

2013

BEKAMAK

bandsawing machines

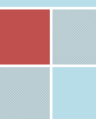
SEMI AUTOMATIC TWIN PILLAR BANDSAWING MACHINES

BMSY 360CDGH



RUNNING VOLTAGE

SERIAL NUMBER



MANUFACTURER / İMALATÇI : BEKA-MAK MAKİNA SANAYİ VE TİC. A.Ş.

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Warranty

- The firm guarantees the machine described hereby, designed in compliance with all regulations in force, in particular safety and health regulations; the machine has undergone successful testing.
- The warranty covers a period of 12 months. It doesn't cover electrical motors and tools.
- The purchaser is entitled 'replacement of faulty parts'. Shipping and packing costs are at his expense.
- The warranty doesn't cover the parts damaged by falls or careless handling of the machine, incorrect operation, non-compliance with the maintenance rules. Any tampering with the machine, especially with the safety devices automatically expires the warranty and the manufacturer will be freed from any responsibility.
- Any kind of alteration on the machine ends the warranty and the manufacturer becomes free from every kind of responsibility.
- No claim for damages shall be accepted in case the machine lays idle for a long period of time.
- Machine is designed to be run indoors. It is not recommended to run the machine outdoors.

The serial number on the machine is a 'main reference for the warranty', instructions manual, after sale service and identify the machine in case of need.

Important

Upon the delivery of the machine, the consumer must make himself sure that all the devices indicated in the paragraph of the safety manual are present and working correctly. Furthermore, he must mount in conformity with the instructions indicated those devices which are not mounted at the time of delivery to facilitate transport.

When ordering spare parts

It is necessary to state:

- Machine model
- Serial number and year of production
- Item reference number

Without serial number no spare parts will be delivered

General Information

- The machines are manufactured in compliance with the accident prevention rules in force.
- Strictly comply with the instructions contained in this manual to obtain the best performance from the machine. Strict compliance with the rules contained herewith will ensure optimum results and avoid any inconvenience caused by the non-compliance of operation and maintenance instructions.
- Closely follow the instructions given below to avoid contacting the manufacturer for the problems which can be easily solved..
- If after having strictly compliance with the given instructions, the purchaser still needs the help of our technical assistance service, he must supply all the technical indications necessary to determine the type of problem and/or the parts which are not functioning correctly. This will enable our technical assistance service to intervene quickly and efficiently on the machine.

Copies of the instruction manual may be requested upon indication of the machine serial number.

General Safety Notes

All installation work including the electrical connection must only be carried out by qualified personnel.

The machine must only be operated by a technically trained and experienced operative who is also instructed in 'safety at work ' procedures.

Any adjustments, cleaning, repairs or changing of the saw blade must under no circumstances be performed unless the machine is fully isolated from the electrical power supply. Ensure the emergency stop button on the control binnacle is pressed and the power supplies at the mains are disconnected."

The band saw must be regularly inspected and maintained in good serviceable condition. Eye protection, ear protection, gloves and protective clothing must be worn when any of the above procedures are being carried out, as well as when cutting fluid is prepared, introduced or displaced from the band saw machine (the relevant environmental regulations must be observed in case of the use and disposal of cutting fluid etc.)

The band saw must be installed on ground. Observe the permissible floor load. Than the band saw machine has been properly bolt to ground securely.

Allow sufficient working space around the band saw of at least 1 meter. Installations of stock roller conveyors require additional space and possibly a lifting mechanism for heavy work pieces.

Always ensure that the working area around the band saw is well lit.

Safety Instructions

- Be sure that electrical connection is made carefully. To avoid unwanted situations like electrical shock, protect the main supply cable with a holster.
- Before running the machine, be sure that all of the protections are mounted properly and all the covers are closed.
- Avoid from smoke and moisture.
- Please use the parts and equipments which are recommended. Usage of unsuitable parts and materials which are bigger than the capacity of the machine can cause unwanted situations.
- Check the machine and inform the defects everyday.
- Don't leave any material after chancing the band.
- Do not hold the material while the machine is cutting. Always tighten the material by using essential parts.
- Please pay attention to choose the area of the machine which doesn't include anything that creates difficulties to control the machine
- Please be sure that the teeth of the band are looking to correct direction.
- Don't leave the band on the ground or any place that is dangerous for other people.
- Be careful when using the machine and keep the working area clean (clean the saw dusts and oil traces)
- Pay attention to security instructions when using the machine.
- Don't wear loose cloths when using the machine.
- Regardless use the protective gloves when using the machine.
- Don't get close too much to the machine when running.
- Before carrying out any cleaning or maintenance procedure, disconnect the machine from main supply.
- In some conditions, noise level can be about 85 db. Band choice and cutting speed is important factor for noise level.
- Illumination is an important factor for security.
- Ratio of coolant liquid is important for obtaining optimum lubrication.
- Never use the machine if you notice any fault of the machine or absence of any part of the machine.
- Control the emergency button at least once a week and be sure that it is working properly.

RELATED DIRECTIVES AND STANDARDS / İLGİLİ YÖNETMELİK VE STANDARTLAR

DIRECTIVES/DIREKTİFLER

MACHINERY DIRECTIVE-/MAKİNE DİREKTİFİ **2006/42/EC**

LOW VOLTAGE DIRECTIVE/DÜŞÜK VOLTAJ DİREKTİFİ **2006/95/EC**

ELECTROMAGNETIC COMPATIBILITY DIRECTIVE/ELEKTRO MANYETİK UYUMLULUK DİREKTİFİ- **2004/108/EC**

STANDARDS/STANDARTLAR

EN ISO 13857:2008; SAFETY OF MACHINERY-SAFETY DISTANCES TO PREVENT DANGER ZONES BEING REACHED BY UPPER LOWER LIMBS/ KOL VE BACAĞLARIN ULAŞABİLECEĞİ BÖLGELERDE TEHLİKENİN ÖNLENMESİ İÇİN GÜVENLİK MESAFELERİ

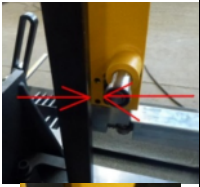
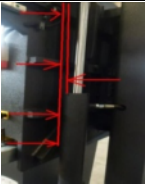
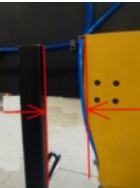
EN ISO 4413:2010: HYDRAULIC FLUID POWER – GENERAL RULES AND SAFETY REQUIREMENTS FOR SYSTEMS AND THEIR COMPONENTS / HİDROLİK AKIŞKAN GÜÇ – SİSTEMLER VE BİLEŞENLERİ İÇİN GÜVENLİK KURALLARI VE GENEL KURALLAR.

EN ISO 13849-1:2008/AC:2009; SAFETY OF MACHINERY - SAFETY-RELATED PARTS OF CONTROL SYSTEMS – PART 1: GENERAL PRINCIPLES FOR DESIGN / MAKİNELERDE GÜVENLİK- KUMANDA SİSTEMLERİNİN GÜVENLİKLE İLGİLİ KISIMLARI- BÖLÜM 1: TASARIM İÇİN GENEL PRENSİPLER

EN 13898:2003+A1:2009/AC:2010: MACHINE TOOLS - SAFETY - SAWING MACHINES FOR COLD METAL /TAKIM TEZGÂHLARI – GÜVENLİK - METALLERİ SOĞUK İŞLEME İÇİN TESTERE TEZGAHLARI

EN ISO 12100:2010; SAFETY OF MACHINERY - GENERAL PRINCIPLES FOR DESIGN – RISK ASSESSMENT AND RISK REDUCTION/ MAKİNALARDA GÜVENLİK – TASARIM İÇİN GENEL PRENSİPLER- RISK DEĞERLENDİRİLMESİ VE RISK AZALTILMASI.

EN 60204-1:2006/A1:2009; SAFETY OF MACHINERY - ELECTRICAL EQUIPMENT OF MACHINES - PART 1: GENERAL REQUIREMENTS / MAKİNELERİN EMNİYETİ – MAKİNELERİN ELEKTRİK DONANIMI – BÖLÜM 1: GENEL GEREKLER

Residual Risks		
Do Not Touch Below Mentioned Moving Or Movable Parts Of The Machine While It Runs.		
	Mechanical Dangers	Residual Risks
	There might be the risk of hand/arm incerceration between wheel cover and control panel.	Necessary warnings are mentioned in the manual. There are warning signs on the machine.
	There might be the risk of hand incerceration between piston hose and piston when the head is down.	There is necessary and enough warnings in the manual. There is warning sign at first part. There is warning sign on the cover.
	There might be the risk of hand/arm incerceration between movable vice profile and arm withdraw point.	There is necessary and enough warnings in the manual. Warning sign has been put at related section.
	There might be the risk of hand/arm incerceration between arm and ear when movable arm is at last point	There is necessary and enough warnings in the manual. Warning sign has been put at related section.
	There might be the risk of hand/arm incerceration between hydraulic lifting piston pipe and lug support profile, movable arm piston pipe and piston upper connection block during the up and down movement of bow .	There is necessary and enough warnings in the manual. Warning sign has been put at related section.
	There might be snipping risk between movable vice profile and movable arm	There is necessary and enough warnings in the manual. Warning sign has been put at related section.

Warning

This chapter outlining the safety devices and norms was drawn up bearing in mind the normal use of the machine as stated in the chapter on the operation of the machine and the adequate preparation of the operators as regards the specific risks linked to the operation of the machine.

If the machine isn't used according to instruction given in the 'purpose of the machine' chapter in this manual, the manufacturer isn't responsible for any damage caused to people and things.

Furthermore, the manufacturer isn't responsible for any damage to people and things and things resulting from the non-compliance with the following warnings.

- A) Adopt all the necessary precautions during loading, calibration, part replacement, cleaning, and repair or maintenance operations to prevent someone else from turning the machine on.
- B) Do not temper with the safety devices and guards on the machine.
- C) Do not remove any of the safety devices and guards on the machine.

Always make sure that safety devices and guards are remounted after their temporary removal for technical reasons ordered by the boss

Connection To The Electrical System

Control panel is mounted on the electric panel. Machine is connected to the main supply in the electrical panel. **R, s and t shows the phases** , **n is** neuter and **pe is grounding**. Connection will be from the 13(l1) klemens which is atright klemens group.

Check the voltage which is mentioned at the first page of the manuel before setting the electrical connection of the machine.

If the cable phase line is correct phase control led lightens in that way it is prevented to motors move on wrong ways. Be sure that the out-put voltage at the power supply is 22 ~ 28 vdc.

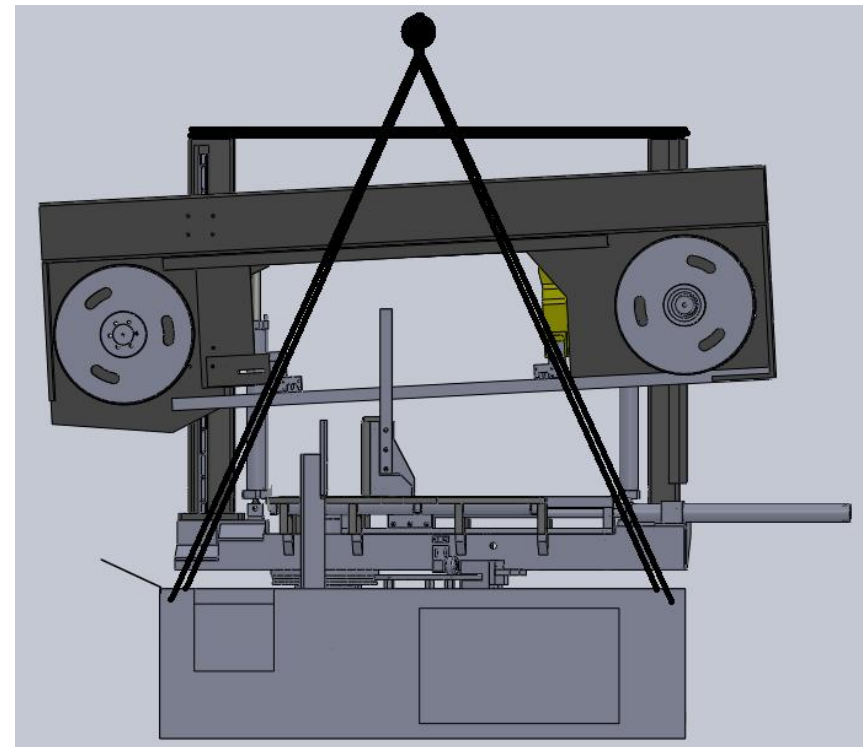
The machine is protected against short circuit with interrupters and against high voltage with thermal relays. Grounding and neutralizing have to be done to protect the machine .

Technical Data

TECNICAL DATA/TECHNISCE DATEN			BMSY 360CDGH
Cutting Capacity Schnittbereich 0°	Round/Rund	mm	360
	Flat/Flach	mm	640 x 360
	Square/Vierkant	mm	360
Cutting Capacity Schnittbereich +30°	Round/Rund	mm	360
	Flat/Flach	mm	510 x 360
	Square/Vierkant	mm	360
Cutting Capacity Schnittbereich +45°	Round/Rund	mm	360
	Flat/Flach	mm	390 x 360
	Square/Vierkant	mm	360
Cutting Capacity Schnittbereich +60°	Round/Rund	mm	310
	Flat/Flach	mm	250 x 360
	Square/Vierkant	mm	270
Cutting Capacity Schnittbereich -30°	Round/Rund	mm	360
	Flat/Flach	mm	510 x 360
	Square/Vierkant	mm	360
Cutting Capacity Schnittbereich -45°	Round/Rund	mm	360
	Flat/Flach	mm	390 x 360
	Square/Vierkant	mm	360
Main Drive Motor/Hauptmotor		kW	3
Hydraulic Motor/Hydraulikmotor		kW	1,1
Coolant Motor/Kühlmittelpumpe		kW	0,12
Chip Conveyor Motor/Späneförderer		kW	0,25
Cutting Speeds/Schnittgeschwindigkeit		m/min	20 - 100
Band Dimensions/Sagebandabmessung		mm	5000 x 34 x 1,1
Working Height/Arbeitshöhe		mm	800
Weight/Gewicht		Kg	1630
Dimensions/Masse	Length/Länge	mm	3000
	Width/Breite	mm	1200
	Height/Höhe	mm	1910

Transportation And Carrying Of Machine Important

Carry well-balanced with a strong rope which will be hooked to carrying rings



Statement of Noise

Conditions for measurement

Tested Machine: BMSO 360CDGB Blade size: 5000 x 34 x 1,1 m

Material in use: ø250 Solid Material

A Nominal sound pressure level in warehouse

Lpfa, 1m = 77 db(A) Coefficient of uncertainty k: 4 db (testing cap 11202)

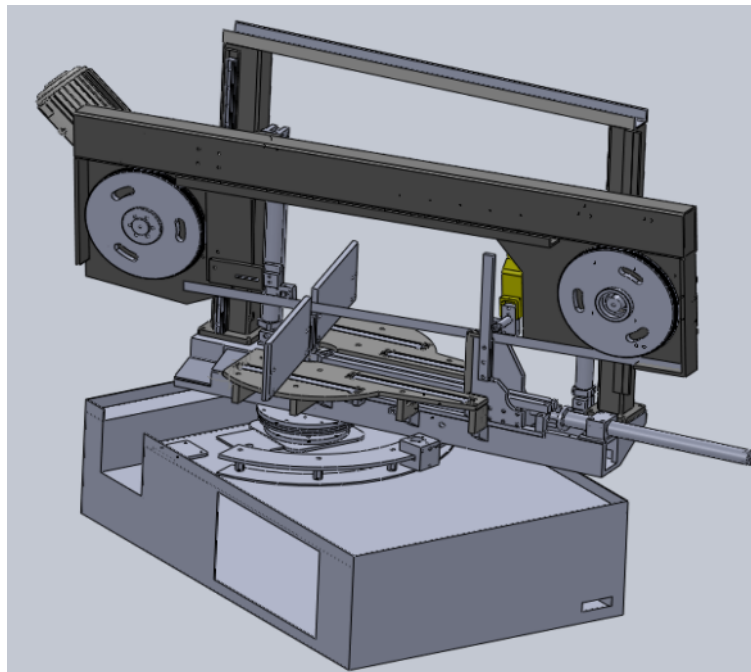
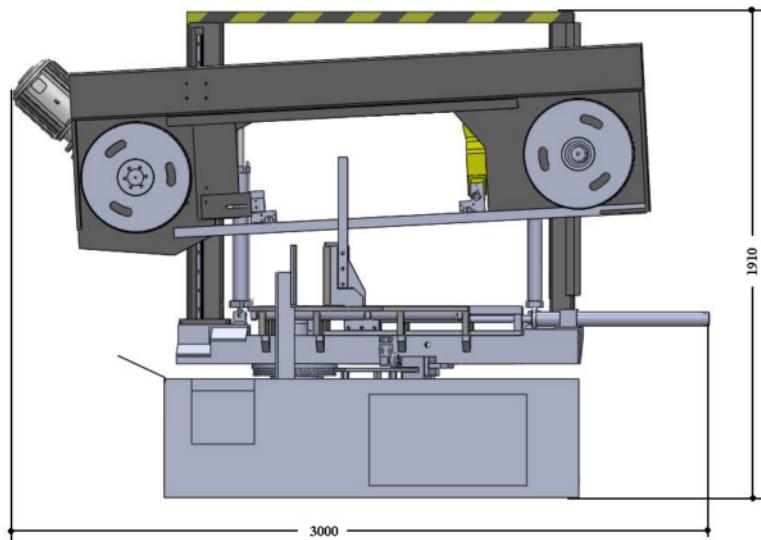
A nominal sound power level

Power level Lwa = 69,7 db(a) (measured value)

Coefficient of uncertainty k: 4 db (testing cap 11202)

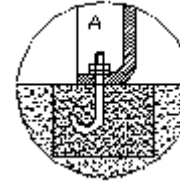
Values for noise are level of issue and it doesn't state it's of value in a given level. Even there is a connection between Issue and exposure levels, this can not be used safely to the side if needed. Factors that effect the real level of exposure that effects work depending on features of warehouses (other noise, other works nearby, and quantity of machines) including exposure time

Allowed level of exposure may change from country to another. Beside these, this information is for the products. consider the changes and risks.



Fixing

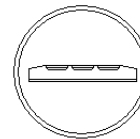
Area that machine will be fixed should be flat and bowless. Machine base should be placed properly , linear and diagonal way . Get the machine to balance with 4pcs m12 screws that are on the legs, you should fix it with $\varnothing 13$ steel pins.

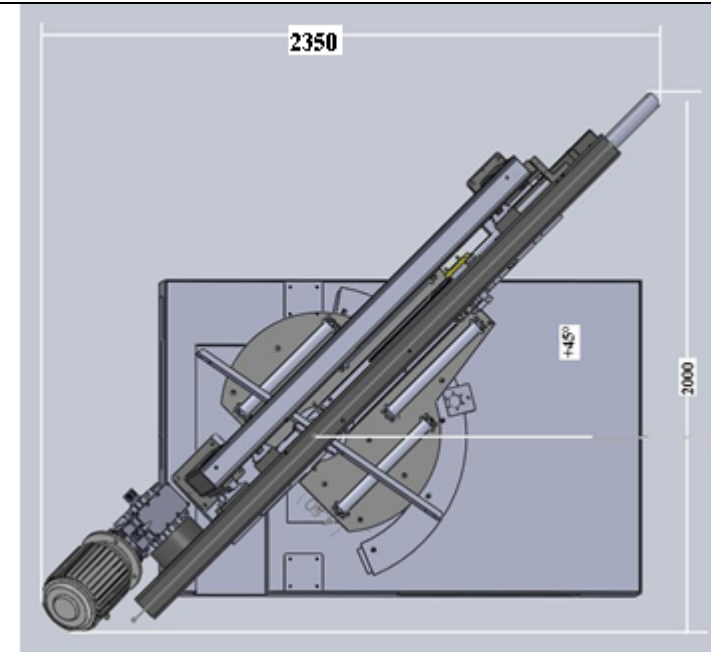
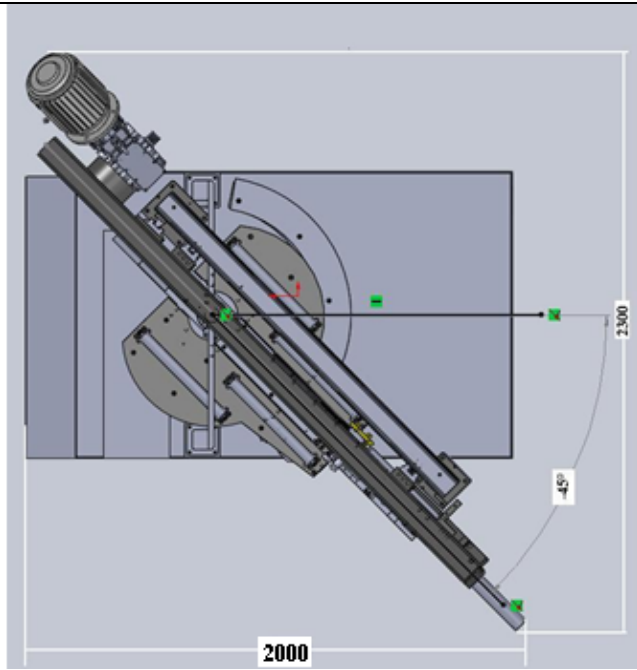
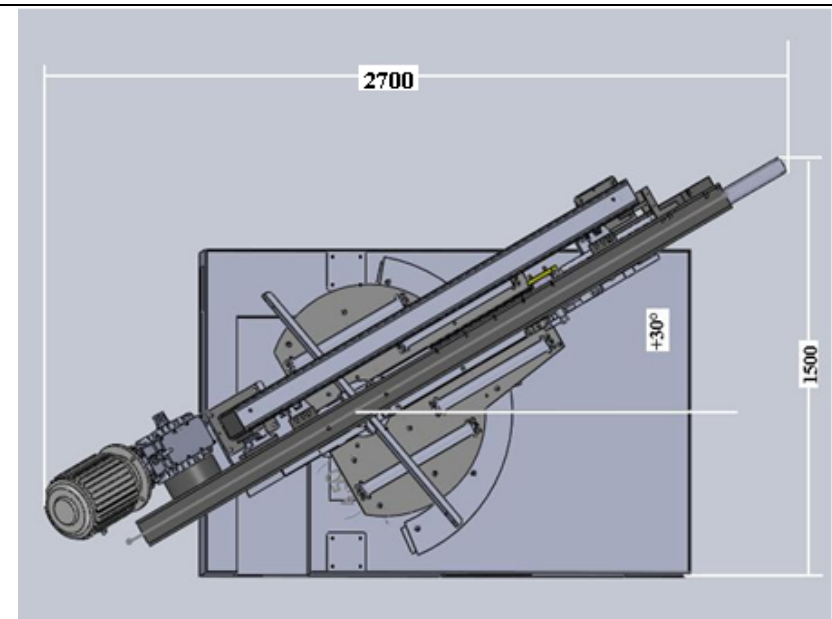
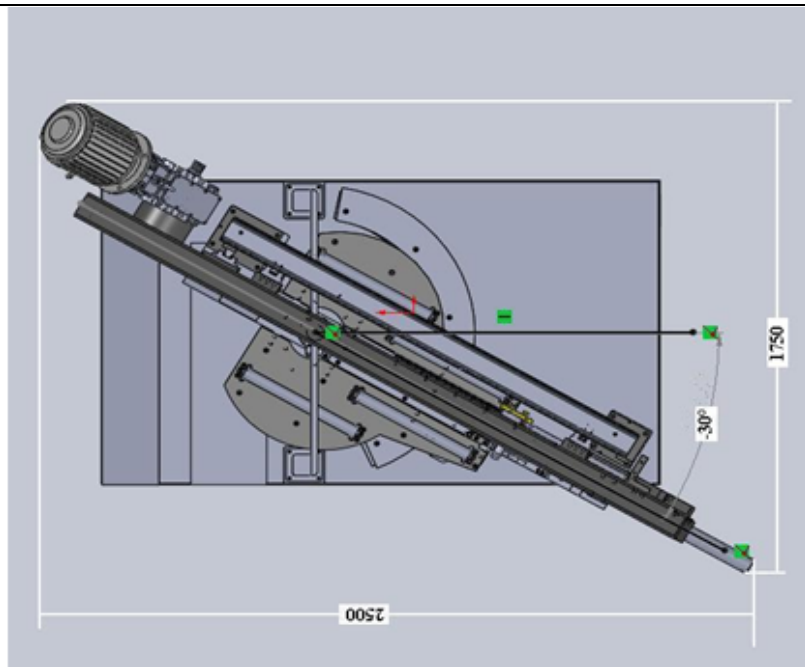


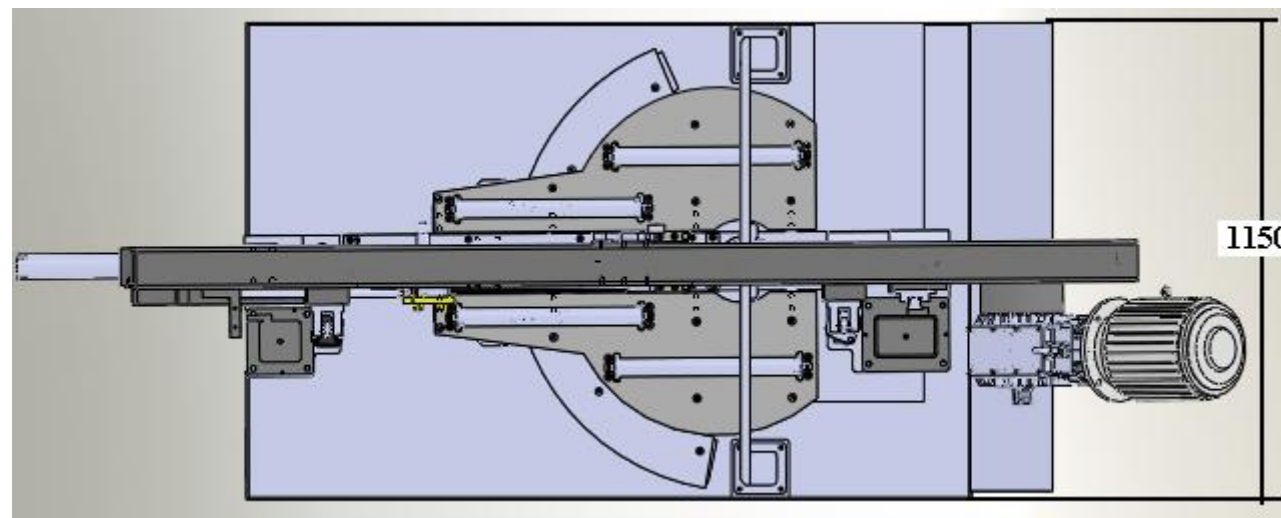
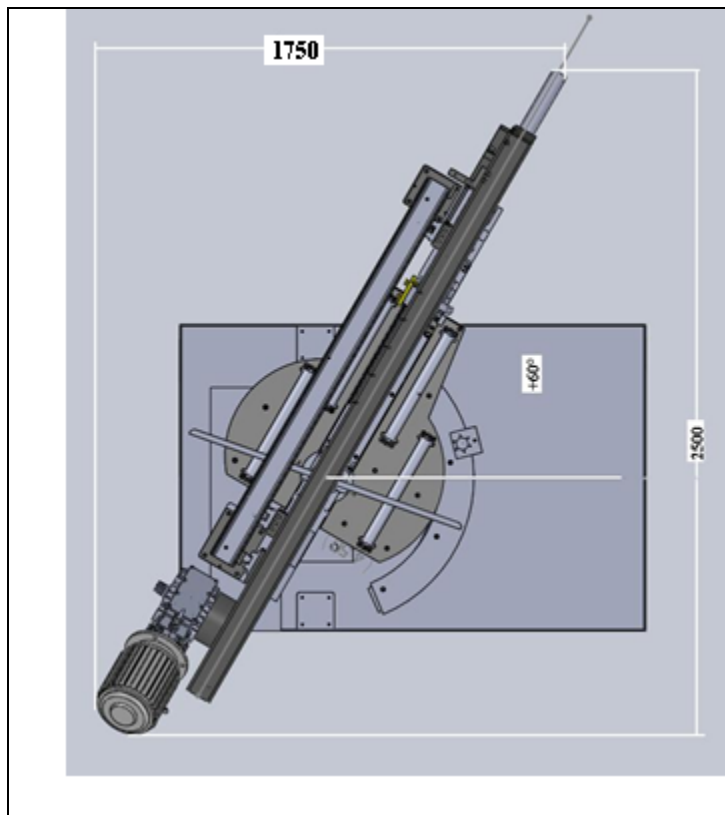
Balancing The Machine

balancing the machine can be achieved by using the height adjustable screws. The machine must be balanced on both directions.

Important : balance of the machine is one of the most important factors for the correct working of the machine.







Operating instruction



Display for height adjustment: displays height of bow set for cutting process. If you enter a value bow goes up or down to that height. If you adjust the height manually you can press "total" button to set the height



Emergency stop button: prevents accidents at unexpected situations.



Start button : start the cutting



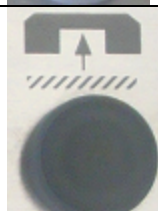
Stop button : stops the cutting



Signal button : show sif there is a problem at the machine.



Coolant button : it is used tol et the coolant liquid flow.



Bow up button: moves the bow up manually and stops cutting.



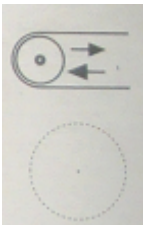
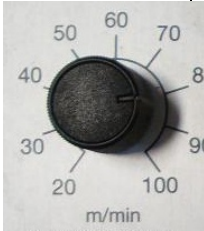
Bow down button: moves down the bow manually.



Start (ready) button: orgises power circuit of the m



Vice pres buton: it is used to press the matherial

	Blade tightening button: tighten the blade.		Mitre lock selector: locks or unlocks the bow for mitre adjustment
	Top clamping selector(optional): this option is for tightening the material vertically for bundle cutting		Angle display: displays the position of bow in degrees between 0° and +60°
	Down feed speed adjustment: adjust speed according to hardness of material to be cut. When blade becomes blunt choose a lower speed to have a better cut.		Speed control potmeter : controls the inverter to adjust the turning speed of blade

The indicator of manometer must be in the green area (area ii). If the indicator is in one of the red area, this means that the tension of the blade is not in the acceptable level and it may cause unwanted results.

Area I : this shows that the tension of the blade is less than it must be. Adjust the blade tension.

Area II : this shows that the tension of the blade is normal

Area III : this shows that the tension of the blade is more than it must be. This may break the blade. Reduce the tension.

Mecanical tensioning:min:320 bar max.320 bar

Hydraulic main pressure:60 bar

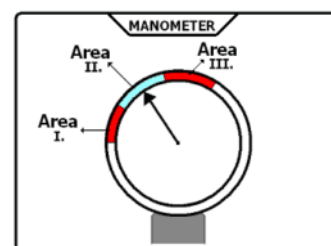
Vice pressure:20 bar

Locking pressure:60 bar

Hydraulic tensioning:50 bar

Lifting pressure:60 bar

Bow down pressure:60 bar



Manual Cutting Operation

- 1-Add coolant to the tank
- 2-Check level of hydraulic oil(ISO 46)
- 3-Switch on main switch
- 4-See energy on light on the control panel
- 5-If there is no light change places of input phases
- 6-Press machine ready button



- 7- Push bow up till it's enough for material to be cut
- 8-Open the vice by turning the related button.
- 9-Place the material. Adjust the length to be cut by lean shaft and close vice jaws and fix the material.
- 10-The saw will not start up unless the material is not clamped with appropriate pressure.
- 11-Start the saw by pressing start button.
- 12-Determine the appropriate saw cutting speed and turn on the coolant according to your need.
- 13-Due to the material detection sensors on the machine approached to the material fastly and then passes to the speed which is adjusted by the valve.
- 14-When the machine runs to the cutting speed , the coolant starts as well.
- 15-Cutting speed of the machine should be adjusted according to the material and chip after cutting process. For example; if the chip is burnt after the cutting that means the speed is too fast. That is not proper for the machine and the blade.
- 16-After cutting process the blade will rise up and stop automatically.
- 17-The same should be done for the second cutting.
- 18-During the time there might pile up chip in front of the sensors , this might cause working problem to the machine; to avoid that , the wheel covers should be opened regularly and chip should be cleaned.

Sensor Parts

(1) Blade broken pressure switch: this switch stops the main motor when the blade is broken and provides protection of the operator and the machine from the damages that a broken blade can cause.

(2) Lower limit switch: this limit switch stop the main motor and starts the bow's upwards movement.

(3) Laser: It is used as a marker for indicating first touching point of the blade to material.

(4) Maximum switch: this switch sets the top point that bandsaw reaches.

(5) Digital Angle Encoder: It is using for reading the angle of bow.

(8) Fotocell: this switch starts the main motor when the blade approaches to the material about 30 mm after the bow begins going down when start button is pressed. And in manual use, this switch stops the movement before the bow crashes to material when the bow is going down.

(9) Protection cover switches: this switch stops the machine if any cover is open.

1- Blade Broken Pressure Switch

2- Lower Limit Switch

3- Lazer

4- Maximum Switch

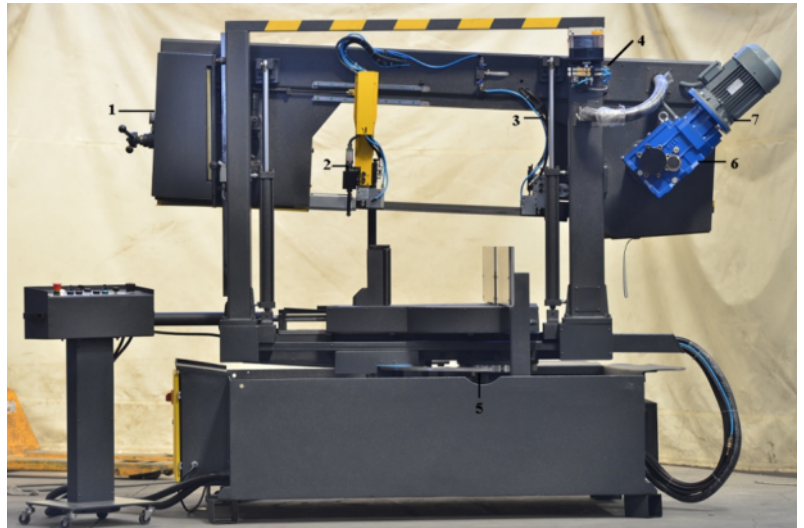
5- Dijital Encoder

6- Wheel Reductor

7- Wheel Motor

8- Protection Cover Switches

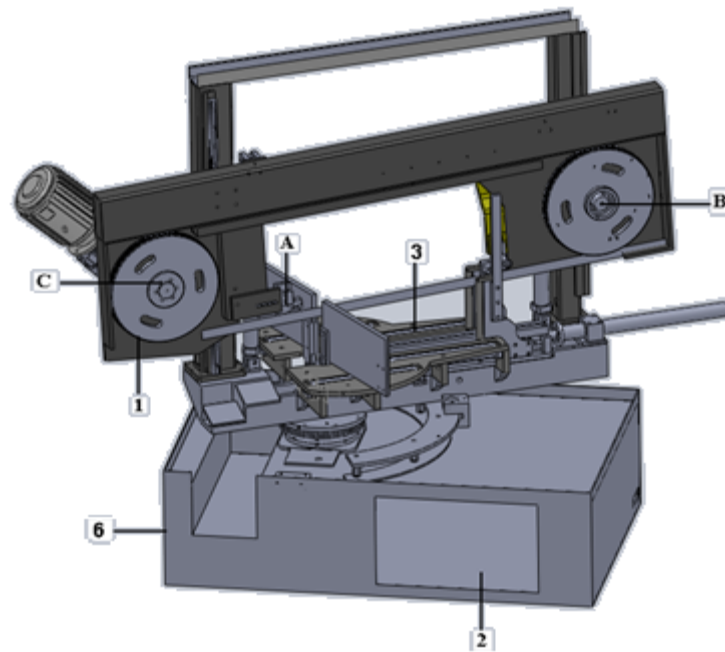
9- Fotocell



Instructions For Maintenance

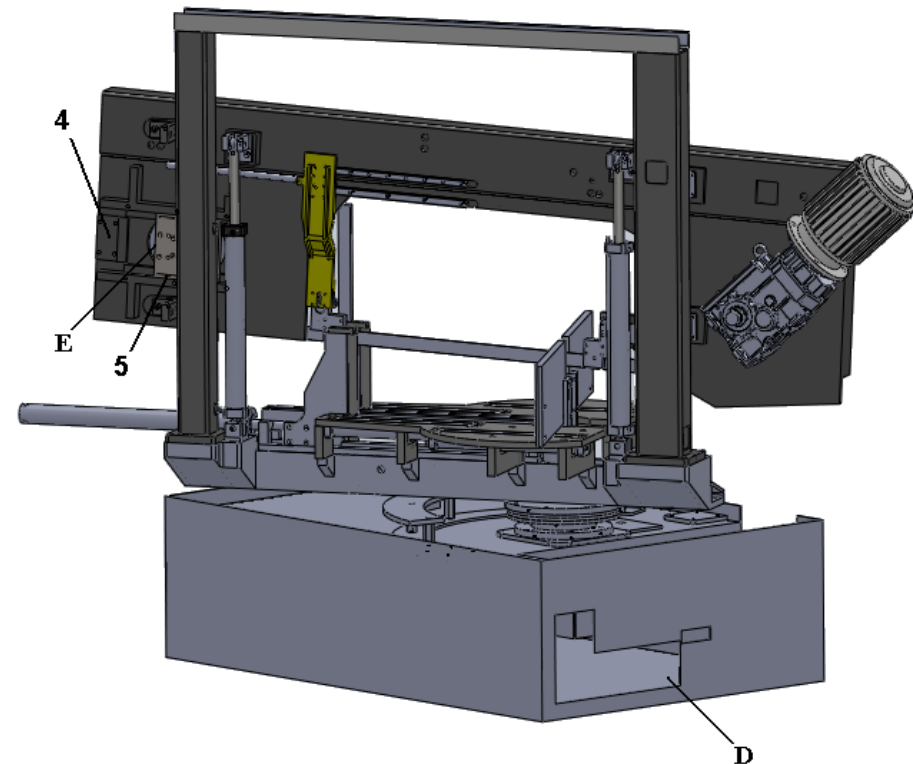
Daily maintenance

- 1-Remove the chips on wheel
 - 2-Clean the hydraulic drawer
 - 3-Remove the chips at shaft and flat
 - 4.Manometer should be between bar.
 - 5-Clean the tensioning slide flats.
 6. Clean the chips in the boron oil tank
- Pump air to remove the dirt in hoses



Monthly maintenance

- A-Check the chip brush.
- B-Fill grease oil from the hole on the tentioning shaft.
- C- Check the tightness of wheel bolts.
- D.Control the oil level in hydraulic tank
- E. Fill grease oil from the hole on the tensioning slide
- F-Check the oil level on reductor from display incase of decreasing add gear oil (number 90)



Pouring Out The Hydraulic Oil

- ✓ Lower down until it receives the cutting head.
- ✓ Remove hydraulic hose union at head lifting
- ✓ Put the removed hydraulic end of the hose into a container.
- ✓ Empty the oil by pressing head lifting button at control panel.

After emptying the oil, fix the hydraulic hose union to the same place.

Changing The Hydraulic Oil

Refilling the hydraulic oil

The hydraulic oil filling

- ✓ Remote the bolts of hydraulic drawer, then pull it out.
- ✓ Open the store cover.
- ✓ Pour 46 numbered iso hydraulic oil into tank. (8lt capacity.)
- ✓ Close the tank cover and move the drawer into the body

Fasten the screws to the body again with the help of hydraulic drawer.

Filling Of Coolant

Consisting of a mixture of liquid and water coolant liquid should be used for steel cutting. Coolant should not be used for cutting casting. Specific periods of time (at least once a month) , coolant should be drained and clean chips. If amount of coolant is not enough, add to the tank. (4 liters of tank capacity. Collant mixing ratio 1/10)

Setting New Blade

- First of all both guard flaps and the guards which are on the guide arms have to be open upwards.
- Loosen the blade by the hand level so far that the blade can be easily taken off around the pulleys
- The same way but vic averse, fit and tighten the new blade. There is also possibility to tighten the blade by torque meter.
- Always pay attention to the teeth of the blade's direction is correct. If not correct it.

Cutting Speeds

The machine has two pre-selected cutting speeds of 20 and 100 m/sec. Cutting speeds has to be selected according to the grade and dimensions of the material. If any vibration and/or noise raises from the blade, change the speed.

- All the details about the cutting of various materials and dimensions are given below

CUTTING RECOMENDATIONS

NOTE:THE CUTTING SPEEDS GIVEN BELOW ARE GUIDELINES ONLY

MATERIAL	MATERIAL DESIGNATION DIN	MATERIAL NO	CUTTING SPEED		COOLANT		
			SPECIAL LG-SUPER	BI-METAL	EMULSION	CUTTING OIL	
						YES	NO
STRUCTUAL STEEL	ST 35 – ST 42	1.0308-	40 - 55	60 - 80	1:10	X	
	ST 350 – ST 70	1.0052-	30 - 45	50 - 70	1:20	X	
HARDENING STEEL	C 10 - C 16	1.0301-	45 - 65	60 - 90	1:10	X	
	14 N1CR 14	1.5752	30 - 40	40 - 50	1:10	X	
	21 N1CR MO 2	1.6523	30 - 45	45 - 55	1:10	X	
	16 MRCR 5	1.7131	30 - 45	50 - 65	1:10	X	
NITRICTED STEEL	34 CRAL 6	1.8504	-----	20 - 35	1:20		X
	34 CR AL NI 7	1.8550	-----	20 - 35	1:20		X
FREE CUTTING STEEL	9 S 20	1.0711	45 - 65	70 - 120	1:10	X	
HEAT TREATABLE STEEL	C 35 C 45	1.0501-	35 - 55	55 - 75	1:20		X
	41 CR 4	1.7035	35 - 35	40 - 60	1:20		X
	40 MN 4	1.5038	35 - 45	50 - 65	1:20		X
	42 CRMO 4	1.7225	30 - 40	35 - 50	1:20		X
	36 NI CR 6	1.5710	30 - 40	50 - 60	1:20		X
	24 NI CR 14	1.5754	25 - 35	40 - 60	1:20		X
BALL BEARING STEEL	100 - CR 6	1.3505	25 - 35	50 - 65	1:30		X
	105 - CR 4	1.3503	25 - 35	50 - 65	1:30		X
	100 - CRMO 6	1.3520	20 - 30	40 - 50	1:30		X
SPRING STEEL	65 SI 7	1.0906	30 - 40	40 - 60	1:30		X
	50 CRV 4	1.8159	30 - 40	40 - 60	1:30		X
UNALLOYED TOOL STEEL	C 80 W 1	1.1525	25 - 35	50 - 60	1:30		X
	C 125 W 1	1.1560	20 - 30	20 - 35	1:30		X
	C 105 W 2	1.1645	25 - 35	40 - 50	1:30		X
ALLOYED TOOL STEEL	105 CR 5	1.2060	30 - 40	50 - 60	1:30		X
	X 210 CR 12	1.2080	-----	20 - 35	-----		X
	X 40 CR MO V 51	1.2344	20 - 30	30 - 40	1:30		X
	X 210 CR W 12	1.2436	-----	20 - 30	-----		X
	X 165 CR MP V 12	1.2601	-----	20 - 35	1:30		X
	56 N1CRMV 7	1.2714	25 - 30	20 - 40	1:30		X
	100 CRMO 5	1.2303	20 - 30	35 - 45	1:30		X
	X 32 CRMOV 33	1.2365	20 - 30	30 - 45	1:20	X	
	S 5-6-2	1.3343	-----	25 - 40	1:30		X
HIGH SPEED STEEL	S 5-6-2-5	1.3243	-----	25 - 40	1:30		X
	S 18-0-1	1.3355	-----	25 - 40	1:30		X
	S 18-1-2-10	1.3265	-----	25 - 40	1:30		X
	X 45 CRSL 93	1.4718	-----	30 - 40	1:20	X	
VALVE STEEL	X 45 CRNIW 189	1.4873	-----	30 - 40	1:20	X	
	CRNI 2520	1.4843	-----	25 - 40	1:10	X	
HIGH TEMPERATURE STEEL	X 20 CRMOV 211	1.4922	-----	25 - 40	1:10	X	
	X5 N1CRTI 2615	1.4980	-----	25 - 40	1:10	X	
HEAT RESISTING STEEL	X 10 CRAL 7	1.4713	-----	20 - 35	1:10	X	
	X 15 CRNISI 25 / 20	1.4841	-----	20 - 35	1:10	X	
	X 10 CRSL 6	1.4712	-----	20 - 35	1:10	X	
STAINLESS AND ACID RESISTING STEEL	X 5 CRNI 189	1.4301	-----	25 - 35	1:10	X	
	X 10 CRNIMPT 1810	1.4571	-----	25 - 35	1:10	X	
	X 10 CR 13	1.4006	-----	25 - 35	1:10	X	
	X 5 CRNIMO 1810	1.4401	-----	25 - 35	1:10	X	
STEEL CASTING	GS – 38		30 - 40	50 - 60	1:50		X
	GS – 60		30 - 40	50 - 60	1:50		X
CAST IRON	GG – 16		30 - 40	40 - 50	-----		X
	GG – 30		30 - 40	40 - 50	-----		X
	GTW – 40		30 - 40	40 - 50	-----		X
	GTS – 65		30 - 40	40 - 50	-----		X
HIGH TEMPERATURE NICKEL ALLOYS	NIMONIC	2.4631	-----	15 - 25	1:10	X	
	HASTELLOY	X 2.4972	-----	15 - 25	1:10	X	
	INCONEL	2.4640	-----	15 - 25	1:10	X	
ALUMINIUM ALLOYS	AL 99.5	3.0255	80 - 300	100 - 700	1:10		X
	ALMG 3	3.3535	80 - 300	100 - 700	1:10		X
BRONZE / TIN BRONZE	CUSN 6	2.1020	50 - 70	70 - 100	1:50		X
	G – CUSN 10	2.1050	50 - 70	70 - 100	1:50		X
ALUMINIUM - BRONZE	CUAL 8	2.0920	30 - 45	50 - 70	1:30		X
	CUAL 8 FE 38	2.0920.60	30 - 40	40 - 50	1:20	X	
RED BRASS	G – CUSN 10 ZN	2.1086.01	30 - 45	70 - 100	1:50		X
	G – CUSN 5 ZN PB	2.1096.01	30 - 45	70 - 100	1:50		X
BRASS	CUZN 10	2.0230	80 - 200	100 - 300	1:50		X
	CUZN 31 S	2.0490	80 - 200	100 - 300	1:50		X

Recommendation for Tooth Style and Tooth Pitch Selections for HSS BI-Metal Bandsaws

Standard Tooth

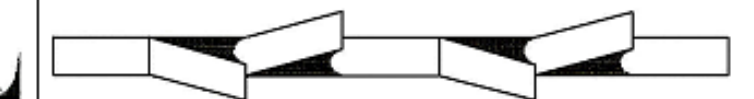
Material Diameter	Tooth Pitch Tooth Shape	Material Diameter	Tooth Pitch Tooth Shape
< 12mm	14 tpi N	< 25 mm	10/14 tpi 0°
12-30 mm	10 tpi N	2-40 mm	8/12 tpi 0°
30-50 mm	8 tpi N	25-70 mm	6/10 tpi 0°
50-80 mm	6 tpi N	35-90 mm	5/8 tpi 0°
80-100	4 tpi KL	50-100 mm	4/6 tpi pos
110-200	3 tpi KL	80-200 mm	¾ tpi pos
200-400	2 tpi KL	> 200 mm	2/3 tpi pos
>400 mm	1,25 tpi KL		

For cutting pipes and shapes

O (mm) S (mm)	Tooth Pitch					
	<40	80	100	150	200	300
3	8/12	8/12	8/12	8/12	6/10	6/10
8	8/12	6/10	6/10	5/8	4/6	4/6
12	6/10	5/8	5/8	4/6	4/6	4/6
15	5/8	4/6	4/6	4/6	3/4	3/4
20		4/6	4/6	3/4	3/4	3/4
30		3/4	3/4	3/4	2/3	2/3
50				3/4	2/3	2/3

Tooth Set Selection

The purpose of 'set' in a bandsaw blade is to provide clearance and to allow the body of the blade to pass freely through the material being cut. The set depends on stock diameter, shape and material to be cut.



Regular or Raker Set

Is the most widely used setting. It consists of a repetitive pattern with one tooth set the right, the next to the left and the third (the raker) without set. This type of set is best where the material being cut is uniform size; also used in contour sawing.

Right-Left Set



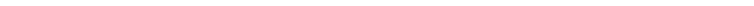
For softer materials, i.e. NF-metals, plastic & wood.



Group Set

For vibration free sawing of smaller diameters such as pipe tubing and shapes-faster cutting speeds and smoother surfaces.

Wavy Set



MATERIAL	CUTTING SPEED m/min.		BANDSAW / TPI				COOLANT	
	SPECIAL	BI-METAL	25mm	25-50	50-100	100-250	YES	NO
Structural Steel	30-50	50-85	14 R	8 R	4-6 R	3-4 R/H	X	
Carbon Steel	30-50	50-70	10 R	8 R	4-6 R	3-4 H	X	
Cementation Steel	30-70	50-85	10 R	8 R	4-6 R	3-4 H	X	
Heat Treatable Steel	30-50	50-70	14 R	8 R	4-6 R	3-4 H	X	
Cast Steel	30-50	50-70	14 R	8 R	4-6 R/H	3-4 H	X	
Cast Iron	30-50	50-70	14 R	8 R	4-6 R/H	3-4 H		X
Cr-Ni Alloys	20-30	30-50	10 R	8 R	4-6 R/H	3-4 H	X	
Stainless Steel	20	20-30	10 R	8 R	4-6 R/H	3-4 H	X	
Cr-Vanadium	20-30	30-50	10 R	8 R	4-6 R/H	3-4 H	X	
Speed Steel	20-30	30-50	10 R	8 R	4-6 R/H	3-4 H	X	
Bronze (Hard)	20-50	50-70	14 R	10 R	6-8 R	4-3 S		X
Bronze (Mild)	70-85	85	10 R	8 R	6 R	3-6 H	X	
Cooper	70-85	85	10 R	8 R	6 R	3-6 H	X	
Brass	85	85	10 R	8 R	6 R	3-6 H		X
Aluminium	85	85	8 S	6-8 S	4-6 S	3 S	X	
Bronze Alloys	50-70	85	10 R	6 H	3-4 H/S	2 H/S	X	
Al-Bronze Alloys	20-50	20-85	10 R	8 R	4-6 H	2-3 H/S	X	
Plastic	85	85	8 S	6-8 S	4-6 H	3 S		X

REGULAR

HOOK

SKIP

2013

BEKA-MAK

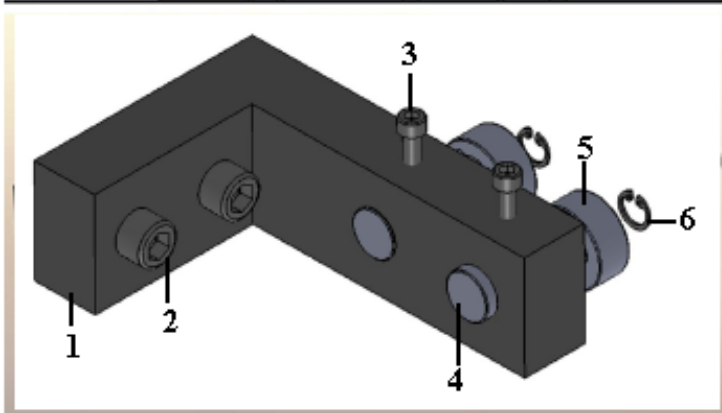
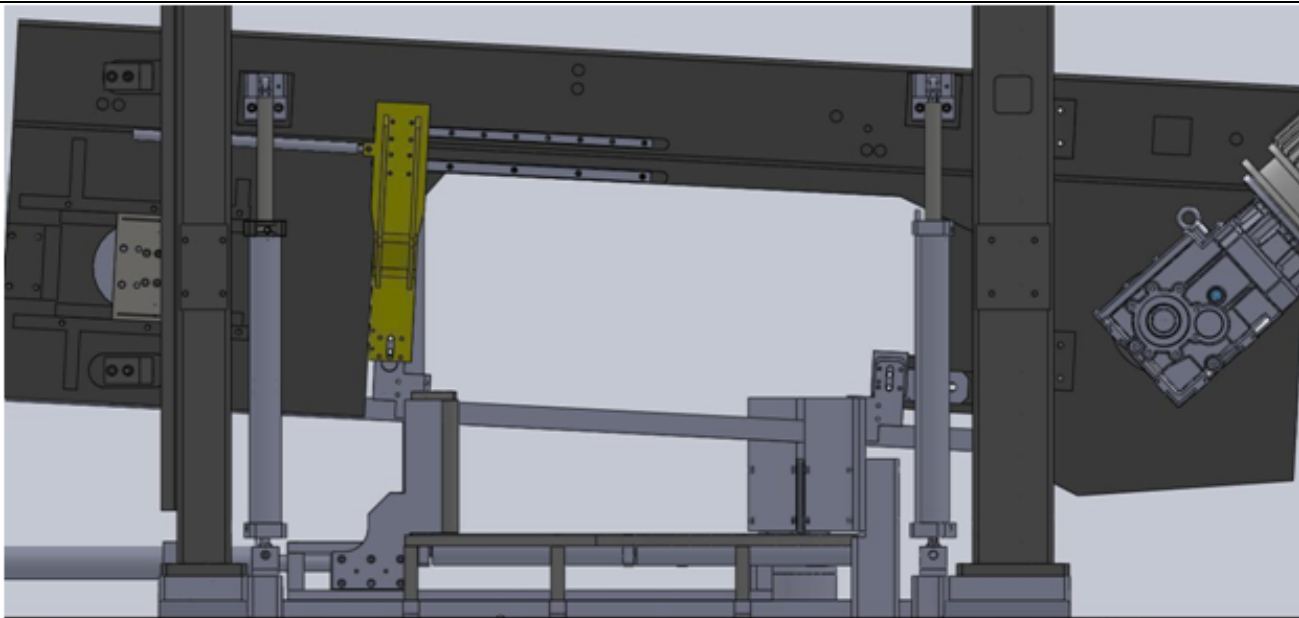
SEMI AUTOMATIC TWIN PILLAR BANDSAWING MACHINES

BMSY 360CDGH



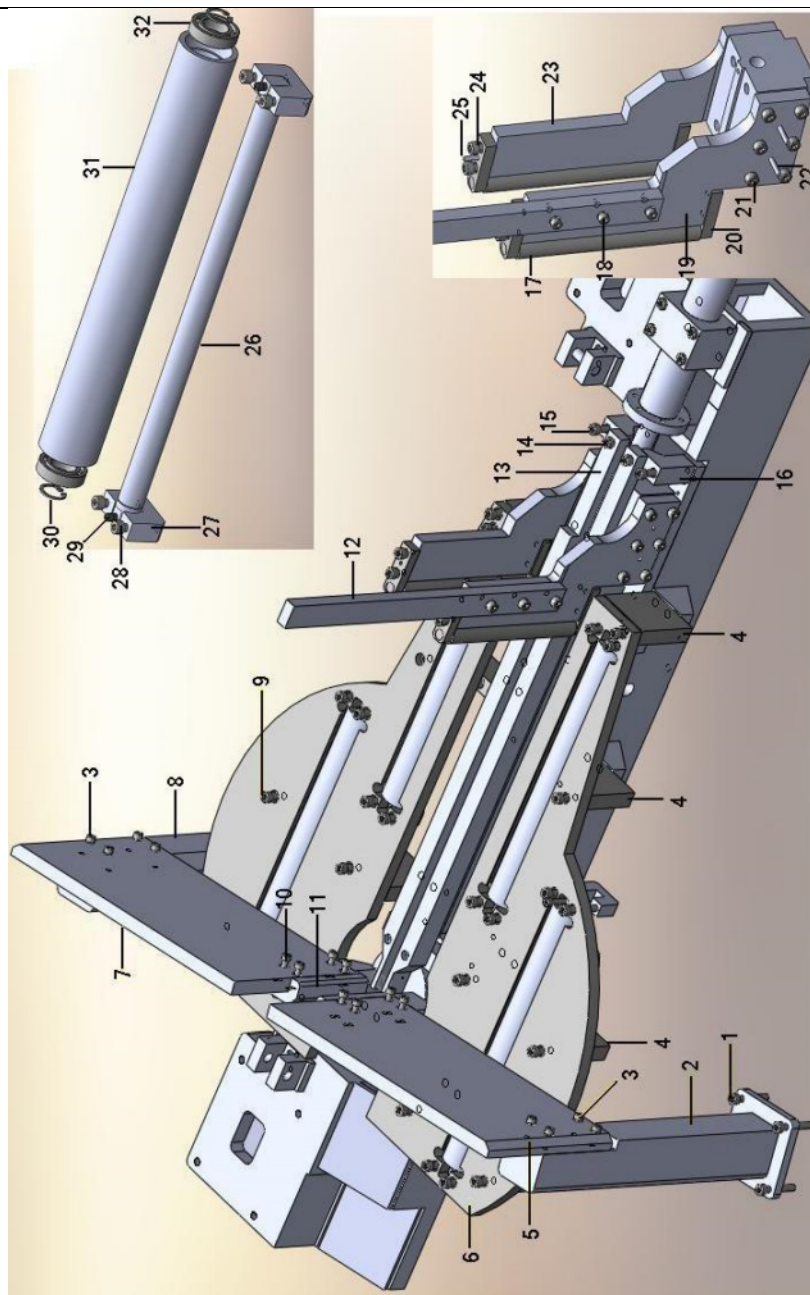
SPARE PART TABLES





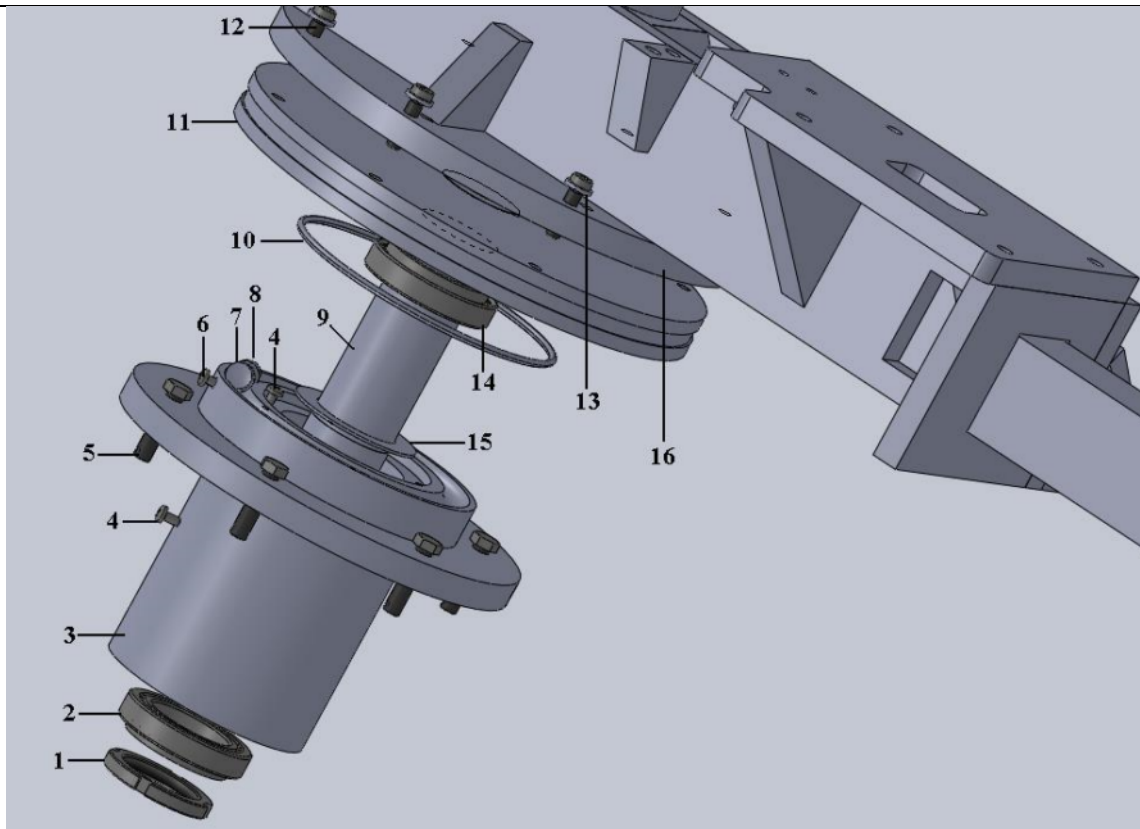
SLIDEWAY AXIS PLATES ASSEMBLY

PART NMR	PART CODE	PART NAME
001	360CDGH.001.001	AXIS PLATE
002	360CDGH.001.002	M12x25 IMBUS
003	360CDGH.001.003	M5x10 IMBUS
004	360CDGH.001.004	EXCENTRIC SHAFT FOR
005	360CDGH.001.005	BEARING 6002
006	360CDGH.001.006	RING
007	360CDGH.001.007	LINEAR SLIDEWAY
008	360CDGH.001.008	M8x35 INBUS
009	360CDGH.001.009	M10x45 INBUS
010	360CDGH.001.010	SLIDEWAY



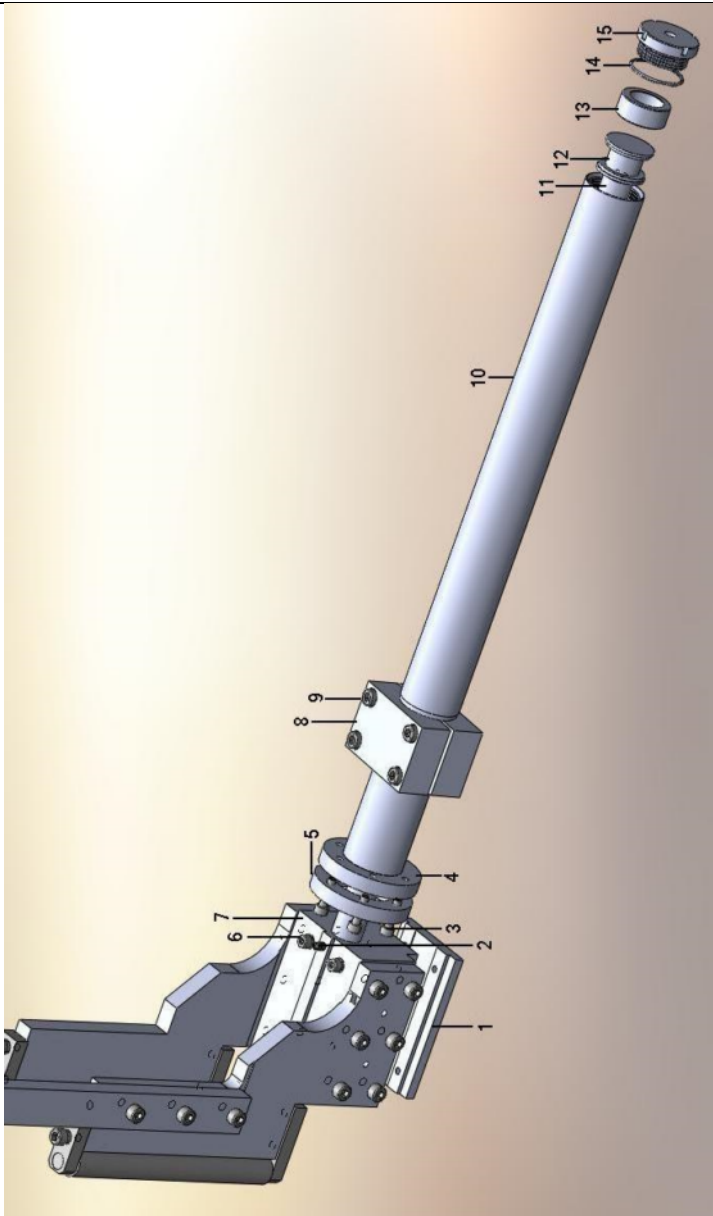
TURN TABLE ASSEMBLY-1

PART NMR	PART CODE	PART NAME
001	360CDGH.002.001	M10x40 INBUS
002	360CDGH.002.002	VICE JAW CONNECTION COLUMN (LEFT)
003	360CDGH.002.003	M8x30 INBUS
004	360CDGH.002.004	LOWER CONNECTION PARTS FOR PLATINA
005	360CDGH.002.005	VICE JAW (LEFT)
006	360CDGH.002.006	ROLLER'S PLATINA(LEFT)
007	360CDGH.002.007	VICE JAW (RIGHT)
008	360CDGH.002.008	VICE JAW CONNECTION COLUMN (RIGHT)
009	360CDGH.002.009	M10x30 INBUS
010	360CDGH.002.010	M8x25 INBUS
011	360CDGH.002.011	VICE JAW CONNECTION BLOCK
012	360CDGH.002.012	MOVING ARM PULLING PLATE
013	360CDGH.002.013	VICE AXIS PLATE
014	360CDGH.002.014	M8x20 INBUS
015	360CDGH.002.015	M8x60 INBUS
016	360CDGH.002.016	VICE AXIS PLATE CONNECTION BLOCK
017	360CDGH.002.017	VICE JAW ROLLER
018	360CDGH.002.018	M8x25 INBUS
019	360CDGH.002.019	MOVEABLE VICE JAW (LEFT)
020	360CDGH.002.020	VICE JAW ROLLER CONNECTION BLOCK
021	360CDGH.002.021	M8x25 INBUS
022	360CDGH.002.022	Ø6x30 PIN
023	360CDGH.002.023	MOVEABLE VICE JAW (RIGHT)
024	360CDGH.002.024	M8x25 INBUS
025	360CDGH.002.025	Ø6x30 PIN
026	360CDGH.002.026	SHAFT FOR PLATINA ROLLER
027	360CDGH.002.027	PLATINA ROLLER CONNECTION BLOCK
028	360CDGH.002.028	M10x30 INBUS
029	360CDGH.002.029	M8x40 SETSKUR
030	360CDGH.002.030	CLIP 471/25
031	360CDGH.002.031	PLATINA ROLLER PIPE
032	360CDGH.002.032	BEARING 6005



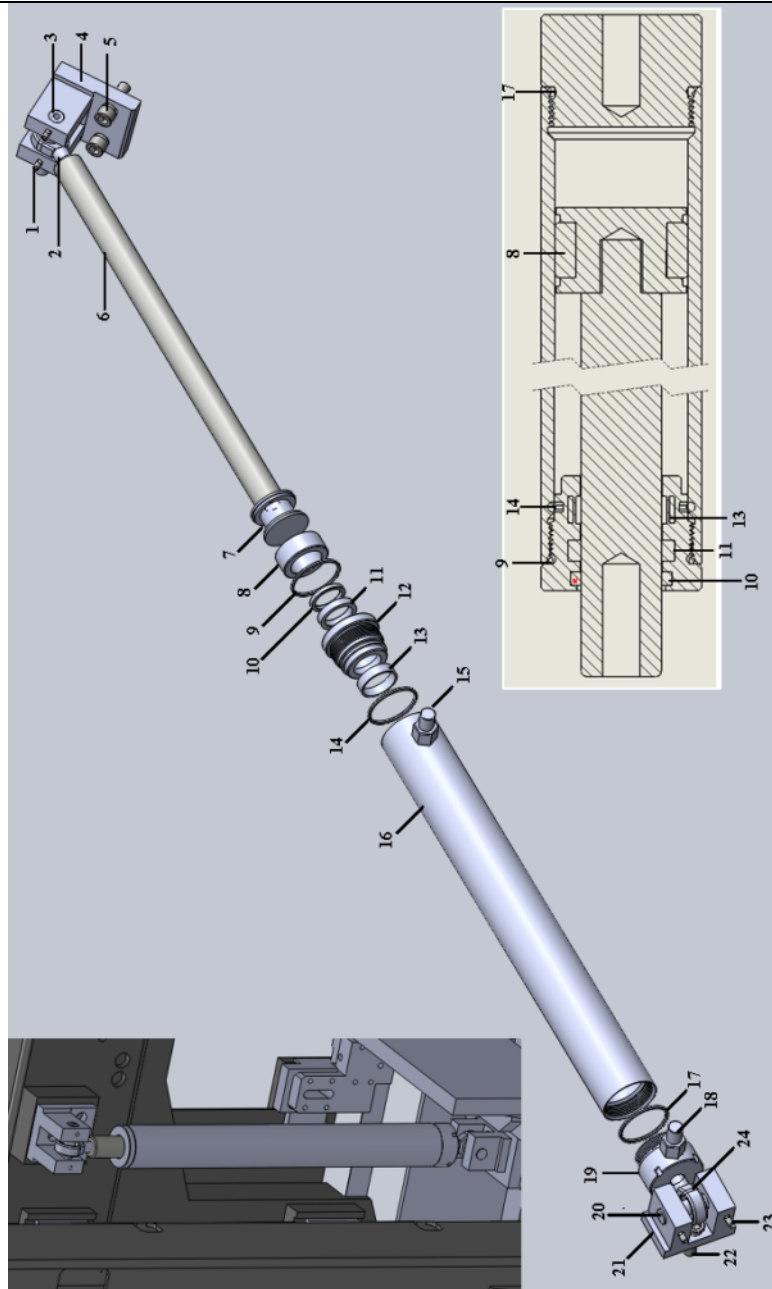
TURN TABLE ASSEMBLY-2

PART NMR	PART CODE	PART NAME
001	360CDGH.003.001	KM12 NUT
002	360CDGH.003.002	BEARING 32012
003	360CDGH.003.003	TURNABLE BASE CYLINDER
004	360CDGH.003.004	M6x10 SETSCREW
005	360CDGH.003.005	M12x40BOLT 6 PCS
006	360CDGH.003.006	M8x1 OILER
007	360CDGH.003.007	PLASTIK(23 ADET)
008	360CDGH.003.008	BALL(22 PCS)
009	360CDGH.003.009	SHAFT FOR TURNABLE BASE
010	360CDGH.003.010	5x190 O-RING
011	360CDGH.003.011	TURN TABLE OUTER WHEEL
012	360CDGH.003.012	M10x40 INBUS(6PCS)
013	360CDGH.003.013	SPRING WASHER
014	360CDGH.003.014	BEARING 32012
015	360CDGH.003.015	WASHER
016	360CDGH.003.016	LOWER CONNECTION WHEEL



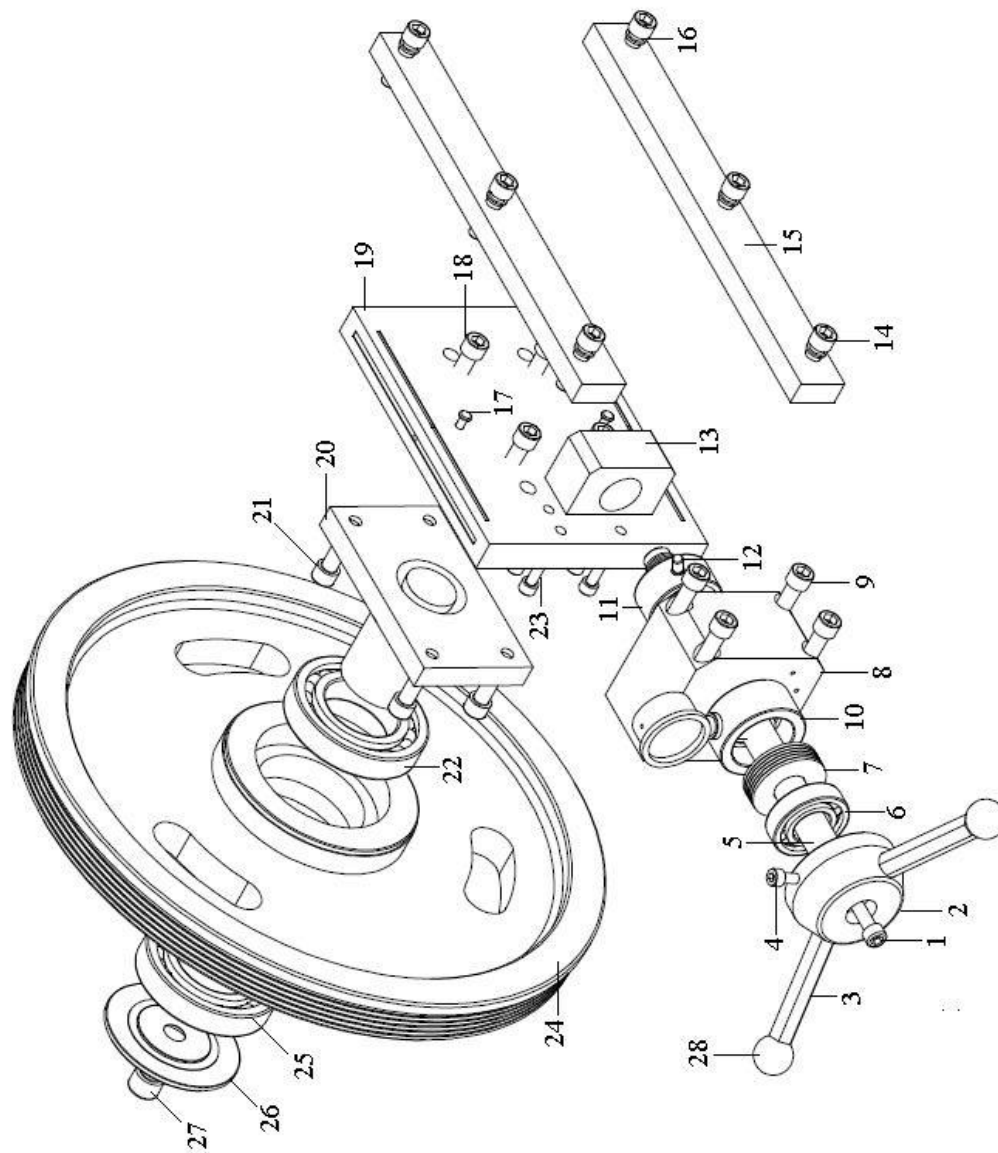
VICE PISTON ASSEMBLY

PART NMR	PART CODE	PART NAME
001	360CDGH.004.001	LOWER CONNECTION NUT
002	360CDGH.004.002	8x15 SETSKUR
003	360CDGH.004.003	M8x20 INBUS
004	360CDGH.004.004	PISTON PIPE NUT (REAR)
005	360CDGH.004.005	PISTON PIPE NUT (FRONT)
006	360CDGH.004.006	M8x60 INBUS
007	360CDGH.004.007	CONNECTION NUT FOR VICE
008	360CDGH.004.008	CONNECTION NUT BETWEEN PIPE AND BODY
009	360CDGH.004.009	M12x60 INBUS
010	360CDGH.004.010	CYLINDER PIPE (VICE)
011	360CDGH.004.011	PIPE SHAFT (VICE)
012	360CDGH.004.012	CYLINDER SHAFT CROWN
013	360CDGH.004.013	SEAL SET 50x34x20,5
014	360CDGH.004.014	O-RING 48x3
015	360CDGH.004.015	PISTON PIPE COVER



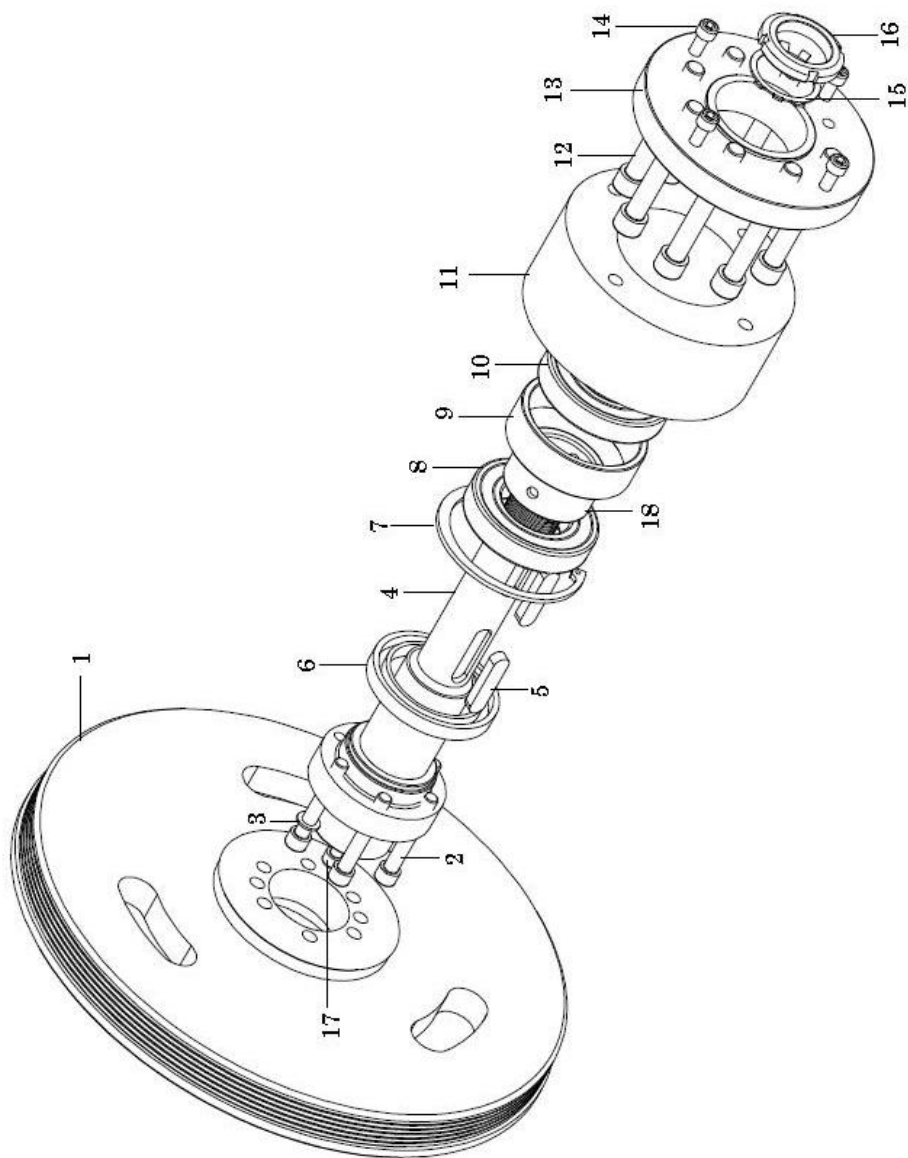
BMSY 360C UPPER PISTON ASSEMBLY

PART NMR	PART CODE	PART NAME
001	360CDGH.00501	M6x10 SESTKUR
002	360CDGH.00502	HELGES
003	360CDGH.00503	Ø16x68 PIN
004	360CDGH.00504	UPPER CONNECTION BLOCK
005	360CDGH.00505	M12x25 INBUS
006	360CDGH.00506	PISTON SHAFT (Ø30)
007	360CDGH.00507	PISTON HEADER
008	360CDGH.00508	50x34x20,5 KOMPACT SET
009	360CDGH.00509	ORING 49x3
010	360CDGH.00510	DUST SEALS 30x38
011	360CDGH.00511	OIL SEALS 30x40x8
012	360CDGH.00512	PISTON UPPER COVER
013	360CDGH.00513	BAND 2x10
014	360CDGH.00514	ORING 49x3
015	360CDGH.00515	Ø8 1/4" JOINT
016	360CDGH.00516	PISTON PIPE 50x60
017	360CDGH.00517	ORING 49x3
018	360CDGH.00518	Ø8 1/4" JOINT
019	360CDGH.00519	PISTON ALT KAPAK
020	360CDGH.00520	Ø16x68 PİM
021	360CDGH.00521	LOWER CONNECTION BLOCK
022	360CDGH.00522	M8x20 INBUS
023	360CDGH.00523	M6x10 SESTKUR
024	360CDGH.00524	HELGES



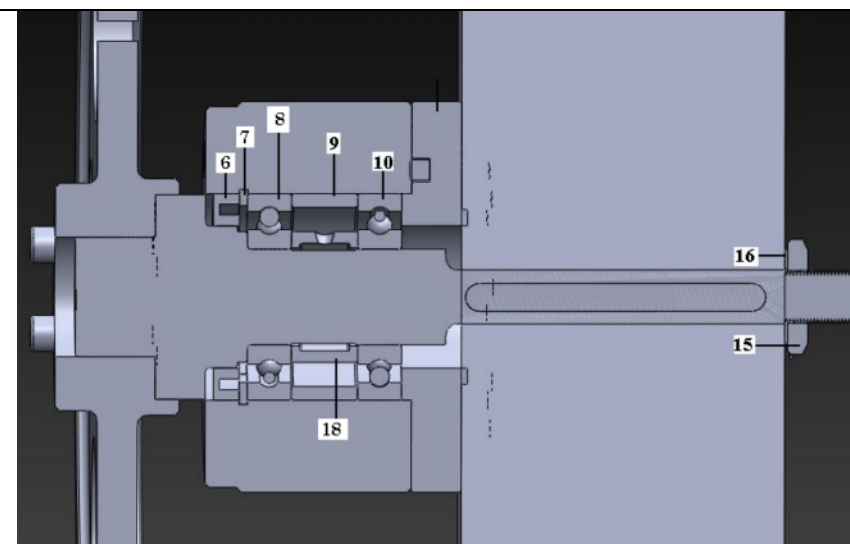
TENSIONING ASSEMBLY

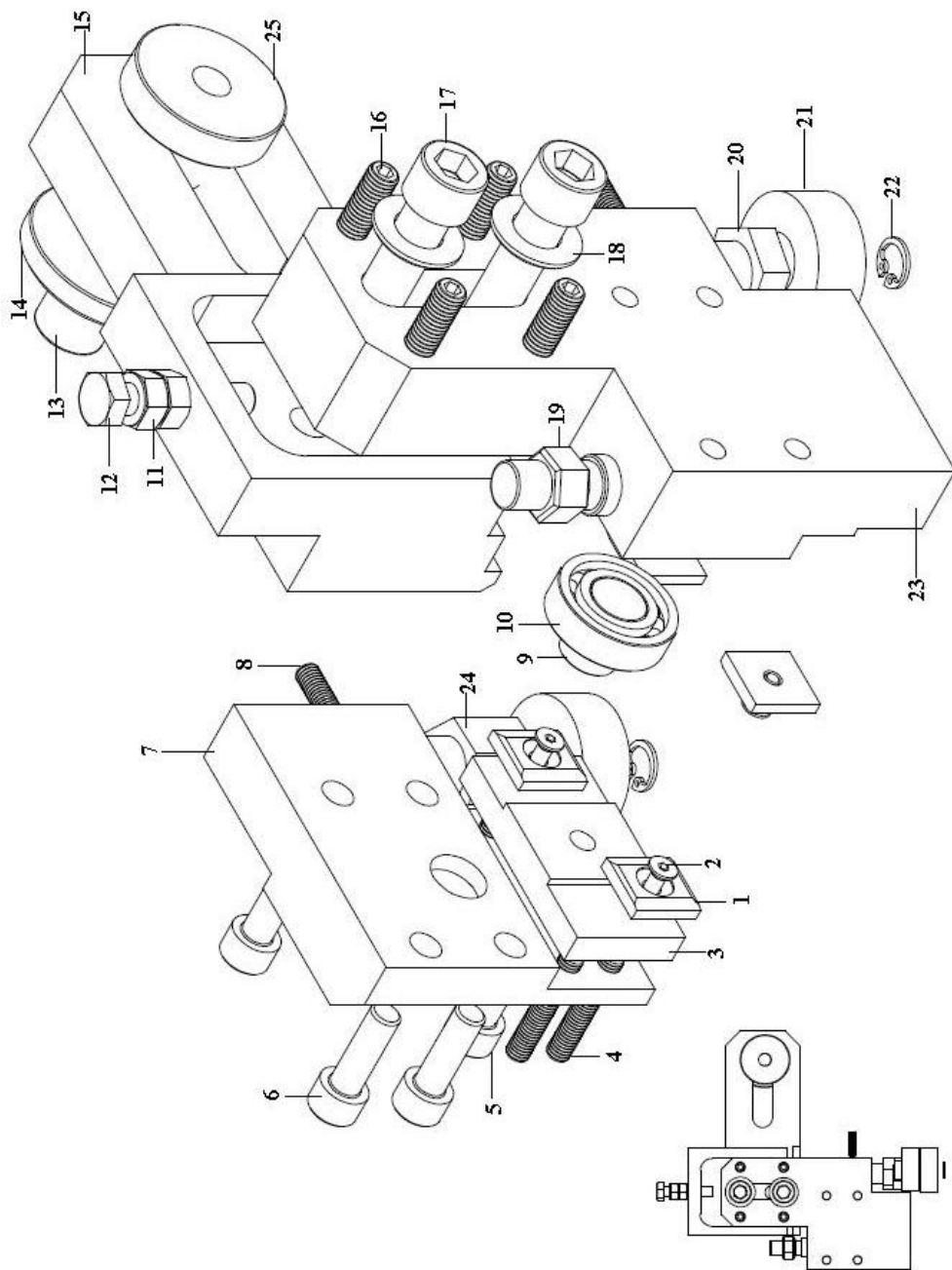
PART NMR	PART CODE	PART NAME
001	360CDGH.006.001	M10x25 INBUS
002	360CDGH.006.002	KNOB
003	360CDGH.006.003	KNOB ARM
004	360CDGH.006.004	M8x30 SETSKUR
005	360CDGH.006.005	TENTIONING SHAFT
006	360CDGH.006.006	51205 BEARING
007	360CDGH.006.007	WASHER(6 PIECES)
008	360CDGH.006.008	TENSIONING BLOCK
009	360CDGH.006.009	M12x110 INBUS
010	360CDGH.006.010	MANOMETER 400 BAR
011	360CDGH.006.011	RING
012	360CDGH.006.012	Ø8x30 PIN
013	360CDGH.006.013	CONNECTION BLOCK
014	360CDGH.006.014	M12x40 INBUS
015	360CDGH.006.015	TENSION BLOCK FLAT
016	360CDGH.006.016	Ø12 RONDEL
017	360CDGH.006.017	M8x1
018	360CDGH.006.018	M12x25 SETSKUR
019	360CDGH.006.019	TENSIONING SLEDGE
020	360CDGH.006.020	WHEEL CONNECTION PLATE
021	360CDGH.006.021	M12x45 INBUS
022	360CDGH.006.022	6212 BEARING
023	360CDGH.006.023	M8x30 INBUS
024	360CDGH.006.024	IDLE WHEEL
025	360CDGH.006.025	6212 BEARING
026	360CDGH.006.026	COVER
027	360CDGH.006.027	M16x30 INBUS(COUNTERSUNK)
028	360CDGH.006.028	



REDUCTOR GROUP

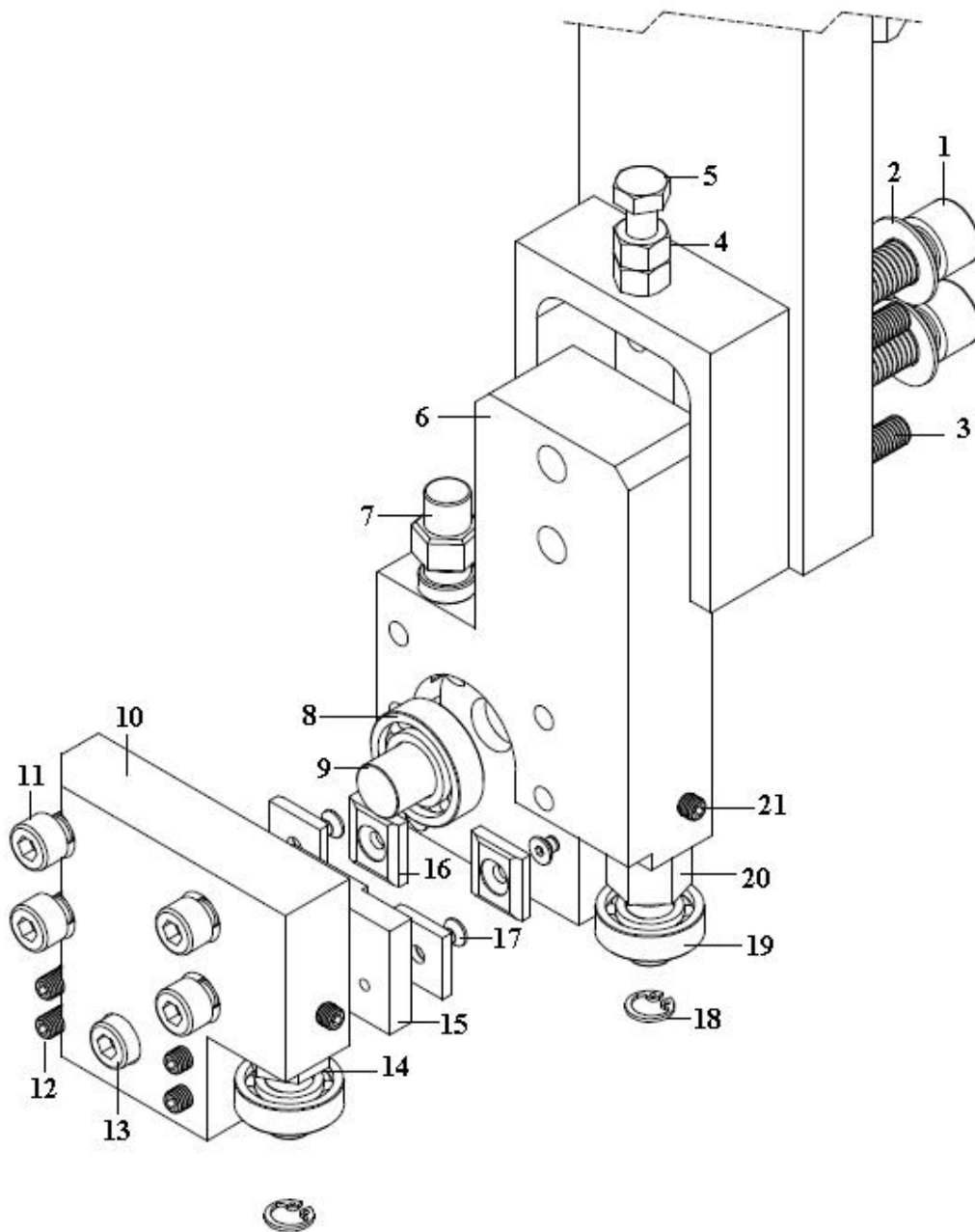
PART NMR	PART CODE	PART NAME
001	360CDGH.007.01	DRIVE WHEEL
002	360CDGH.007.02	M12x70 INBUS
003	360CDGH.007.03	SPRONG WASHER M12
004	360CDGH.007.04	REDUCER SHAFT
005	360CDGH.007.05	KEY 14x9x60
006	360CDGH.007.06	SEAL 80x110x13
007	360CDGH.007.07	RING DIN472/110
008	360CDGH.007.08	BEARING NJ 212
009	360CDGH.007.09	OUTER RING
010	360CDGH.007.10	BEARING RS 6212
011	360CDGH.007.11	BODY
012	360CDGH.007.12	M12x110 INBUS
013	360CDGH.007.13	FLANGE
014	360CDGH.007.14	M10x30 INBUS
015	360CDGH.007.15	MB 9 WASHER
016	360CDGH.007.16	KM 9NUT
017	360CDGH.007.17	M10x1 GREASE UNION
018	360CDGH.007.18	INNER RING





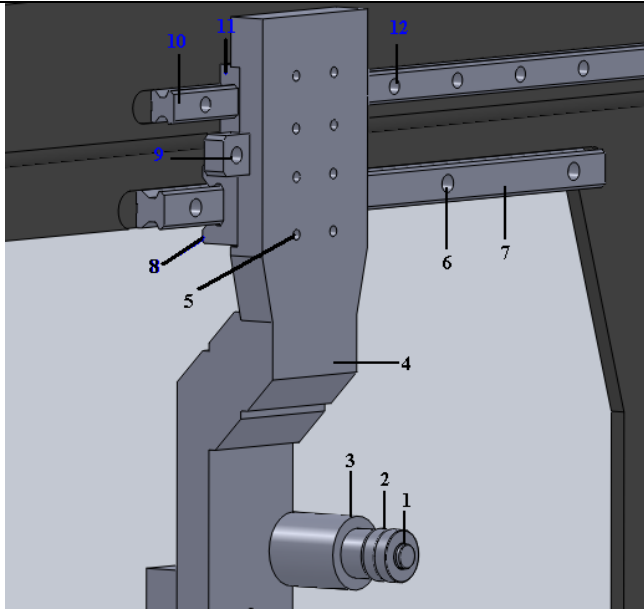
FIXED CARBIDE GUIDE ASSEMBLY

PART NMR	PART CODE	PART NAME
001	360CDGH.008..01	CARBIDE BSM-8785
002	360CDGH.008..02	M4x8 BOLT
003	360CDGH.008..03	CARBIDE PLATE
004	360CDGH.008..04	M6x40 SESTKUR
005	360CDGH.008..05	M8x35 INBUS
006	360CDGH.008..06	M8x20 INBUS
007	360CDGH.008..07	FIXED CARBIDE BLOCK UPPER PLATE
008	360CDGH.008..08	M6 x6 SESTKUR
009	360CDGH.008..09	BEARING INNER SHAFT
010	360CDGH.008..10	6002 BEARING
011	360CDGH.008..11	M8 NUT
012	360CDGH.008..12	M8x40 BOLT
013	360CDGH.008..13	M12x50 INBUS
014	360CDGH.008..14	WASHER
015	360CDGH.008..15	FIXED CARBIDE BLOCK BASE
016	360CDGH.008..16	M8x40 SESTKUR
017	360CDGH.008..17	M14x50 INBUS
018	360CDGH.008..18	WASHER
019	360CDGH.008..19	JOINT
020	360CDGH.008..20	ECCENTRIC LONG PIN
021	360CDGH.008..21	3201 BEARING
022	360CDGH.008..22	RING
023	360CDGH.008..23	CARBIDE PLATE
024	360CDGH.008..24	ECCENTRIC SHORT PIN
025	360CDGH.008..25	FIXING NUT



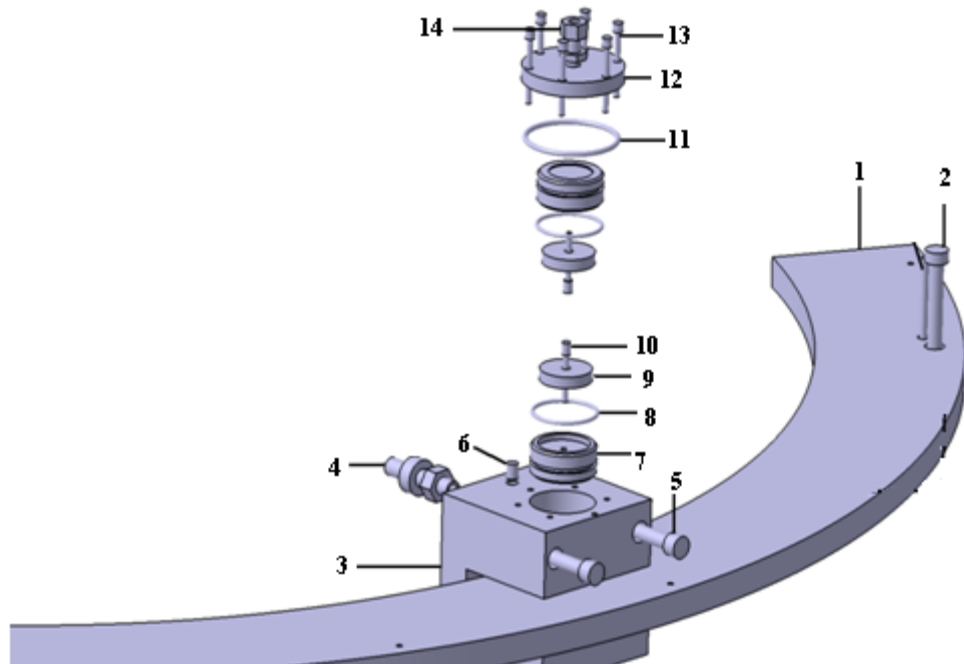
ARM CARBIDE BLOCK ASSEMBLY

PART NMR	PART CODE	PART NAME
001	360CDGH.009..01	M14x50 INBUS
002	360CDGH.009..02	WASHER
003	360CDGH.009..03	M8x20 SESTKUR
004	360CDGH.009..04	M8 NUT
005	360CDGH.009..05	M8x35 BOLT
006	360CDGH.009..06	MOVING CARBIDE BLOCK LOWER PLATE
007	360CDGH.009..07	JOINT
008	360CDGH.009..08	6002 BEARING
009	360CDGH.009..09	BEARING INNER SHAFT
010	360CDGH.009..10	MOVING CARBIDE BLOCK UPPER PLATE
011	360CDGH.009..11	M8x25 INBUS
012	360CDGH.009..12	M6x40 SESTKUR
013	360CDGH.009..13	M8x15 INBUS
014	360CDGH.009..14	ECCENTRIC SHORT PIN
015	360CDGH.009..15	CARBIDE PLATE
016	360CDGH.009..16	CARBIDE BSM-8785
017	360CDGH.009..17	M4x8 BOLT
018	360CDGH.009..18	RING 471/12
019	360CDGH.009..19	3201 BEARING
020	360CDGH.009..20	ECCENTRIC LONG PIN
021	360CDGH.009..21	M6x6 SESTKUR



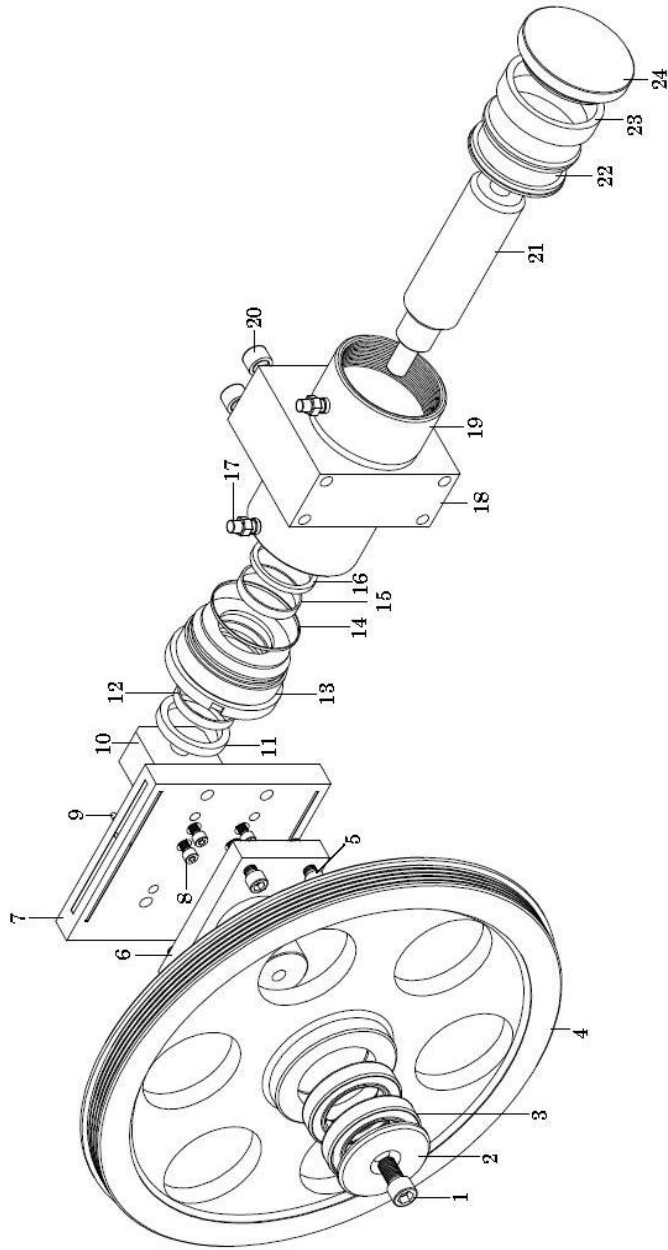
ARM ASSEMBLY

PART NMR	PART CODE	PART NAME
001	360CDGH.010.01	SEGMAN
002	360CDGH.010.02	BEARING 62202
003	360CDGH.010.03	BEARING CONNECTION PIM
004	360CDGH.010.04	MOVING ARM
005	360CDGH.010.05	M6X25 INBUS
006	360CDGH.010.06	M6X25 INBUS
007	360CDGH.010.07	FIXED LINEER SLEDGE
008	360CDGH.010.08	MOVING LINEER SLEDGE
009	360CDGH.010.09	M12 INBUS
010	360CDGH.010.10	FIXED LINEER SLEDGE
011	360CDGH.010.11	MOVING LINEER SLEDGE
012	360CDGH.010.12	M6X25 INBUS



LOCKER ASSEMBLY

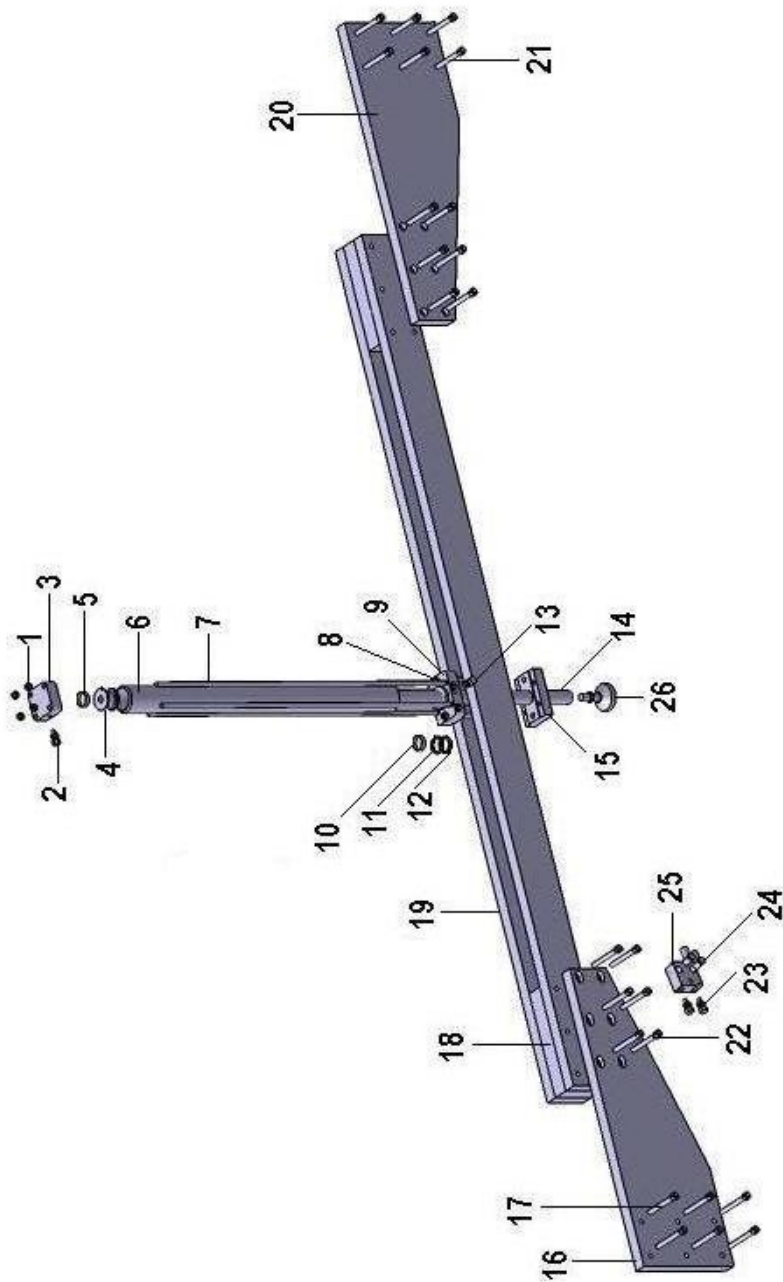
PART NMR	PART CODE	PART NAME
001	360CDGH.011.001	DEGREE ADJUST FLAT
002	360CDGH.011.002	M12X35 INBUS
003	360CDGH.011.003	LOCKING FLAT
004	360CDGH.011.004	1/8" REKOR
005	360CDGH.011.005	M8X110 INBUS
006	360CDGH.011.006	STOPPER
007	360CDGH.011.007	WHEEL
008	360CDGH.011.008	O-RING
009	360CDGH.011.009	BRASS
010	360CDGH.011.010	M5X10 INBUS
011	360CDGH.011.011	O-RING
012	360CDGH.011.012	COVER
013	360CDGH.011.013	M5X15 INBUS
014	360CDGH.011.014	REKOR



TENSIONING ASSEMBLY (OPTIONAL)

PART NMR	PART CODE	PART NAME
001	360CDGH.012.01	M16x30 INBUS(HAVŞA BAŞLI)
002	360CDGH.012.02	KAPAK
003	360CDGH.012.03	6012 BEARING
004	360CDGH.012.04	IDLE WHEEL
005	360CDGH.012.05	M12x45 INBUS
006	360CDGH.012.06	WHEEL CONNECTION FLAT
007	360CDGH.012.07	SLEDGE
008	360CDGH.012.08	M8x30 IBUS
009	360CDGH.012.09	GRASÖRLÜK
010	360CDGH.012.10	SLEDGE BLOCK
011	360CDGH.012.11	BANT 2x10
012	360CDGH.012.12	OIL SEAL 25x35x7
013	360CDGH.012.13	PISTON HOLDER
014	360CDGH.012.14	O-RING 90x4
015	360CDGH.012.15	BANT 2x10
016	360CDGH.012.16	DUST SEAL 25x33x7,5
017	360CDGH.012.17	Ø8 1/4" REKOR
018	360CDGH.012.18	LEAN PART (INNER)
019	360CDGH.012.19	SHAFT PIPE
020	360CDGH.012.20	M12 INBUS
021	360CDGH.012.21	SHAFT
022	360CDGH.012.22	PISTON HEADER
023	360CDGH.012.23	SEAL SET 100x86x22,4
024	360CDGH.012.24	PISTON COVER (BACK)

OPTIONAL



TOP CLAMPING GROUP (OPTIONAL)

PART NMR	PART CODE	PART NAME
001	360CDGH.013.01	M10 NUT
002	360CDGH.013.02	1/4" REKOR
003	360CDGH.013.03	PISTON UPPER BLOCK
004	360CDGH.013.04	PISTON HEAD
005	360CDGH.013.05	SEAL
006	360CDGH.013.06	PISTON PIPE
007	360CDGH.013.07	M10 SHAFT
008	360CDGH.013.08	M12 BOLT
009	360CDGH.013.09	PISTON LOWER BLOCK
010	360CDGH.013.10	BAND
011	360CDGH.013.11	OIL SEAL
012	360CDGH.013.12	DUST SEAL
013	360CDGH.013.13	1/4" REKOR
014	360CDGH.013.14	PISTON SHAFT
015	360CDGH.013.15	FIXING BLOCK
016	360CDGH.013.16	REDUCTOR FLAT
017	360CDGH.013.17	M10 INBUS
018	360CDGH.013.18	FLAT
019	360CDGH.013.19	CONNECTION FLAT
020	360CDGH.013.20	TENSIONING FLAT
021	360CDGH.013.21	M10 INBUS
022	360CDGH.013.22	M10 INBUS
023	360CDGH.013.23	REKOR
024	360CDGH.013.24	REKOR
025	360CDGH.013.25	BLOCK
026	360CDGH.013.26	CLAMPING TOOL

OPTIONAL

0

1

2

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4

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9



COMPANY :

MACHINE TYPE : BMSY 360 CDGH

SERIAL NR :

COUNTRY :

OPTIONS : INVERTER+HYD. VICE

DATE :

BEKA-MAK A.Ş.

Job no.
LINEER KIZILMAK 440 CDGH PROTOKOLU

Draw.no.

Rev.:

By:

Date:

10.02.2005

Device:

Location:

Sheet

1

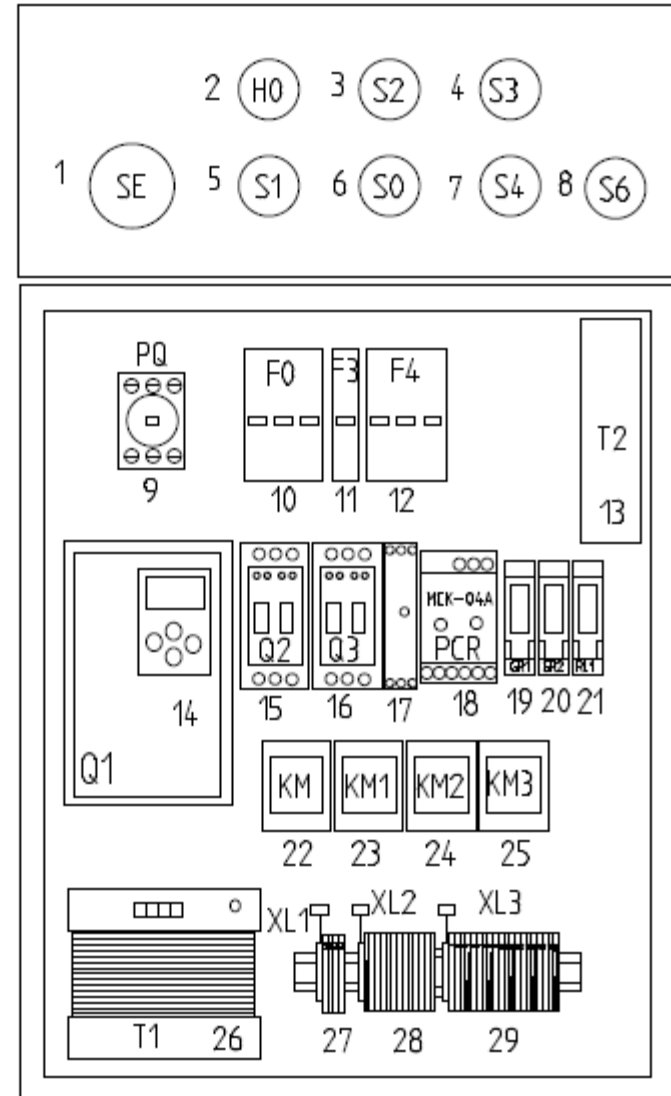
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INDEX

1	COVER
2	INDEX
3	SETTLEMENT
4	POWER SUPPLY
5	POWER DIAGRAM
6	INVERTER PLAN
7	CIRCUIT DIAGRAM
8	CIRCUIT DIAGRAM
9	TERMINAL PLAN

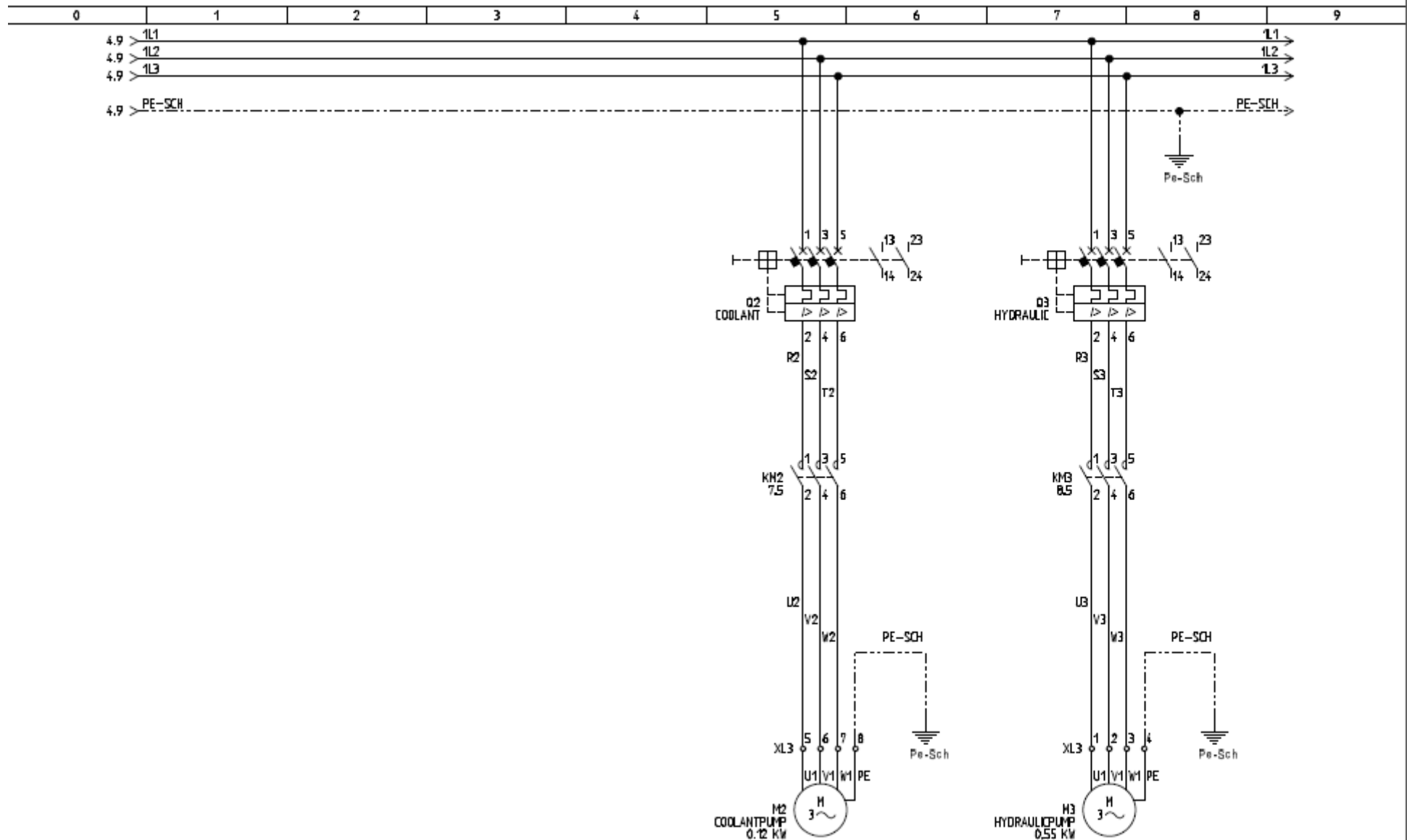
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			LI 440 COGH (FOTOCELL)	Date:	Device:	Location:	Sheet
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NO	NAME	DESCRIPTION	BRAND	REFERANS					
1	SE	EMERGENCY STOP BUTTON	TELEMECANIQUE	XB5-ASS42					
2	H0	LAMB	TELEMECANIQUE	XB7-EV61P					
3	S2	COOLANT SELECTOR	TELEMECANIQUE	XB5-AA21					
4	S3	BOW UP BUTTON	TELEMECANIQUE	XB5-AA21					
5	S1	START BUTTON	TELEMECANIQUE	XB5-AA31					
6	S0	STOP BUTTON	TELEMECANIQUE	XB5-AA42					
7	S4	BOW DOWN BUTTON	TELEMECANIQUE	XB5-AA21					
8	S0	READY BUTTON	TELEMECANIQUE	XB5-AW3365					
9	F0	MAIN SWITCH	TELEMECANIQUE	VCFO - 044039					
10	F0	MAIN FUSE	TELEMECANIQUE	24351					
11	F3	24 VDC FUSE	TELEMECANIQUE	24355					
12	F4	FUSE FOR SAW	TELEMECANIQUE	24355					
13	T2	POWER SUPPLY	MFAN WELL	100-24 VDC					
14	Q1	MAIN MOTOR INVERTER	TELEMECANIQUE	ATV33HU40N4					
15	Q2	CIRCUIT BREAKER FOR COOLANTPUMP	TELEMECANIQUE	GV2ME02					
16	Q3	CIRCUIT BREAKER FOR HYD.PUMP	TELEMECANIQUE	GV2ME07					
17	KA1	TIMER	ENTES	5M5					
18	PCR	PHASE CONTROL RELAY	ENTES	MKC 04-A					
19	GR1	COVER RELAY 1	TELEMECANIQUE	RSB-1A160BD					
20	GR2	COVER RELAY 2	TELEMECANIQUE	RSB-1A160BD					
21	RL1	RELAY	TELEMECANIQUE	RSB-2A060BD					
22	KM	MAIN CONTACTOR	TELEMECANIQUE	LPK06-10BD-24DC					
23	KM1	CONTACTOR FOR SAW	TELEMECANIQUE	LPK06-10BD-24DC					
24	KM2	CONTACTOR FOR COOLANT MOTOR	TELEMECANIQUE	LPK06-10BD-24DC					
25	KM3	CONTACTOR FOR HYD.MOTOR	TELEMECANIQUE	LPK06-10BD-24DC					
26	T1	TRANSFORMER	SIEMENS	4AX3002-3ED16-0C					
27	XL1	FUSES FOR TRANSFORMER	KLEMSAN	300100-ASK 3M					
28	XL2	KABEL CONNECTIONS	KLEMSAN	300220-VBK-2,5					
29	XL3	MOTOR CONNECTIONS	KLEMSAN	300220-VBK-4					



BEKA-MAK A.Ş.

LINEER KIZAKLI 440 COGH (FOTOCCELL)	Job no.	Draw.no.	Reviz	By:
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BEKA-MAK A.Ş.

LINEER KIZAKLI 440 COGH (FOTOCELLI)

Job no.
Date: 10.02.2005

Draw.no.

Device:

Reviz

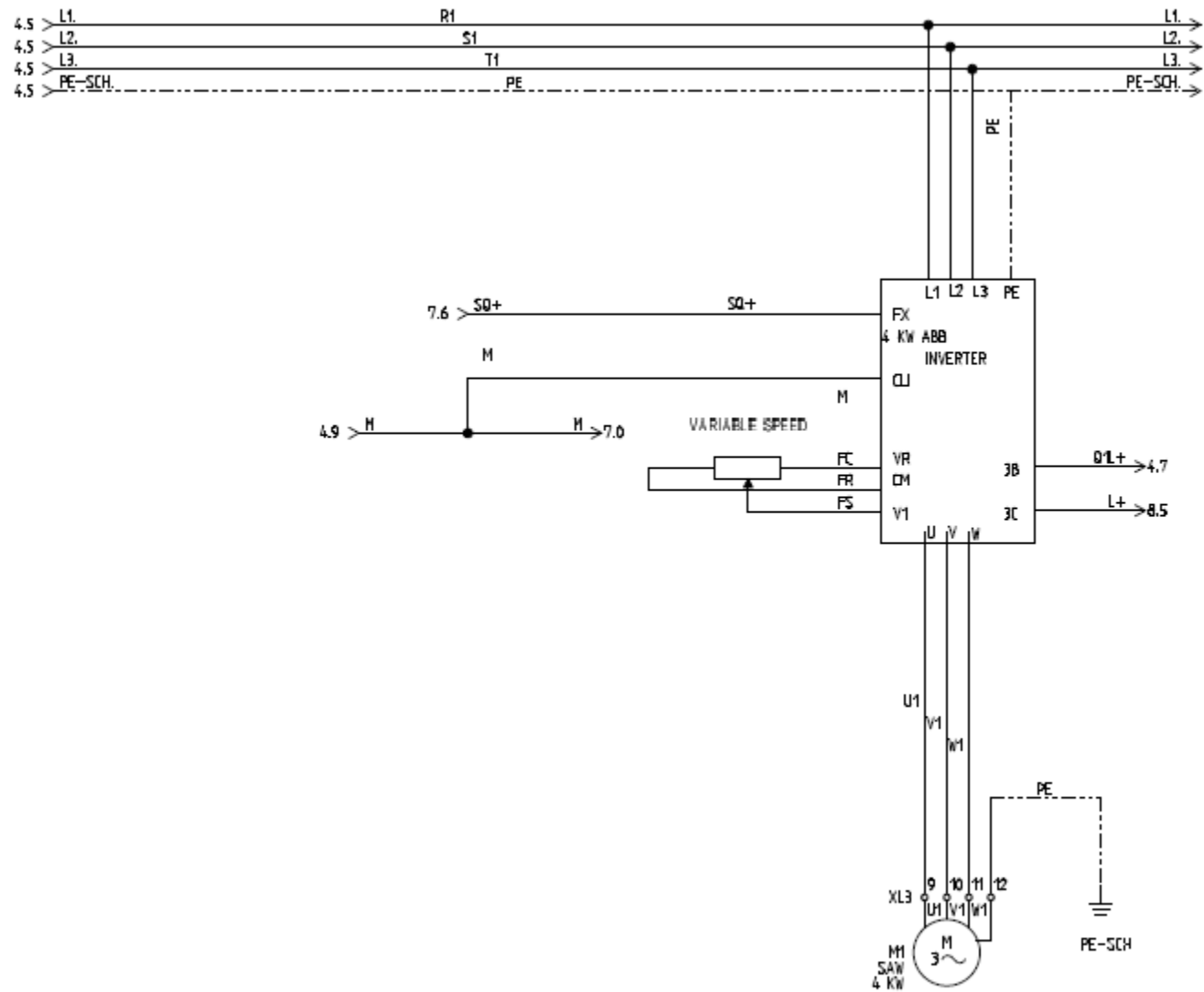
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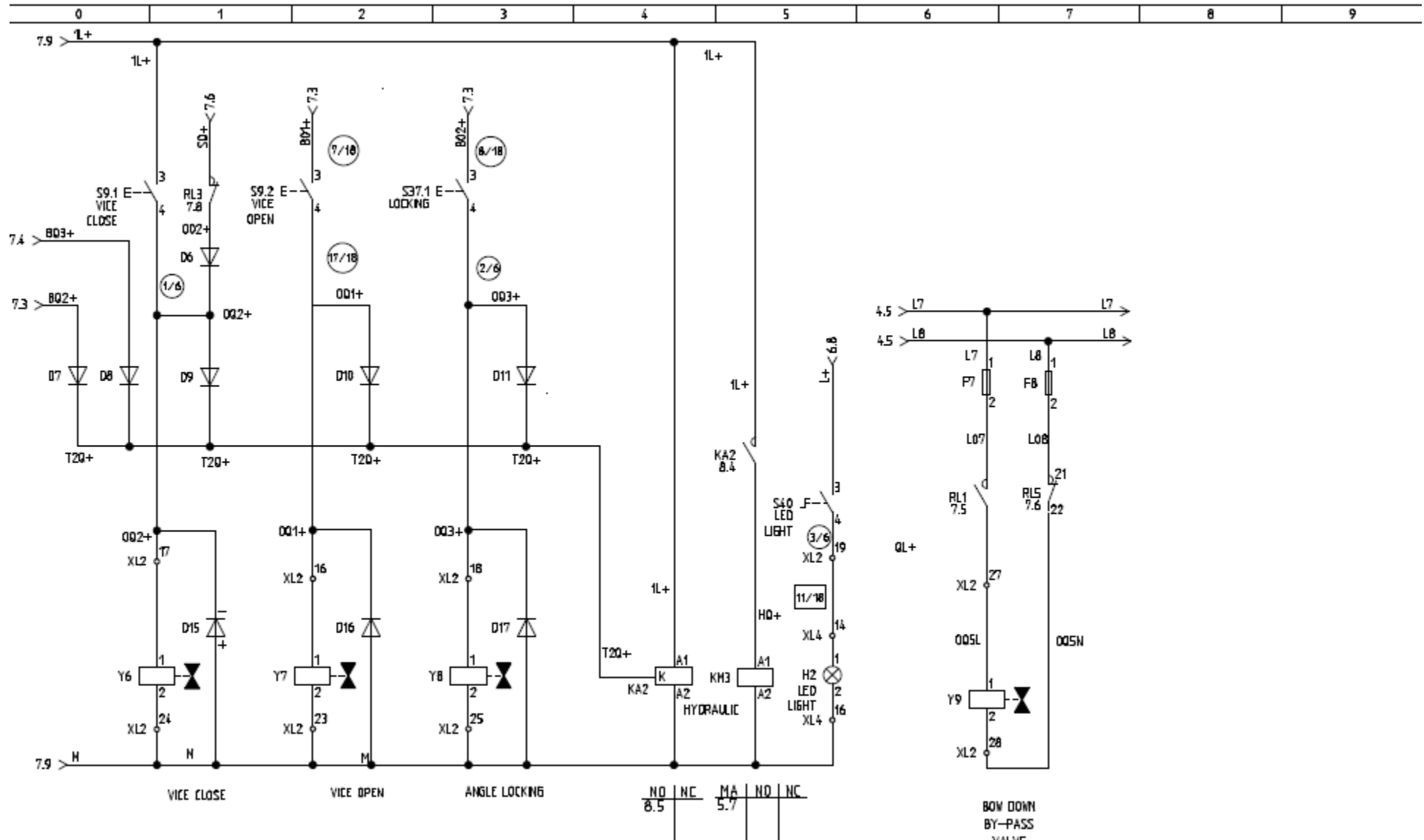
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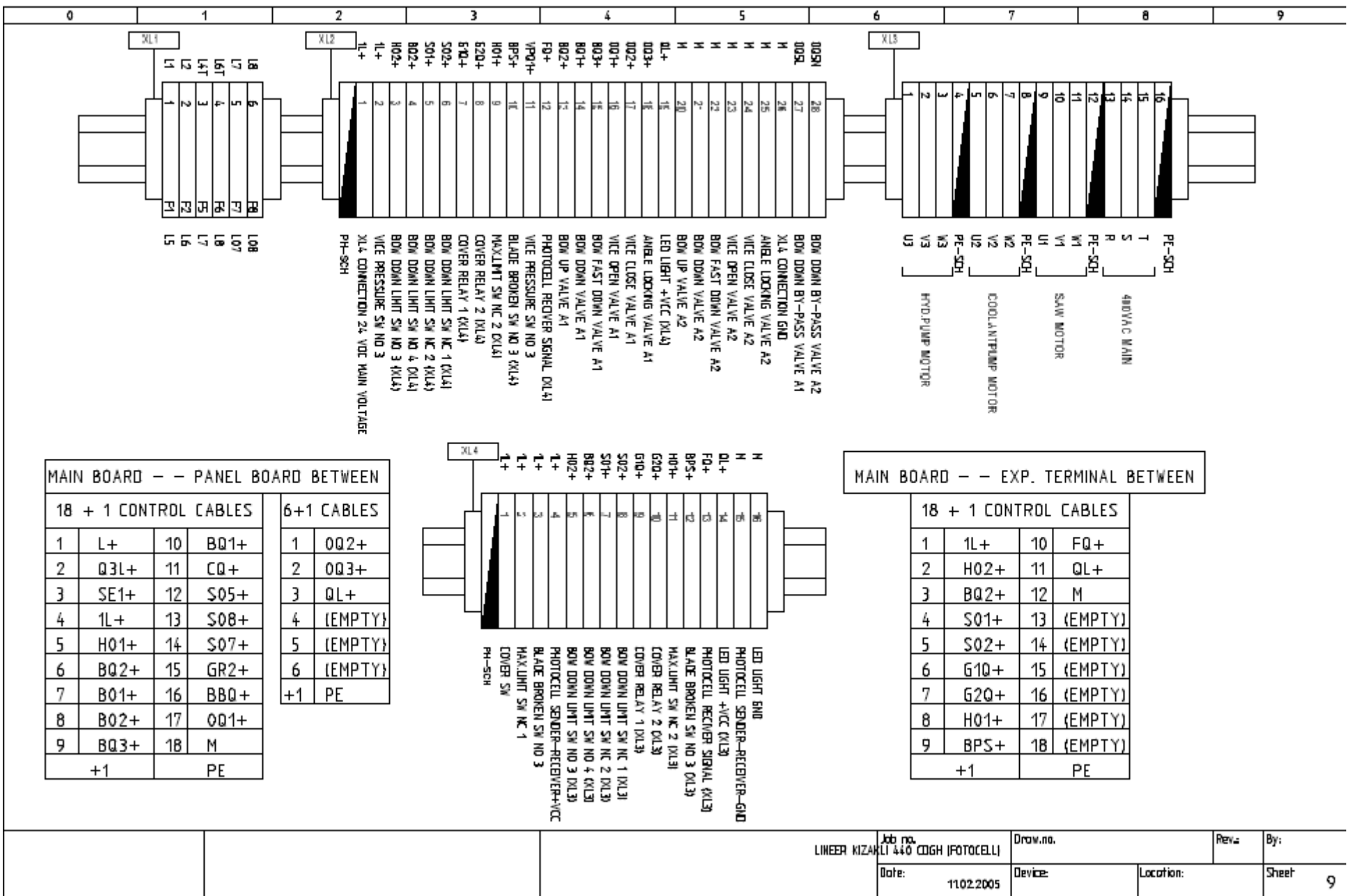
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			Date: 01.07.2005	Device:	Location:	Sheet 6



		LINEER KIZAK LI 440 CDGH (FOTOCCELL)	Job no.	Draw.no.	Rev.	By:
			Date: 24.06.2005	Device:	Location:	Sheet 8



1	1LU	BQ2+	TESTERE YUKARI VALFI (HIZLI) – HEAD UP
2	1LD	BQ1+	TESTERE ASAGI VALFI (YAVASI) – DOWN SLOW
3	1RD	BQ3+	TESTERE ASAGI VALFI – TIMED DOWN
4	2LU	BQ2+	TESTERE YUKARI VALFI (YAVASI) – TIMED HEAD UP
5	2RU	BQ3+	TESTERE ASAGI VALFI (HIZLI) – QUICK APPROACH
6	3LU	OQ2+	MENGENE KAPAMA VALFI – CLOSE VICE
7	3RU	OQ1+	MENGENE ACMA VALFI – OPEN VICE
8	BPV	OQ5L OQ5R	TESTERE ASAGI VALFI (YAVASI) – DOWN SLOW
9	VPS	VPQ+	MENGENE BASINC SALTERI – VICE PRESSURE SW
10			
11			
12			
13			
14			
15			
16			

