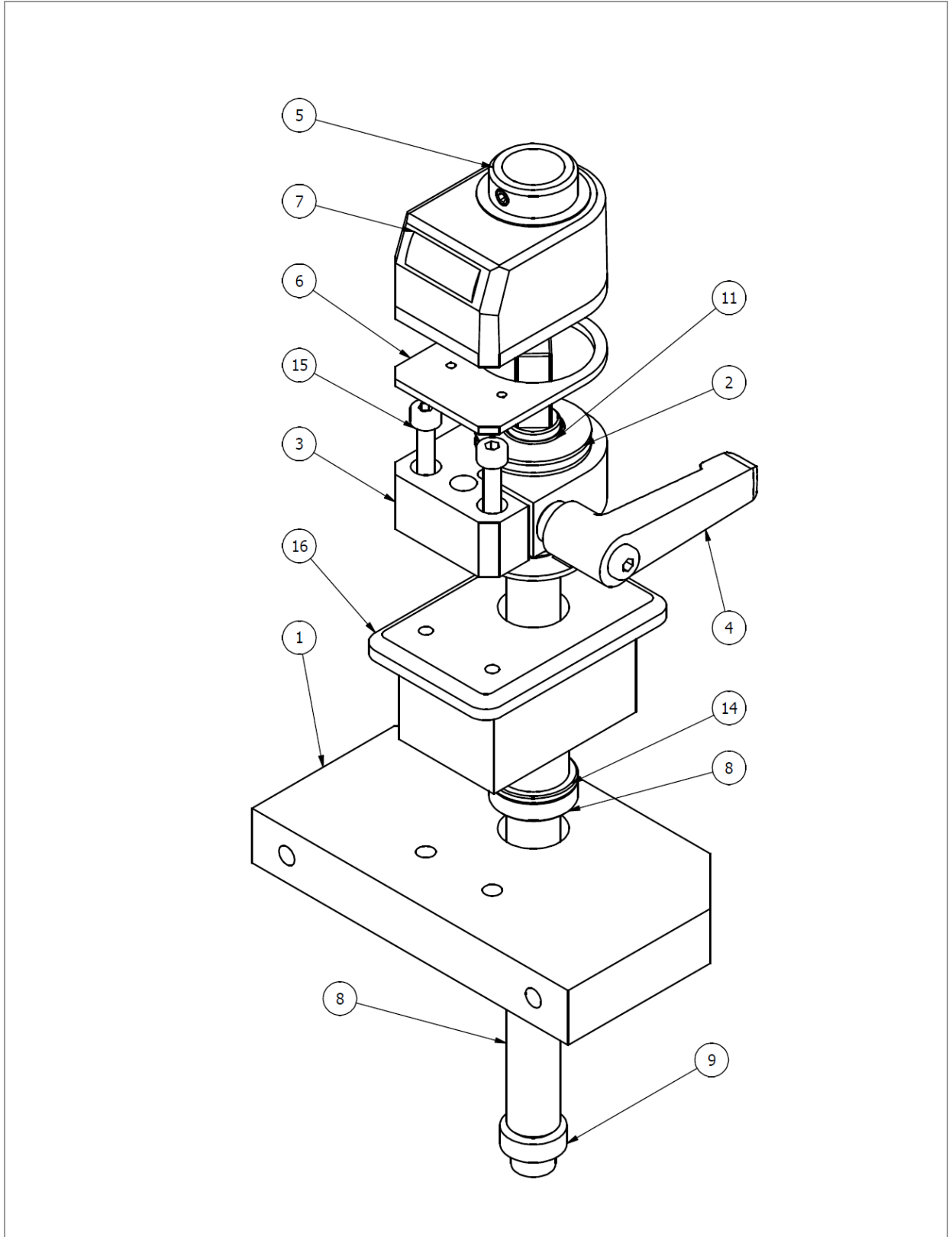


**WB-51TB**

**H08D005002 – Machine frame unit and controls**

<b>POS.</b>	<b>QTY</b>	<b>CODE</b>	<b>DESCRIPTION</b>
8	1	ID005026	REAR STRUCTURE DOOR
9	1	XN000116	HABASIT ELECTRONIC CONTROL
10	1	XN000221	COMPLETE RED BUTTON - XB4 BA21
11	1	XN000115	COMPLETE BLACK BUTTON - XB4 BA21
12	1	XN000113	MUSHROOM HEAD EMERGENCY BUTTON - XB4 BT42 TELEMECANIQUE
13	1	XN000232	PRESSURE REGULATOR - LR-1/8-G - FESTO
14	2	XN000071	KRYOS GRID – GKV100
15	1	IN040122	PLASTIC WIRE CLAMP PG16 V-TEC
17	1	XN000250	22MM KEY TRIGGER SWITCH - XB4BG21 - TELEMECANIQUE
18	2	XN000067	RECESSED HANDLE EPR.120-PF-C1 ELESA
19	1	ID005025	METALLIC SHEET METAL BASE STRUCTURE
21	1	XN000220	GAUGE SERIES FMA-40-10-1/4-EN - FESTO

## 8.2 H08D005005 – Dowel height adjustment crank unit



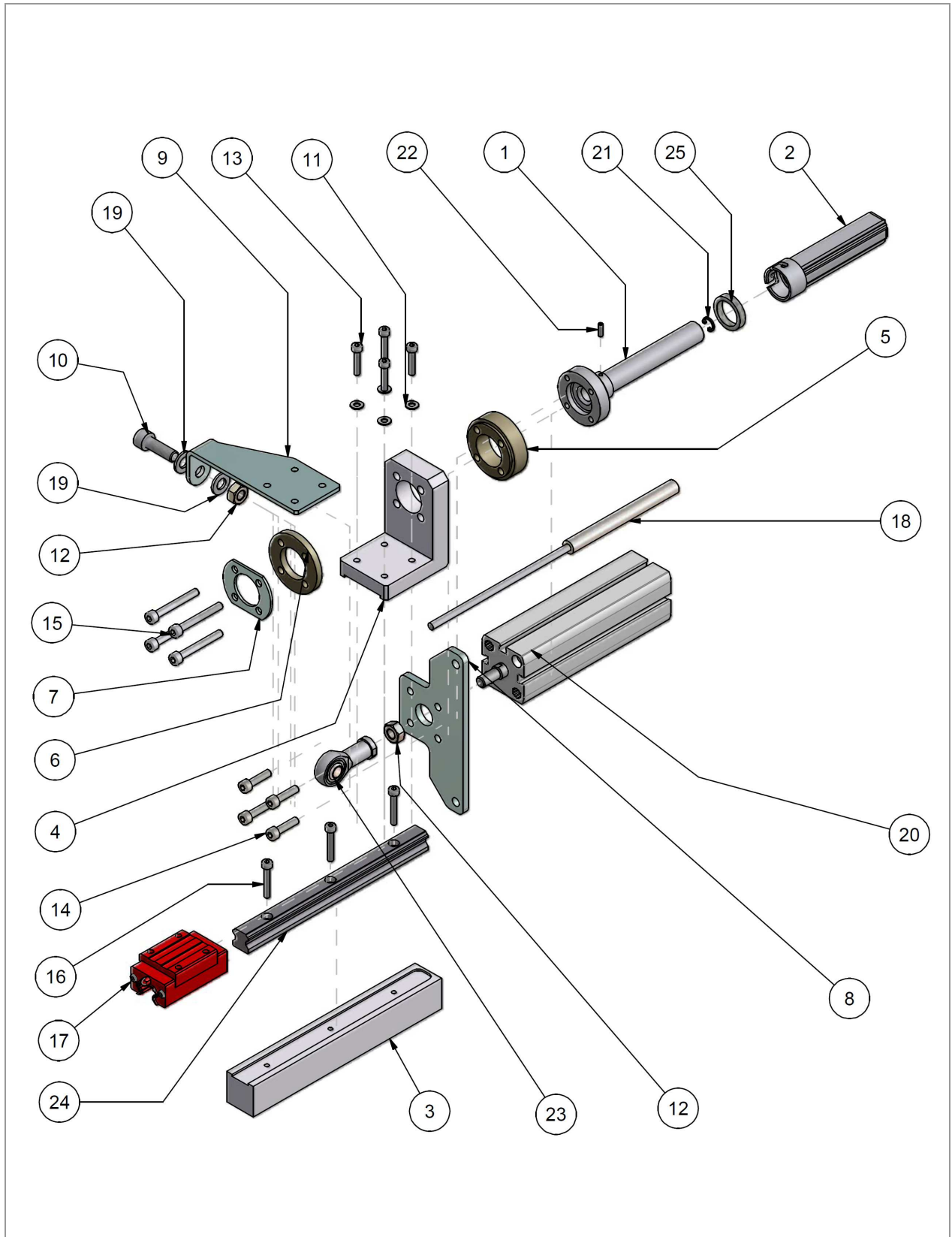


**WB-51TB**

**H08D005005 – Dowel height adjustment crank unit**

POS.	QTY	CODE	DESCRIPTION
1	1	ID005029	DISPLAY AND REGISTER SUPPORT BASE
2	2	XN000088	AXIAL FIFTH WHEEL INA-FAG AS1226
3	1	XN000086_1	BSA51-1 - BASE FOR SPINDLE LOCKING
4	1	XN000086_2	BSA51-2 - BASE FOR SPINDLE LOCKING
5	1	XN000085_1	DD51_PART1 - DIGITAL POSITION INDICATORS DIRECT DRIVE
6	1	XN000085_2	DD51_PART2 - DIGITAL POSITION INDICATORS DIRECT DRIVE
7	1	XN000085_3	DD51_PART4 - DIGITAL POSITION INDICATORS DIRECT DRIVE
8	1	ID005028	DOWEL HEIGHT REGULATION SCREW
9	1	ID005030	STOP WASHER
11	1	IN011764	DIGITAL DISPLAY REDUCTION RB51-RB52-RBT52 ELESA
14	1	XN000091	SINTERED BUSHING ISO 2795 - 12 X 16 X 12
15	2	IN010217	RECESSED ALLEN-KEY CYLINDER HEAD SCREW - M 4 X 20 GALVANIZED
16	1	ID005027	READER SHIM

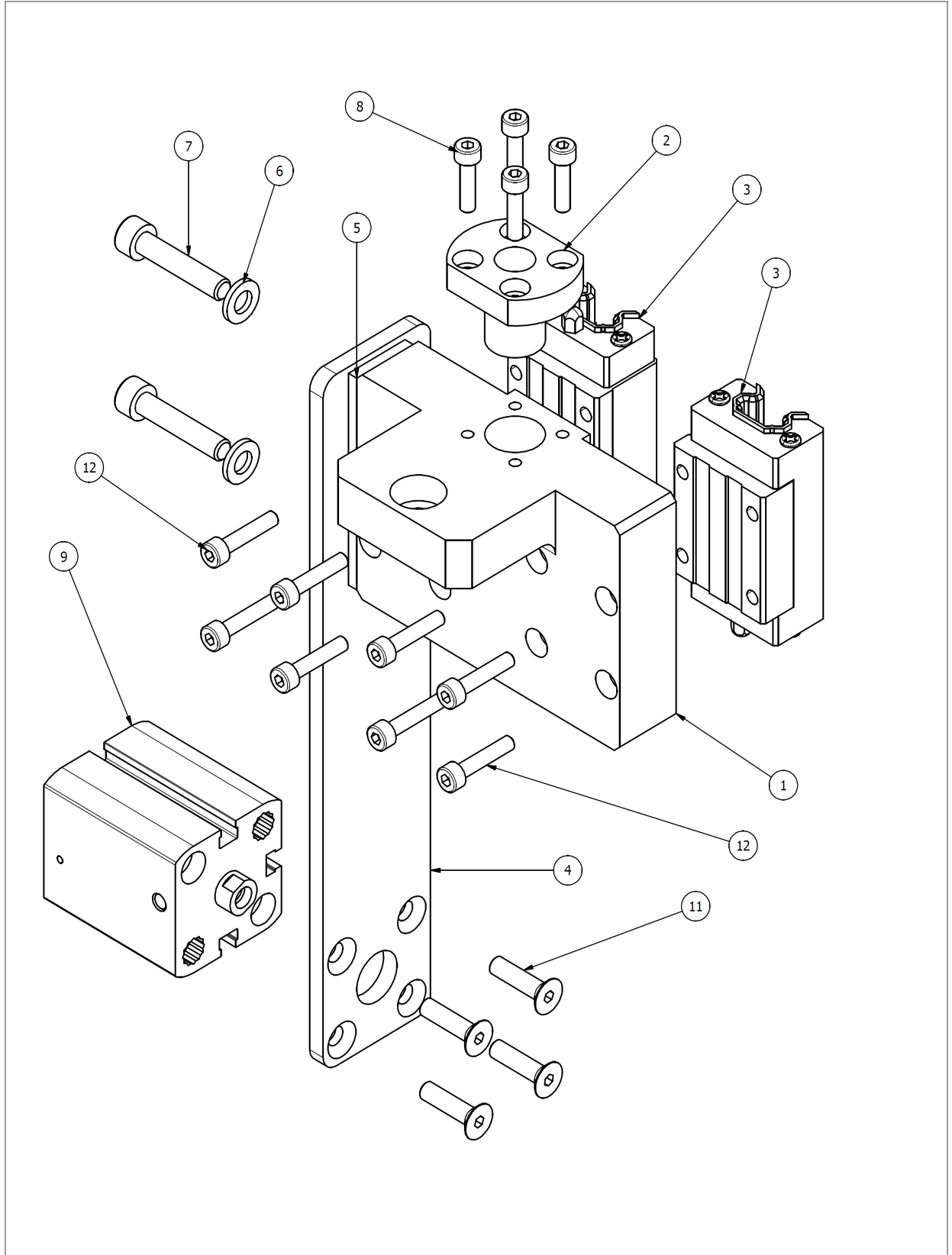
### 8.3 H08D005003 – Heating unit carriage unit (hot blade)





WB-51TB			H08D005003 – Heating unit carriage unit (hot blade)
POS.	QTY	CODE	DESCRIPTION
1	1	ID005526	WELDING REINFORCEMENT PLATE
2	1	ID005525	LEISTER HEAT GUN NOZZLE ITEM 106.992
3	1	ID005544	WELDING TOOL SUPPORT STRUCTURE
6	6	XN000197	ALLEN SCREW - M5X8 GALVANIZED
7	1	ID005540	HARDENING SPACER
8	1	ID005531	QUICK RELEASE SYSTEM
9	1	ID005547	LEISTER FAN LOCK RING
10	1	ID005541	SLOTTED PLATE
11	2	ID005507	CENTRING PIN
12	1	ID005546	WIDE BELT PRESSER WHEEL
13	1	ID005542	TEFLON BELT PRESSER WHEEL
14	1	ID005510	PRESSURE WHEEL SHAFT
15	2	XN000195	COMPRESSION SPRING 1X6.5X40,5 DIM ITEM D11980
18	2	IN010594	HH SCREW UNI 5931-M5X20 GALVANIZED
19	1	ID005548	PROFILE FEED SUPPORT PLATE
20	2	XN000213	ELASTIC RING FOR INTERIORS I 42 X 1,75
21	2	IN010922	ELASTIC RING FOR SHAFT EXTERIOR – E 20X1.2
23	1	H08N010002	RADIAL BALL BEARING 6004-2RS1
24	2	XN000215	GROOVED KNOB Ø16 - M5 - BT.FP - ELESA
25	1	IN040010	TRIAC S TYPE LEISTER-KOMBI FAN ITEM 100.705
26	2	ID005549	THREADED BAR M5

### 8.4 H08D005006 – Dowel height adjustment unit

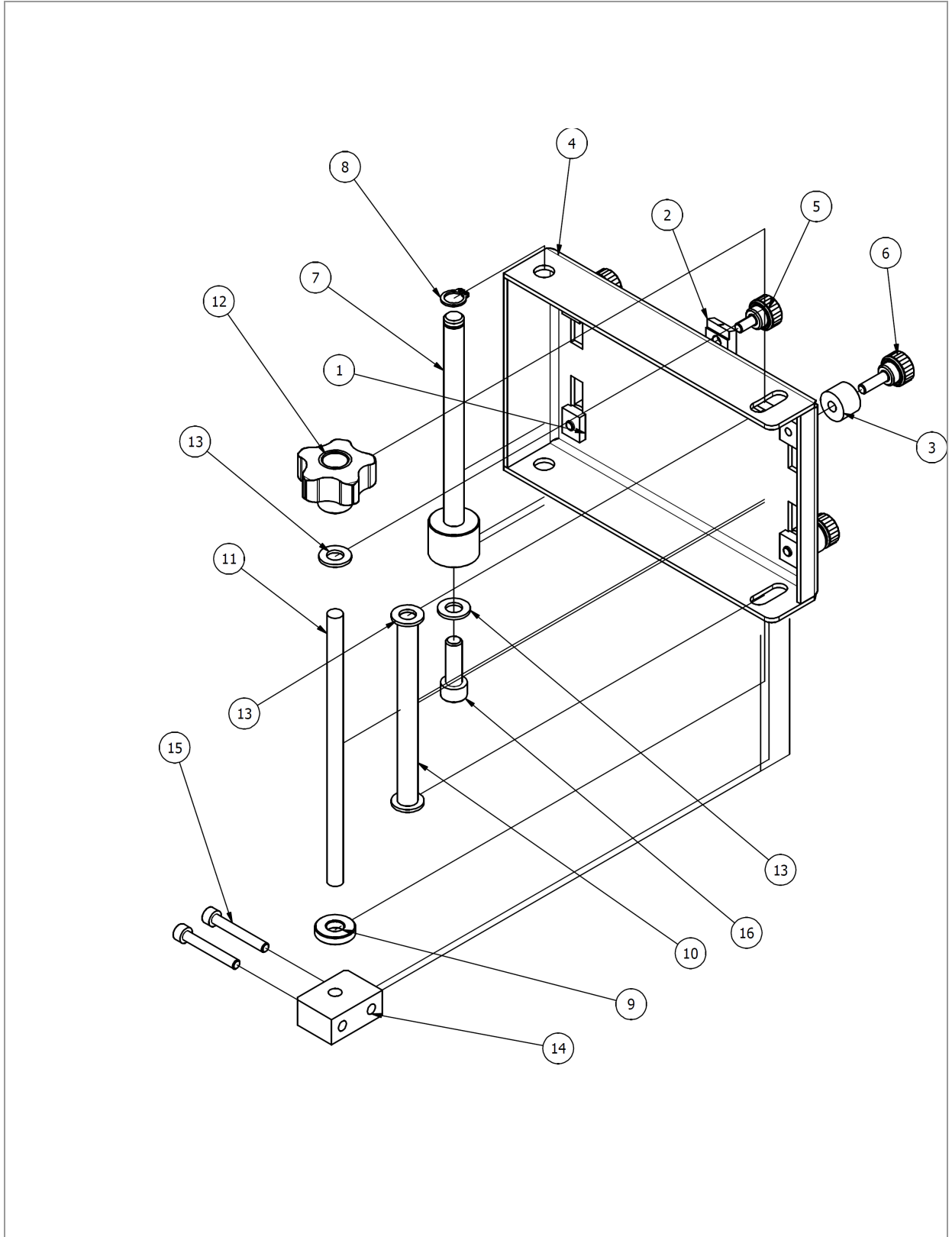




<b>WB-51TB</b>		<b>H08D005006 – Dowel height adjustment unit</b>	
<b>POS.</b>	<b>QTY</b>	<b>CODE</b>	<b>DESCRIPTION</b>
1	1	ID005062	THREADED BUSHING M12X1
2	1	ID005063	DOWEL ADJUSTMENT PLATE
3	1	ID005064	PISTON STOP ROD
4	1	ID005065	ADJUSTMENT CARRIAGE SIDE SHIM
5	4	IN010012	GALVANIZED COUNTERSUNK HEX HEAD SCREW UNI 5933-M5X20
6	2	IN010065	WASHER DIN 125 - A 6,4
7	2	IN010077	ALLEN SCREW - DIN 912 - M6 X 30
8	8	IN010217	RECESSED ALLEN-KEY CYLINDER HEAD SCREW - M 4 X 20 GALVANIZED
9	2	XN000079	CARRIAGE HGH-15-CA HIWIN
10	4	XN000096	ALLEN SCREW - DIN 912 - M4 X 16
11	1	XN000180	SIMPLE ACTION COMPACT CYLINDER AEN-25-10-I-P-A-Z



### 8.5 H08D005007 – Belt support surface unit



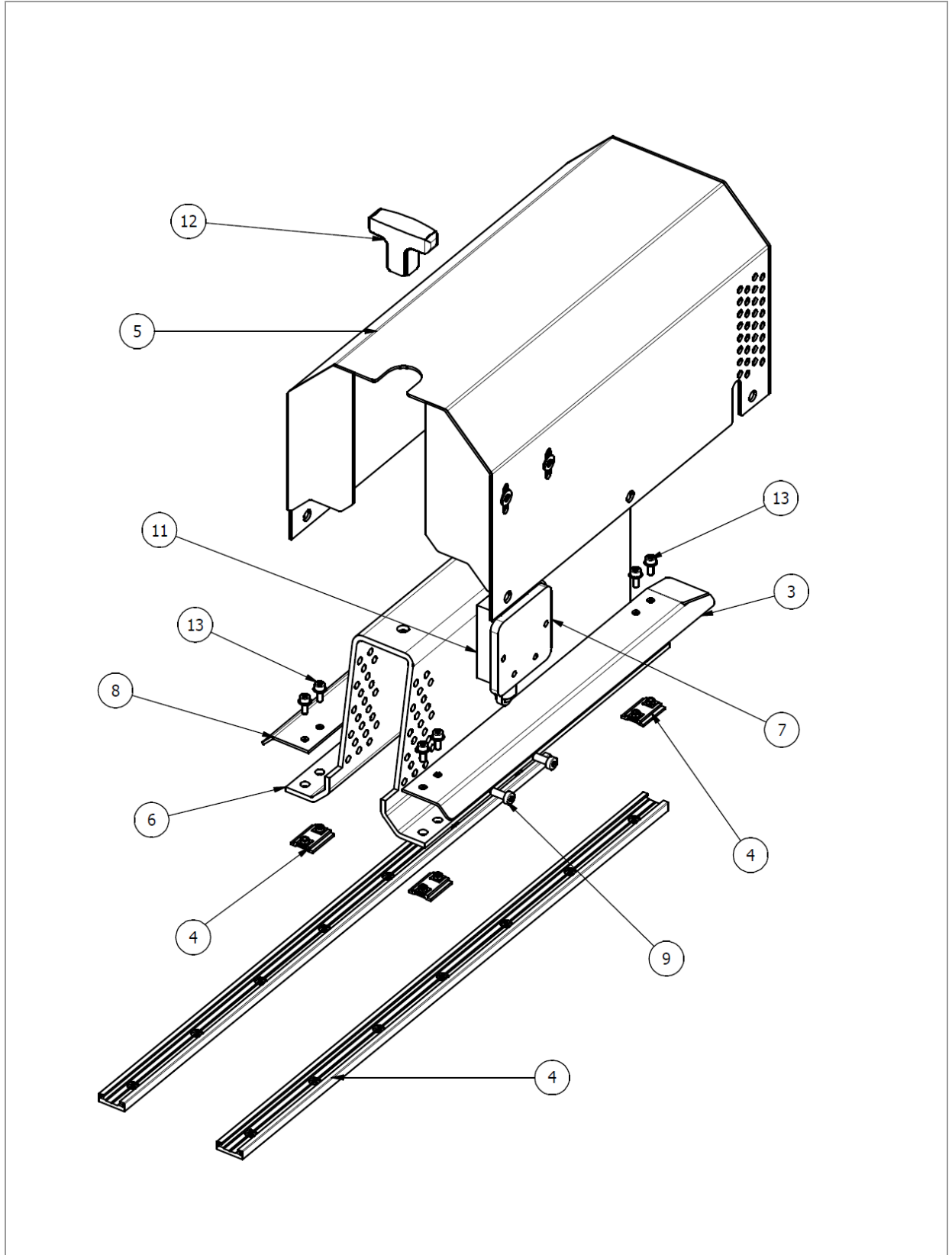


**WB-51TB**

**H08D005007 – Belt support surface unit**

POS.	QTY	CODE	DESCRIPTION
1	5	ID005039	GUIDE SLIDING DOWEL
2	1	ID005040	ORIGIN INDICATOR
3	4	ID005038	GUIDE SHIM
4	1	ID005036	BELT SLIDING SURFACE
5	1	XN000240	GROOVED KNOB - BT.16 P-M5X10 - ELESA
6	4	XN000239	GROOVED KNOB - BT.16 P-M5X16 - ELESA
7	1	ID005037	INFEED SURFACE FASTENING PIN
8	1	XN000241	ELASTIC RING FOR SHAFT EXTERIOR - E 10X1
9	1	ID005061	SHIM Ø20X4.5_IØ8.5
10	1	ID005068	INFEED SURFACE LOCK SHIM
11	1	ID005069	THREADED BAR M8
12	1	XN000255	LOBE HAND WHEEL - VCT.40 FP-M8 - ELESA
13	4	XN000105	WASHER DIN 125 - A 8,4
14	1	ID005067	INFEED SURFACE FASTENING BLOCK
15	2	IN010221	ALLEN SCREW - DIN 912 - M5 X 35 GALVANIZED
16	1	IN010016	RECESSED ALLEN-KEY CYLINDER HEAD SCREW - M8 X 25 GALVANIZED

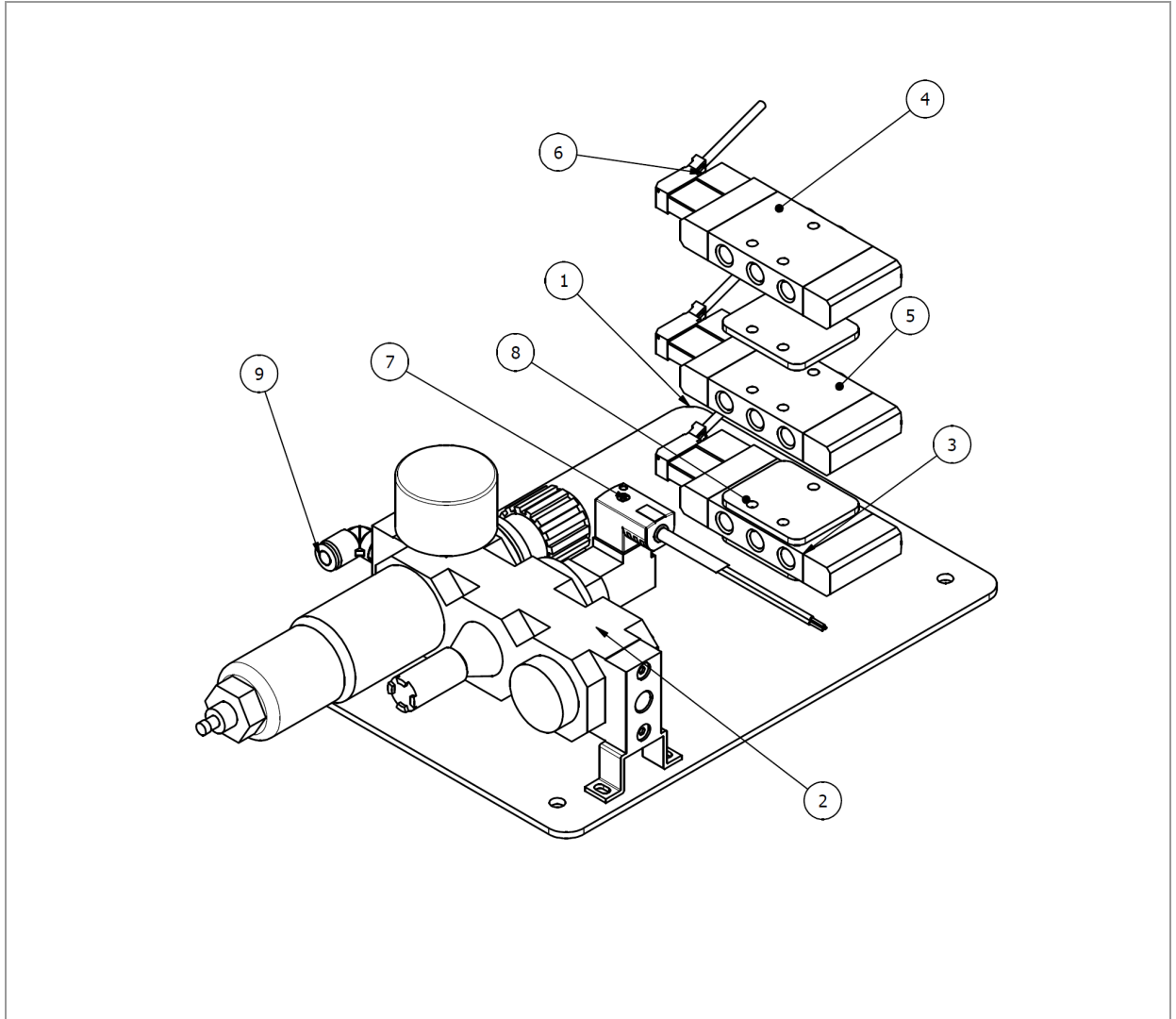
## 8.6 H08D005008 – Front guard unit





<b>WB-51TB</b>			<b>H08D005008 – Front guard unit</b>
<b>POS.</b>	<b>QTY</b>	<b>CODE</b>	<b>DESCRIPTION</b>
3	1	ID005043	RIGHT GUIDE PLATE
4	2	XN000242	LINEAR GUIDE IGUS - NK-02-17-2, 400
5	1	ID005045	FIXED FRONT GUARD
6	1	ID005046	FRONT SLIDING GUARD
7	1	ID005044	LIMIT SWITCH FASTENING PLATE
8	1	ID005047	LEFT GUIDE PLATE
9	2	DIN 7984 - M4 x 10	Cylinder head screw
11	1	XN000243	LIMIT SWITCH WITH STEEL WHEEL - XCMN2102L1 - TELEMECANIQUE
12	1	XN000244	Handle - L.652/40 B-M6-NERO - Elesà
13	8	XN000245	Recessed Allen-Key Cylinder Head Screw - M3 x 8

### 8.7 H08D005009 – Air pressure and pneumatic valve regulator panel unit

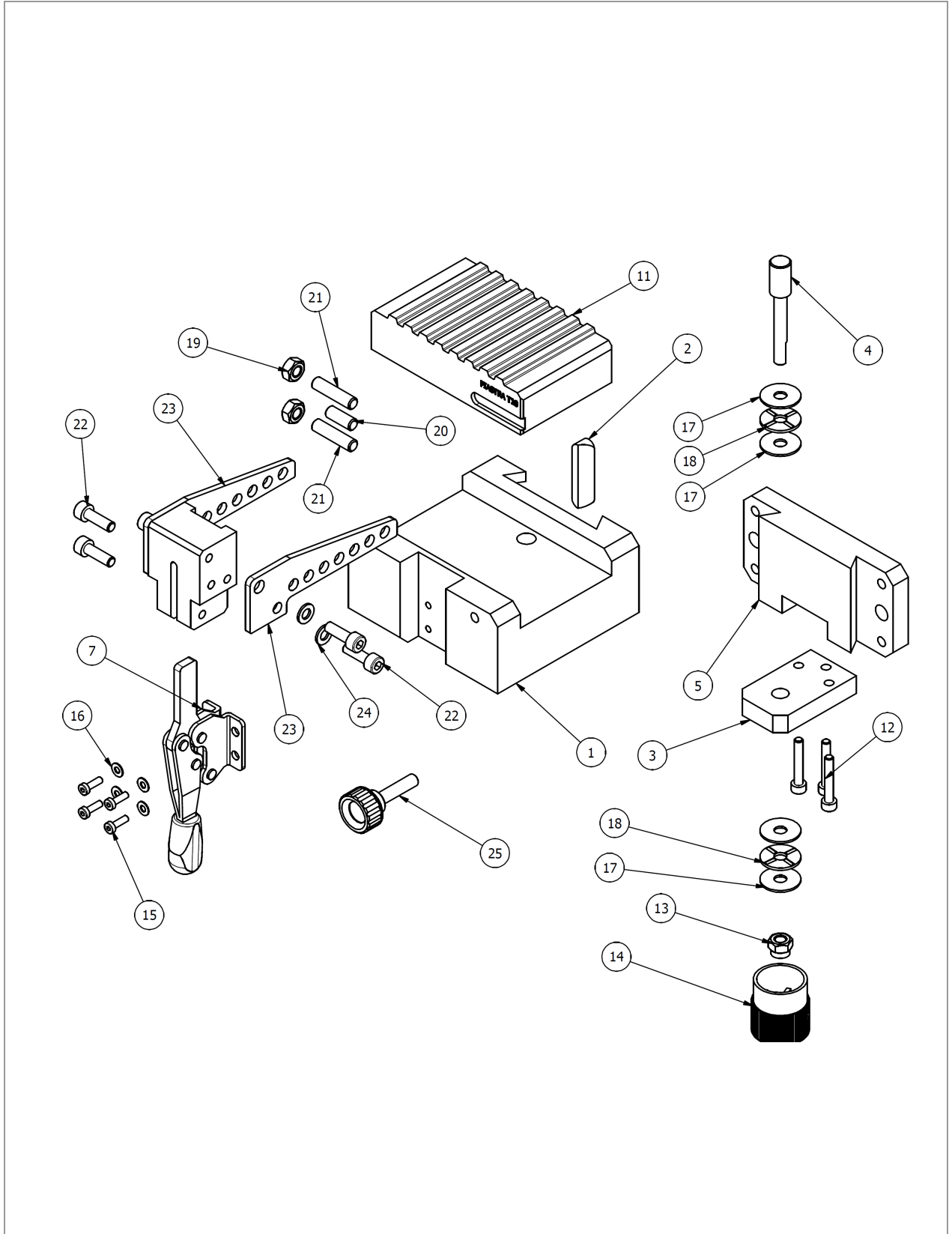


**WB-51TB**

**H08D005009 – Air pressure and pneumatic valve regulator panel unit**

POS.	QTY	CODE	DESCRIPTION
1	1	ID005049	PNEUMATIC PANEL
2	1	XN000181	AIR CONDITIONING UNIT LFR-1/8-D-MINI-KD
3	3	XN000182_1	196941_CPE14_M1BH_5L_1_86_01
4	3	XN000182_2	196941_CPE14_M1BH_5L_1_86_02
5	3	XN000182_3	196941_CPE14_M1BH_5L_1_86_03
6	3	XN000184	ELECTRIC CONNECTOR KMYZ-9-24-25-LED-PUR-B
7	1	XN000183	ELECTRIC CONNECTOR KMEB-1-24-25-LED
8	3	ID005048	VALVE SHIM
9	1	XN000146	COUPLING L 130927 QSL-B-1/8-6-20 FESTO

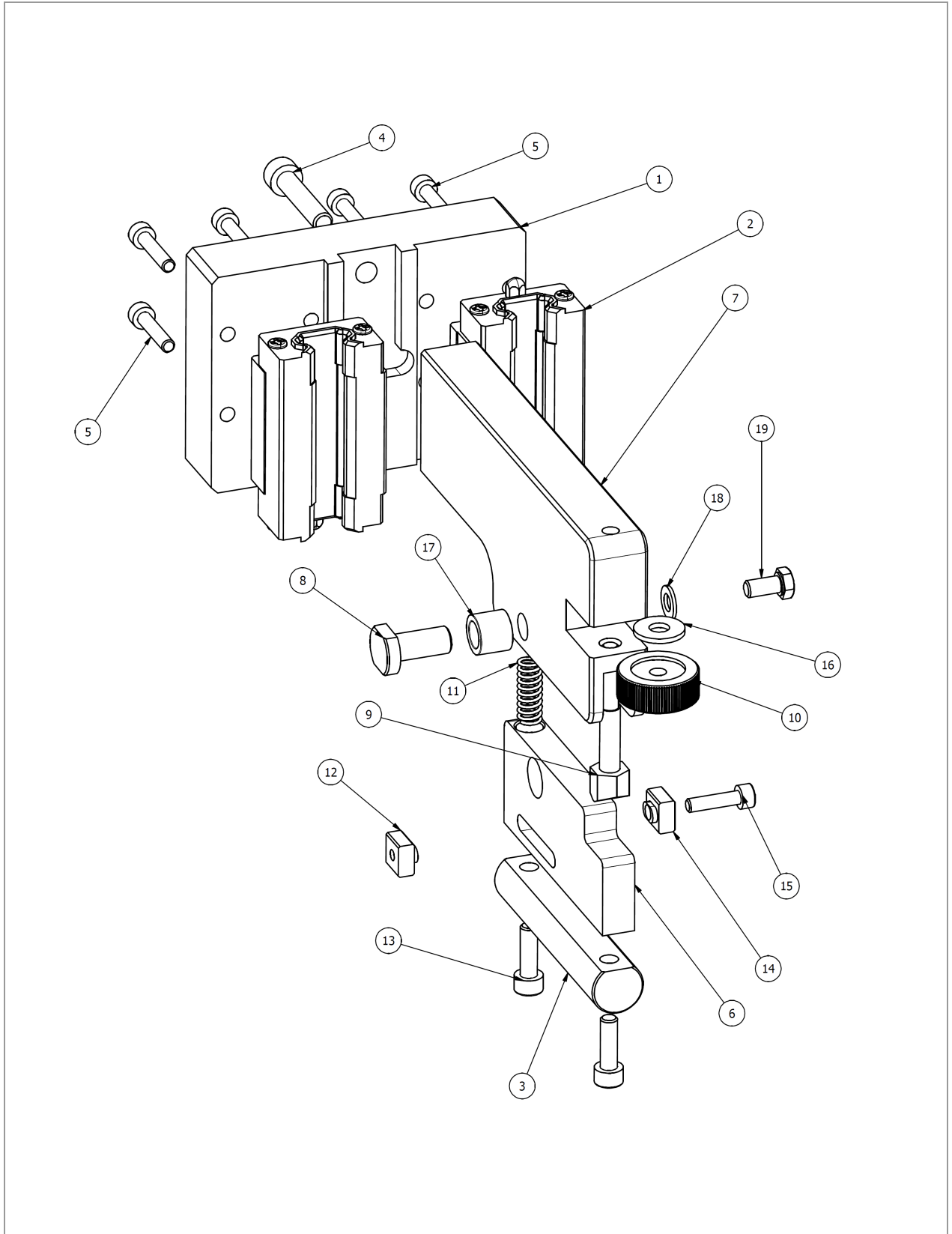
### 8.8 H08D005010 – Belt lock base unit





<b>WB-51TB</b>		<b>H08D005010 – Belt lock base unit</b>	
<b>POS.</b>	<b>QTY</b>	<b>CODE</b>	<b>DESCRIPTION</b>
1	1	ID005031	TEMPLATE CARRIAGE ANVIL
2	1	ID005055	GAP ADJUSTMENT KEY
3	1	ID005050	ANVIL HEIGHT ADJUSTMENT SYSTEM SUPPORT
4	1	ID005054	ADJUSTMENT SCREW M10X1
5	1	ID005033	TEMPLATE CARRIAGE ANVIL BASE
7	1	XN000066_1	75_o0_6_01
11	1	ID005051	CENTRING PLATE T10
12	3	IN011744	Allen screw DIN 912 - M4 x 25
13	1	XN000223	Self-locking Allen nut – M6
14	1	XN000224	REGULATION KNOB ELESA IZP.25 N-6+GS-10/20
15	4	XN000081	Allen screw DIN 7984 - M3 x 10 GALVANIZED
16	4	XN000225	WASHER - DIN 125 - A 3,2 GALVANIZED
17	4	XN000228	FIFTH WHEEL - 6X19X1 - AS0619 - INA FAG
18	2	XN000229	AXIAL ROLLER CAGE - 6X19X2 - AXK0619 - INA FAG
19	2	IN010270	UNI 5588-68 M6 GALVANIZED NUT
20	1	XN000230	Flat-tipped grub screw - M6 x 16
21	2	XN000231	Flat-tipped grub screw - M6 x 25
22	6	IN010114	Allen screw DIN 912 - M5 x 16
23	2	ID005052	BELT LOCK PLATE
24	4	IN010061	Washer DIN 125 - A 5,3
25	1	XN000248	GROOVED KNOB - BT.20 p-M6x25 - ELESA

### 8.9 H08D005011 – Dowel support unit







<b>WB-51TB</b>			<b>H08D005011 – Dowel carriage unit</b>
<b>POS.</b>	<b>QTY</b>	<b>CODE</b>	<b>DESCRIPTION</b>
1	1	ID005031	TEMPLATE CARRIAGE ANVIL
2	1	ID005055	GAP ADJUSTMENT KEY
3	1	ID005050	ANVIL HEIGHT ADJUSTMENT SYSTEM SUPPORT
4	1	ID005054	ADJUSTMENT SCREW M10X1
5	1	ID005033	TEMPLATE CARRIAGE ANVIL BASE
7	1	XN000066_1	75_o0_6_01
11	1	ID005051	CENTRING PLATE T10
12	3	IN011744	Allen screw DIN 912 - M4 x 25
13	1	XN000223	Self-locking Allen nut – M6
14	1	XN000224	REGULATION KNOB ELESA IZP.25 N-6+GS-10/20
15	4	XN000081	Allen screw DIN 7984 - M3 x 10 GALVANIZED
16	4	XN000225	Washer - DIN 125 - A 3,2 GALVANIZED
17	4	XN000228	FIFTH WHEEL - 6X19X1 - AS0619 - INA FAG
18	2	XN000229	AXIAL ROLLER CAGE - 6X19X2 - AXK0619 - INA FAG
19	2	IN010270	UNI 5588-68 M6 GALVANIZED NUT
20	1	XN000230	Flat-tipped grub screw - M6 x 16
21	2	XN000231	Flat-tipped grub screw - M6 x 25
22	6	IN010114	Allen screw DIN 912 - M5 x 16
23	2	ID005052	BELT LOCK PLATE
24	4	IN010061	Washer DIN 125 - A 5,3
25	1	XN000248	GROOVED KNOB - BT.20 p-M6x25 - ELESA



## **9 Product and product use liabilities.**

The customer is liable for correct product selection and use according to his industrial and/or commercial needs unless use was recommended by Habasis technicians, duly informed by the customer on operating needs. In this case, special instructions for use must be indicated in the order and confirmed by Habasis. The customer is always liable for product use safety.

**ALL THE TECHNICAL INDICATIONS IN THIS CATALOGUE ARE ACCURATE AND RELIABLE. THEY ALWAYS REFER TO STANDARD USE AND ARE THE RESULTS OF TESTS CONDUCTED ON EQUIPMENT IN REDUCED SCALE. THEY SHOULD BE CHECKED BY THE CUSTOMER ACCORDING TO INTENDED INDUSTRIAL USE AND ESPECIALLY FOR SPECIAL APPLICATIONS FOR WHICH ANY MANUFACTURER RECOMMENDATIONS, NOT INDICATED IN THE ORDER AND ORDER CONFIRMATION, ARE MERELY INDICATIVE, WITHOUT ANY GUARANTEE ON THEIR ABILITY TO PROVIDE THE DESIRED RESULT NOR ANY LIABILITY REGARDING END PRODUCT QUALITY OR HABASIT PRODUCT'S CORRESPONDENCE TO THE CUSTOMER'S PRODUCTION NEEDS AND FINAL RESULTS WHICH ARE NOT UNDER THE MANUFACTURER'S CONTROL. THEREFORE, IN THIS CONTEXT, HABASIT SHALL NOT BE LIABLE FOR FAULTS, DEFECTS OR DAMAGES ASSOCIATED WITH THE USE OF THEIR PRODUCTS.**