

***ELITE* A.G**

KS100/M
MARKING AND CUTTING
MACHINE

SAFETY INSTRUCTIONS

This instruction manual and the indications and symbols that are used on the device itself are provided in order to ensure safe operation of this device and to prevent accidents and injury to yourself or other people.

CAUTION

This thread cutter system should only be used by operators who have received the necessary training in safe use beforehand.

Attach all safety devices before using the cutting machine. If the device is used without these devices attached, injury may result.

Do not touch any of the moving parts or press any objects against the device while sewing, as this may result in personal injury or damage to the device.

MAINTENANCE INSPECTION

Maintenance and inspection of the device should only be carried out by a qualified technician.

Use only the proper replacement parts as specified by Elite A.G.

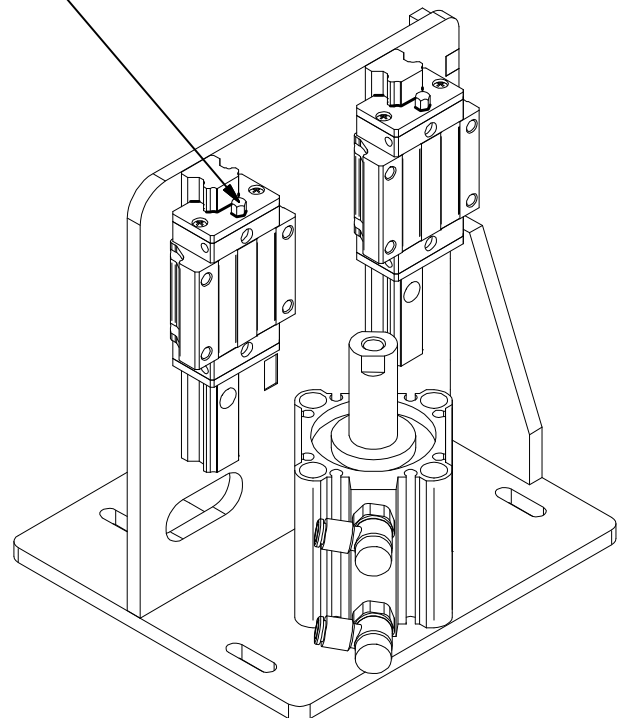
If any safety devices have been removed, be absolutely sure to re-install them to their original positions and check that they operate correctly before using the device.

Any problems in device operation which result from unauthorized modifications to the device will not be covered by the warranty.

The recommended viscosity of oil is about 30-150cSt.
(HIWIN G03 Grease of low particle-emitting (High Speed))

Machine Maintenance Steps

- **Cutting machine maintenance free**
- **Lubricate once a month**



WARNING LABELS

Please follow the instructions on the labels at all times when using the device. If the labels have been removed or are difficult to read please contact ELITE A.G.



INSTALLATION

Parts installation should only be carried out by a qualified technician.

Please contact Elite A.G. for any electrical problem that may need to be repaired.

Do not connect the power cord until installation is complete, otherwise the device may operate if the cut switch is depressed by mistake, which could result in injury.

All cord should be secured at least 25mm away from any moving parts. Furthermore, do not excessively bend the cable or secure it too firmly with staples, otherwise there is the danger that fire or electric shocks could occur.

Be sure to connect the ground. If the ground connection is not secure, you run the risk of receiving a serious electric shock, and problems with correct operation may also occur.

MAIN SCREEN



Main screen function buttons ;

SETTINGS : Enter settings menu.

CUT : Manual knife cutting.(**Only works on when machine STOP**).

PULLER : Increase or Decrease puller.

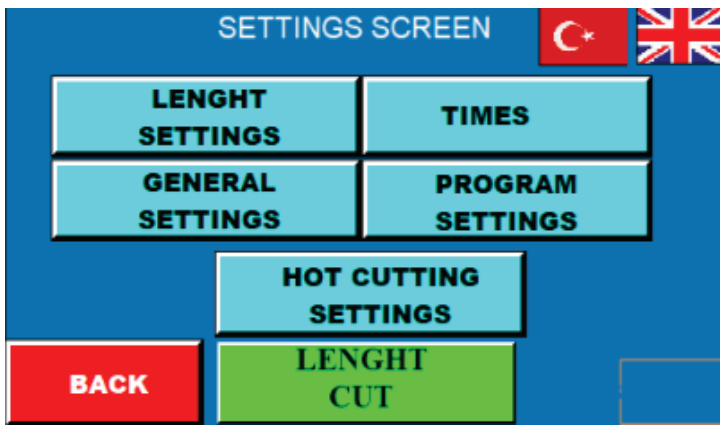
JOG : Manually working freeing motor. (**Only works on when machine STOP**).

QTY : Enter working quantity.

COUNTER : Already finish quantity.You can reset with **RESET** button.

TOTAL COUNTER : This shows total working quantity, from beginning.You can **RESET** if you wish.

READY ! : It show all problems about machine in this area. **READY !** You can start working.



LENGHT SETTINGS : Enter for adjust lenght.

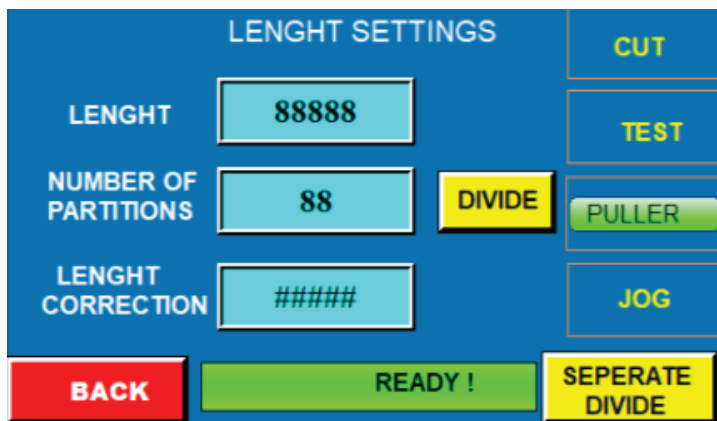
TIMES : Enter for adjust cutting time.

GENERAL SETTINGS : Enter for adjust machine general settings.

PROGRAM SETTINGS : Enter for save or load your ADJUSTMENTS.

HOT CUTTING SETTINGS : Enter for adjust temperature.

BACK : Enter for back to previous menu.

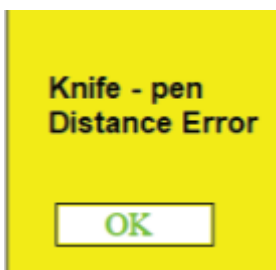


LENGTH : Enter you lenght with Milimeter.

TEST : Push for test your lenght.

NUMBER OF PARTITIONS : After entering the lenght , lenght is taken into the memory of the machine by pressing this button. Press the divide button each lenght change.

LENGHT CORRECTION :If machine give shorter than your lenght you can make correction from here.



KNIFE-PEN DISTANCE CANNOT BE ENTERED LESS THAN 104MM

DIFFERENT DIVISION SETTINGS

Residual value: ##### Number of divisions: 88

88888 1 88888 4

88888 2 88888 5

88888 3 88888 6

BACK NEXT

RESIDUAL VALUE : INCREASING VALUE FROM INTEGER.

NUMBER OF DIVISIONS : THE DESIRED PARTITION RANGES VALUE IS ENTERED

TIME SETTINGS KNIFE

Cutting Time: 88888 milliseconds

Marking Time: 88888 milliseconds

BACK

Knife cutting time and marking time are precisely adjusted in mm on this screen.

GENERAL SETTINGS MARK

Machine Speed: 888 %

Knife-Pen Distance: 88888

Counter: 88888888 DEL

Total Counter: 8888888888 DEL

BACK Sensor Off! Cutting Mode OFF!

Knife-Pen Distance : Measure the distance between the pencil and knife and entered mm. The machine only uses this value in marking mode. (DONT CHANGE THIS SETTINGS UNLESS THE KNIFE-PEN CHANGES.)

If you read empty program, the value here may be zero. In this case, the blade spacing value must be entered here again.

If cutting is disabled the machine works without cutting.

PROGRAM SETTINGS

Program Number: 888

Program Name: 0123456789::<=>?@ABC

Program: SAVE LOAD

BACK

You can SAVE or LOAD your programs from this MENU.
You can SAVE maximum 900 programs to memory

SAVING PROGRAM;

1. First enter Program Number and Name.
2. Push SAVE 2 secs for save it.

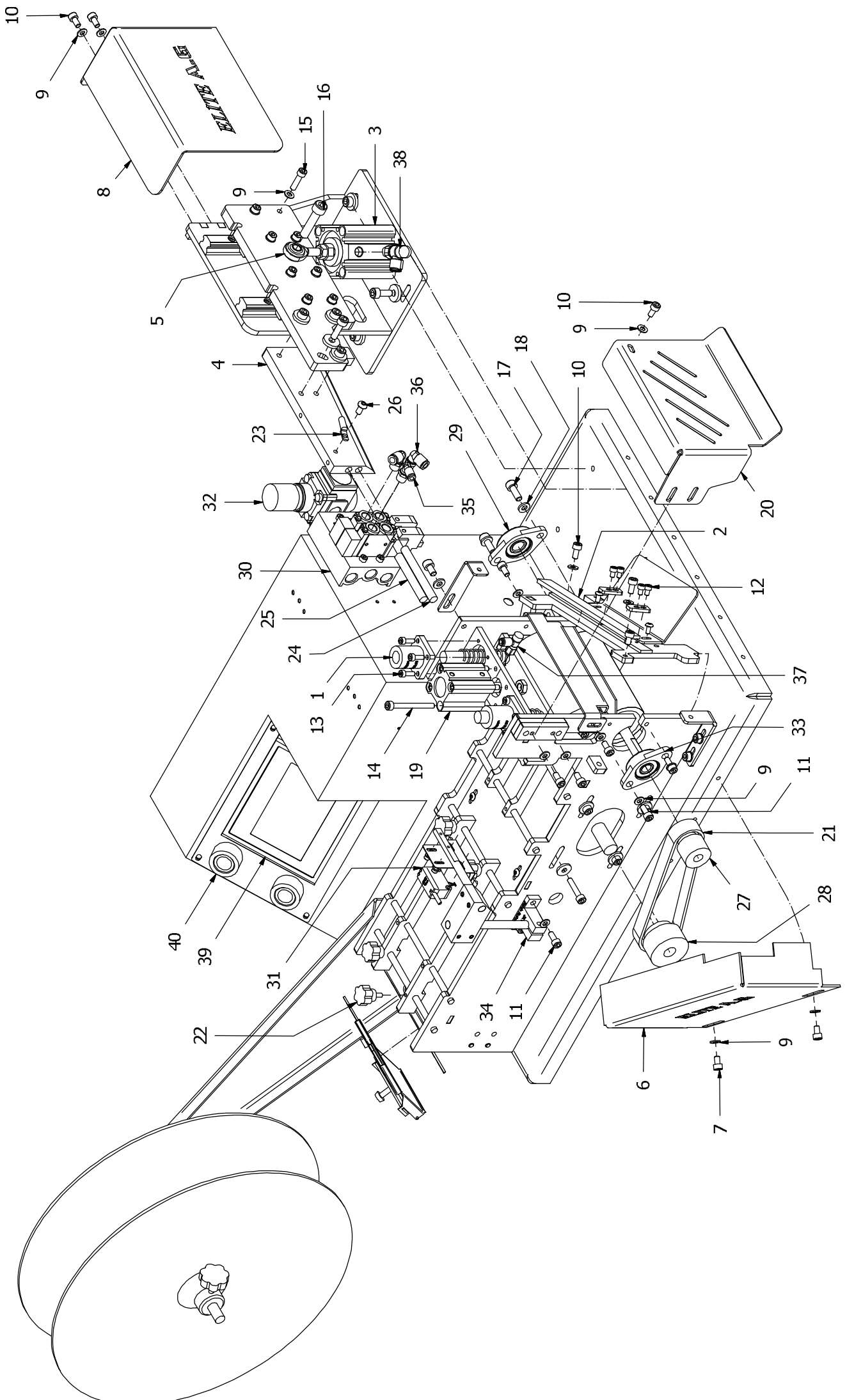
LOADING PROGRAM;

1. First enter Program NO.
2. Than push LOAD 2 secs.

Please dont save empty programs than you should adjust that.

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PART LIST



ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	Linear Bearing	KS100-A_09
2	1	Bottom Knife	KS100_16
3	1	Compact Cylinder	KS100_45
4	1	Top Knife	KS100_12H
5	1	Rod End	KS100-A_50
6	1	Stepper Motor Cover	KS100_35
7	5	Stepper Motor Pulley	ISO 4762 - M5 x 8ISO
8	1	Cylinder Cover	KS100-A_054
9	30	Plain washers for clevis pins - Product grade A	ISO 8738 - 5(2)
10	12	Hexagon Socket Head Cap Screw	ISO 4762 - M5 x 10ISO
11	4	Hexagon Socket Head Cap Screw	ISO 4762 - M5 x 12ISO
12	4	Plain washers for clevis pins - Product grade A	DIN 912 - M4 x 0,7 x 6 x 4,25
13	8	Hexagon Socket Head Cap Screw	ISO 4762 - M4 x 12ISO
14	4	Hexagon Socket Head Cap Screw	ISO 4762 - M5 x 50ISO
15	8	Hexagon Socket Head Cap Screw	ISO 4762 - M5 x 20ISO
16	1	Hexagon Socket Head Cap Screw	ISO 4762 - M8 x 35ISO
17	6	Hexagon Socket Head Cap Screw	ISO 4762 - M6 x 16ISO
18	3	Plain washers for clevis pins - Product grade A	ISO 8738 - 6(2)
19	1	Compact Cylinder	KS100-A_14_CQ2B20-30M
20	1	Knife Cover	KS100-A_057
21	1	Belt HTD 375-5M	KS100-A_059
22	6	Hand Screw	KS100-A_060
23	1	Thermocouple 1m J type	KS100_96
24	1	220V 300 W Resistor - L	KS100_94
25	1	220V 300 W Resistor	KS100_95
26	1		ISO 7380-1 - M5 x 10
27	1	Roller Pulley	KS100-A_062
28	1	Stepper Motor Pulley	KS100-A_061
29	1	Ball Bearing	KS100-A_064
30	1	Valve / Pneumatic Manifold	KS100-A_067
31	1	Label Sensor	KS100-A_066
32	1	Regulator	KS100-A_069
33	1	Ball Bearing	KS100-A_063
34	1	Shaft Holder	KS100-A_070
35	1	Fittings	KS100-A_071
36	2	Fittings	KS100-A_072
37	1	Fittings	KS100-A_073
38	2	Fittings	KS100-A_074
39	1	Touch Screen	KS100-A_076
40	2	Button	KS100-A_075

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TECHNICAL DATA



Reliability Data : Compact Cylinder

Model:CQ2 series

Prepared	H.GOTO 12.JUL.2018
Checked	K.NIKAIDO 12.JUL.2018
Approved	M.OKUMA 12.JUL.2018

B₁₀data

Based on the life test results of CQ2 series, assuming that a failure mode following the weibull distribution, the following B₁₀ data has been estimated (90% confidence level).

Model/Series	B ₁₀	Pressure (MPa)	Load
CQ2 series (φ12~200)	8 million cycles	0.5MPa	Maximum allowable lateral load applied to the bushing is 1/20 of the maximum cylinder force.

Notes)

The determination of B₁₀ is generally based on the methods described in ISO19973, except for pressure, load.

Warning)

SMC does not take any responsibility for the use of this data or for the use of the product when used in the safety related part of a control system (SRP/CS) according to ISO13849-1.



Reliability Data : Solenoid Valve

Model: SY(A) series

Prepared	H. Suzuki 15 th June 2018
Checked	<i>S. Sumiyoshi 19th June 2018</i>
Approved	<i>S. Miyazoe 19. June, 2018</i>

B₁₀ data

Based on the life test results of SY(A)3000/5000/7000/9000 series, assuming that a failure mode following the weibull distribution, the following B₁₀ data has been estimated (90% confidence level).

Model/Series	B ₁₀ (Million cycles)	Pressure (MPa)
SY3*($\frac{2}{4}$)0/5*($\frac{2}{4}$)0/7*($\frac{2}{4}$)0/9*($\frac{2}{4}$)0 series (Single, Double, 3 port)	47	0.7
SY3*($\frac{2}{4}$)0/5*($\frac{2}{4}$)0/7*($\frac{2}{4}$)0/9*($\frac{2}{4}$)0 series (3 position)	27	0.7
SYA3*($\frac{2}{4}$)0/5*($\frac{2}{4}$)0/7*($\frac{2}{4}$)0 series (Single, Double)	47	0.7
SYA3*($\frac{2}{4}$)0/5*($\frac{2}{4}$)0/7*($\frac{2}{4}$)0 series (3 position)	27	0.7

Notes)

The determination of B₁₀ is generally based on the methods described in ISO19973, except for Pressure.

Warning)

SMC does not take any responsibility for the use of this data or for the use of the product when used in the safety related part of a control system (SRP/CS) according to ISO13849-1.

Reliability characteristic data for: Air cylinder

Model number : Standard type/CJ2 series
 _____ : Low friction type/CJ2Q series
 _____ : Low-speed cylinders/CJ2X series

B10 data

Based on the following endurance test results of the cylinder CJ2 series, and assuming a failure mode following the Weibull distribution the following B10 data has been estimated. (90% confidence level)

	B10
Standard type/CJ2 series	22.8 million cycles
Low friction type/CJ2Q series	4.1 million cycles
Low-speed cylinders/CJ2X series	0.8 million cycles

NOTE:

The estimated reliability data provided is only applicable to the component in the stated operating conditions. Use of this data for any assessment under standards or otherwise, is at the sole risk of the user. This product is not a safety component and is not supplied to provide a safety function.

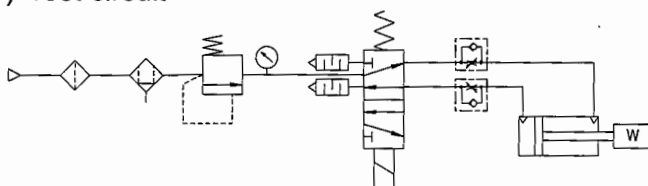
Endurance test results

For reference

- Standard type: 15 pieces were tested up to 25 million cycles, and found to have zero failure.
- Low friction type: 10 pieces were tested up to 5 million cycles, and found to have zero failure.
- Low-speed cylinders: 10 pieces were tested up to 1 million cycles, and found to have zero failure.

Endurance test conditions

1) Test circuit



- 2) Pressure: 0.5MPa
- 3) Lubrication: None
- 4) Air supply: Dry air
- 5) Operating freq.: CJ2&CJ2Q : 120times / sec.
CJ2X : 60 times / sec.
- 6) Laboratory: Life test room
- 7) Ambient temp.: Normal temp. (13 to 33 °C)
- 8) Load:


CJ2&CJ2Q : The load whose lateral load applied to the bushing is 1/40 of the maximum theoretical output/

CJ2X : No load

Prepared	T. MATSUDA Feb-24-2010
Checked	
Approved	T. Sato Feb-24-2010

Life of Compact Cylinder

The table below shows a guideline for the life of the product. The data has been validated from life testing results.

Product name	Series	Product life (as reference)
Compact cylinder: Single acting	CQS-S/T series 	5 million reciprocating cycles.



Caution

Product Life

- Product life shown in this material is for reference for model selection, and not the actual warranted values.
 - Maintenance including regular replacement of seals and grease improves product life.
- Please refer to the life guideline above for the average maintenance intervals.

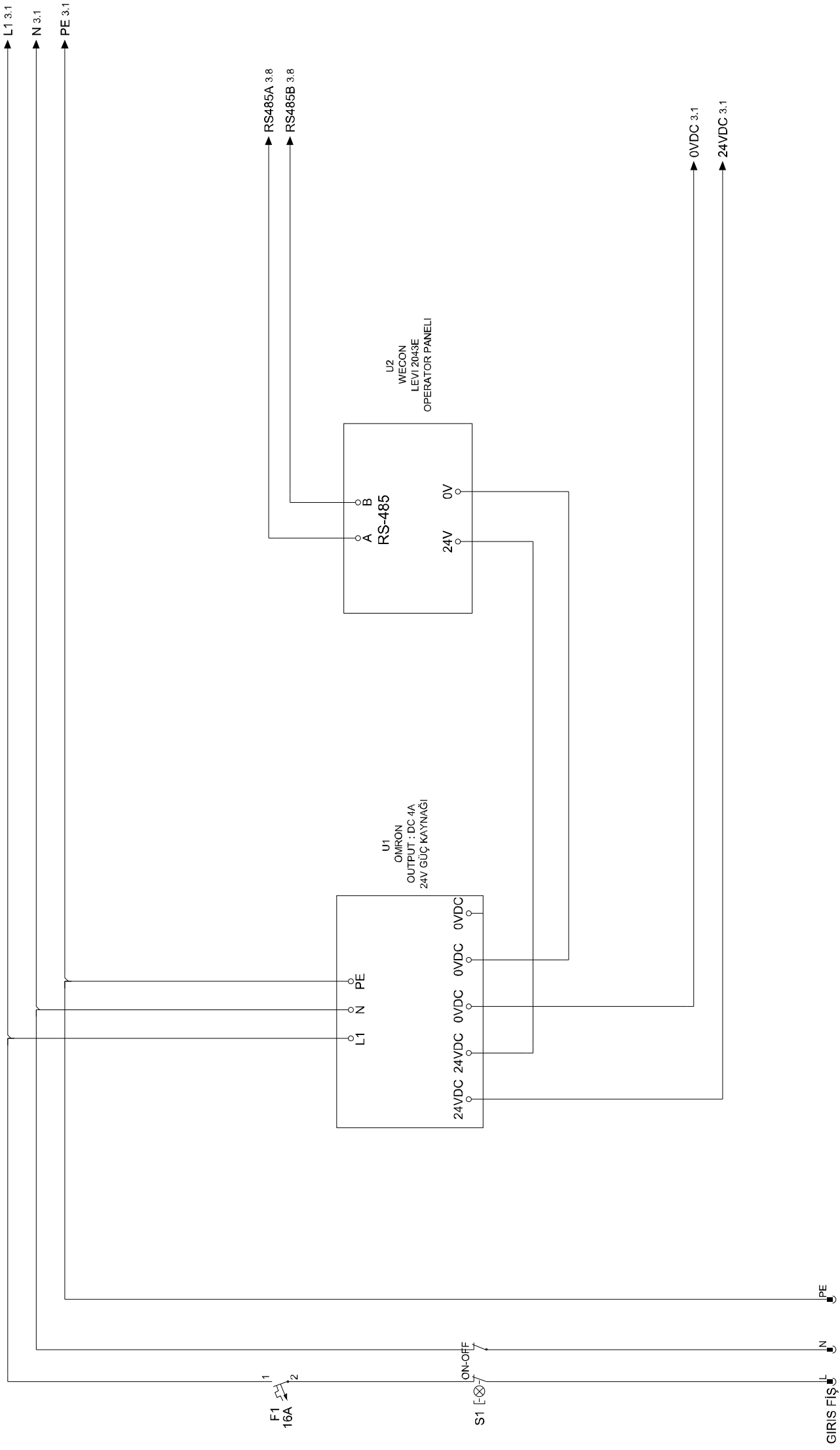
Conditions for the expected product life

- Specifications and values published in catalogs, drawings and operation manuals are satisfied.
- Introduction of foreign matter, including drain, into the operating fluid may cause lubrication failure.

Regular inspection

For regular maintenance, please replace seals, add grease, or replace the product as necessary in accordance with below points Also refer to the catalog or the Operation Manual (CQS*-OM0001C) for detail.

- Air leakage from seals
- Sliding mark on the piston rod
- Change in operating condition and change in the minimum operating pressure
- Presence of a grease film on the sliding surface



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