EDGE TECHNOLOGIES

Rebel V-65 Servo

Revision 8

Rebel V-65 Servo

OPERATIONS MANUAL

Vs-65 Series
SERVO SHORT BAR FEEDER
REBEL-V65E SERVO / REBEL-V65LE SERVO

MANUAL FOR USE AND MAINTENANCE

REV. 08 DATE：2016/06/01 COD：BRS104032

S/H

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CONTENT（INDEX）

1. GENERAL INFORMATION

Please read the Manual carefully before operating bar feeder.

1.1 Contents of the manual

The feeder manufacturer provides this manual, which is an essential part of the integrated products. Please act according to the indication of the manual in order to assure operators' safety as well as the machines', and greatly achieve economic efficiency and to get the best output of the machine's capability. The important part is printed in boldface, and included the following marks:

Warning：

Hazard! It is possible to hurt you seriously, please be careful.

Watch out-Precautions：

For preventing the accident or the loss of property, you should take precautions.

Important information：

Special important know-how information

Please take use of the table of contents, you will quickly find the information you need.

The mark shown in the manual means that the machine should be operated by a qualified and expert operator. As to the other operation shall be handled by a qualified personnel or professional operator of bar feeder.

1.2 The label of manufacturer and bar feeder

A. Name of manufacturer

B. Model(Type)

C. Serial Number

D. Manufacture Date

E. Weight of Machine

F. Pneumatic Pressure

G. Rated Voltage

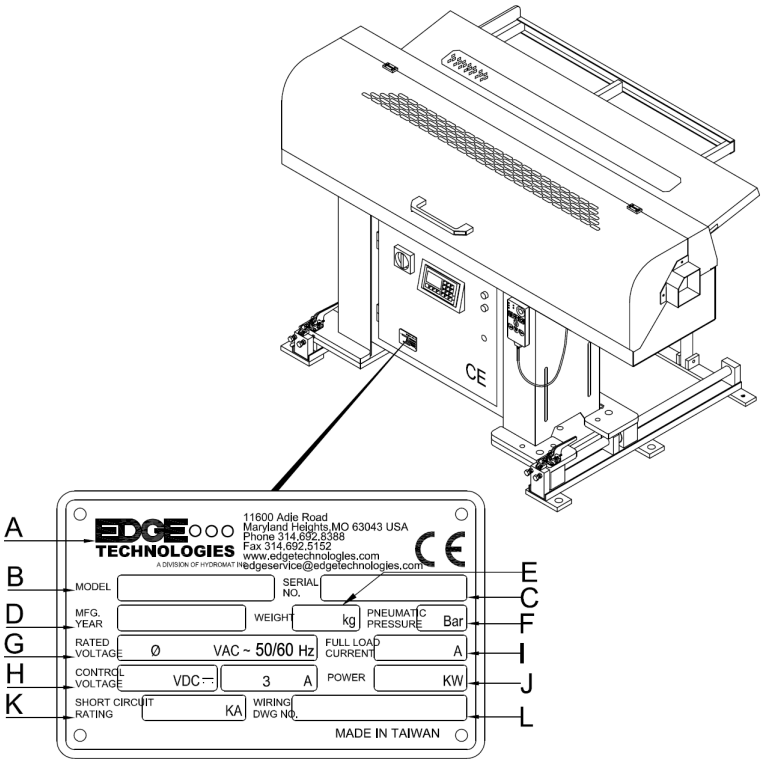
H. Control Voltage

I. Full Load Current

J. Power

K. Short Circuit Rating

L. Wiring Drawing Number



1.3 Support of technique

If you need any support of technique, you can inquire the service center in the appendix at anytime.

INFORMATION：

When you need the support of technique, please refer to the label on the bar feeder. Tell us the data of the bar feeder.

2. DATA OF TECHNIQUE

2.1 Introduction of the bar feeder

The Vs-65E/LE is designed for full automatic lathe to auto feeds material, the bar feeder is suitable for digital control sliding headstock lathe and fixed headstock lathe. The program of the P.L.C system can control the bar feeder running with the lathe at the same time. Operator can set parameters by the interface of man machine directly.

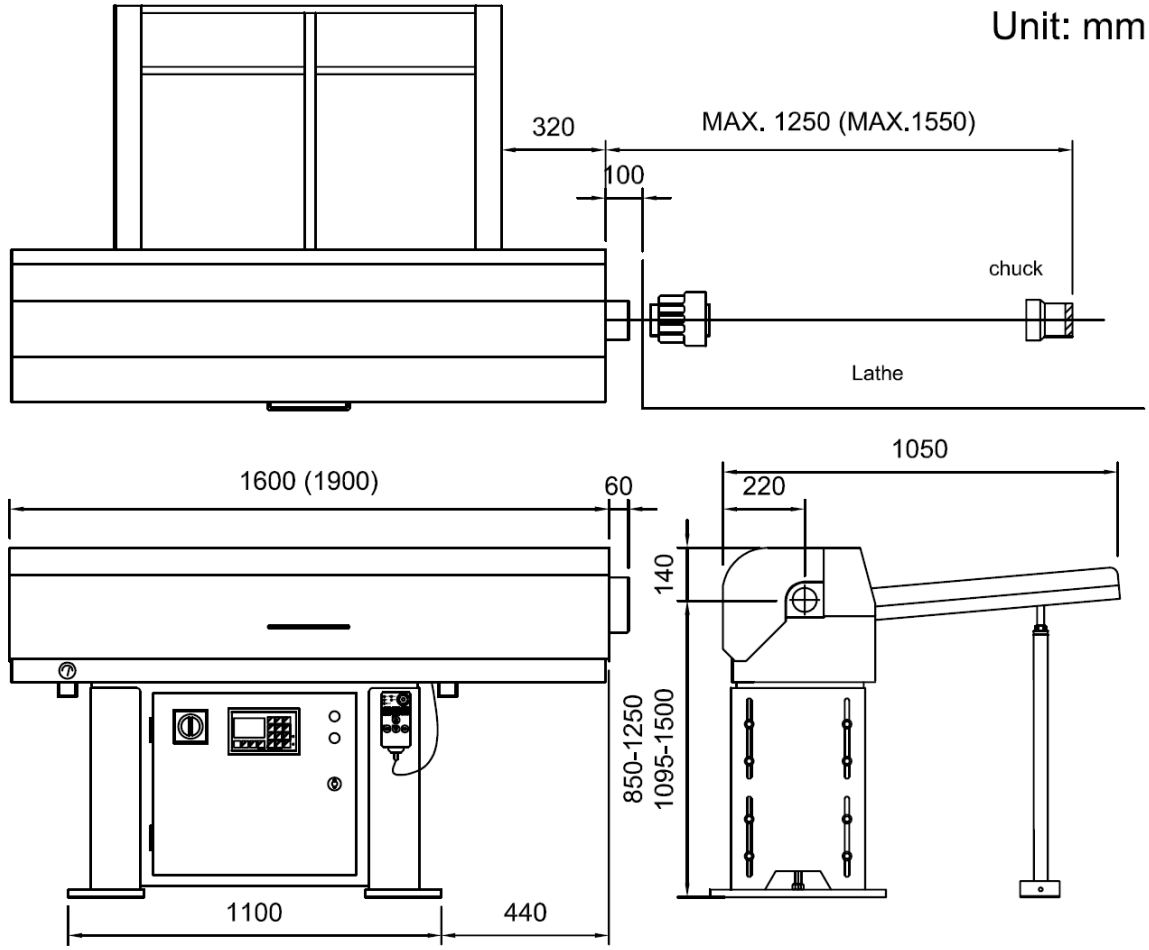
The remote control box is easily to be operated.

The bar feeder can feed circular material and any other forms of material. While the lathe is running, the guide channel is closed completely; meanwhile, the lubricating oil is poured into the guide channel. Therefore, noise and shake can be reduced while the material is rotated in high speed.

Furthermore, the lubricating oil also can reduce the temperature resulted from friction so the surface of material can't be damaged. The remnant material will be pushed out off the guide channel by the push bar or the next material.

The instructions and legends of the manual are edited according to the operator stands at the left side of the lathe.

2.2 Machine size



2.3 Description

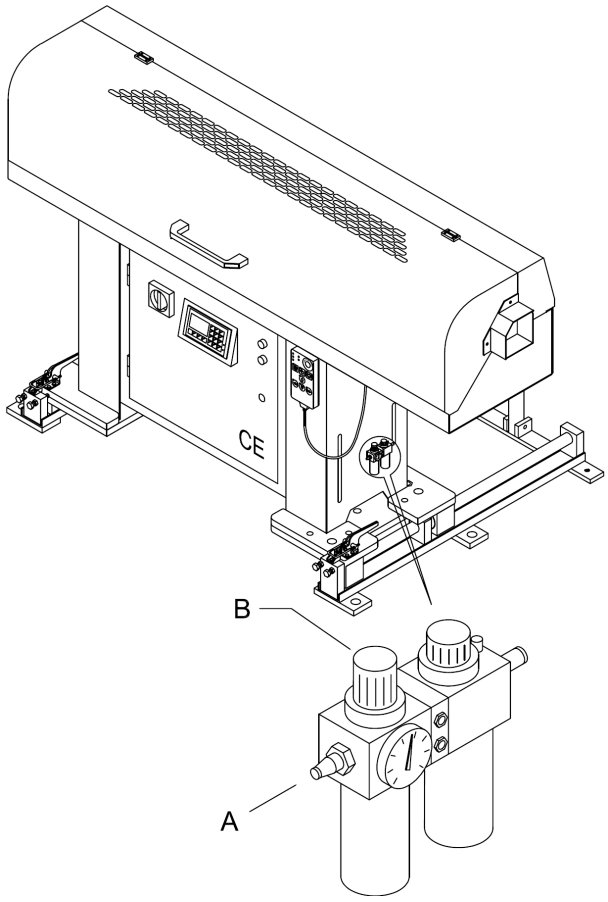
	Vs-65E	Vs-65LE
Diameter of bar	ø5 mm ~ ø65 mm	
Length of bar	max.1250 mm Bar length depends on spindle length.	max. 1550 mm Bar length depends on spindle length.
Spindle height	850 mm ~ 1250 mm	
Extend spindle height	1095 mm ~ 1500 mm	
Weight	250 kg	280 kg
Air supply	5 ~ 7 kg / cm^2	
Power supply	220 / 380V 0.4A 50 / 60Hz	

2.4 Compressed air supply and power supply

2.4.1 Compressed air pipe minimum Ø 8mm. Minimum pressure 6 kg/cm^2. Compressed air consumption about 50L/H.

2.4.2 Put the air supply tube into (A). Then pull and turn around the knob (B) and set the pressure at 6kg/cm^2.

2.4.3 Power supply 220V/380V，50/60Hz.



3. TRANSPORTATION

Hazard—warning：

Transportation and hoist (please refer to the item 3.2.1 of following weight table) You have to sure the crane; forklift or other related tools could take the weight. Using the proper equipment to move and hoist the machine should be led by the expert personnel.

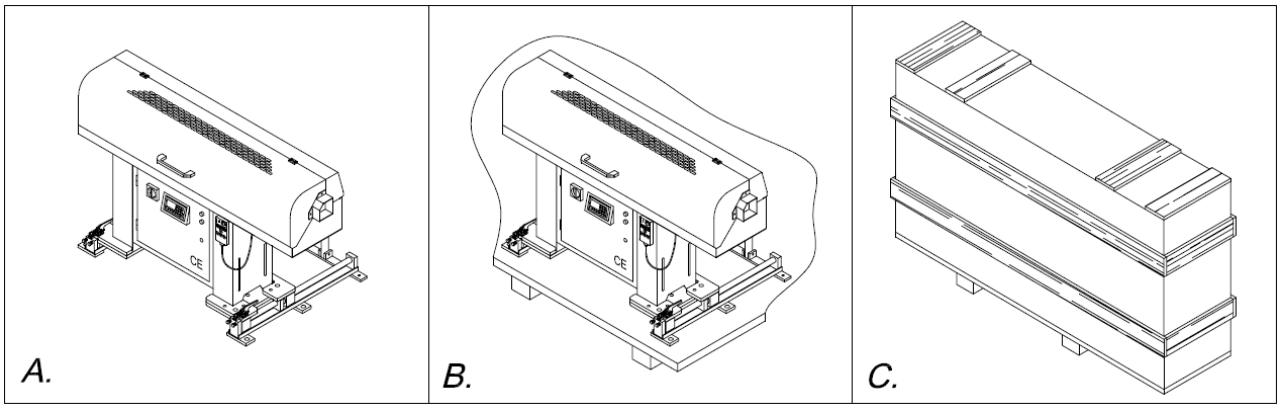
3.1 Packing the Feeder

There are three kinds of packing Feeder：

A. Unpacking.

B. On the pallet: Put the feeder on the pallet and wrap PE membrane around the feeder.

C. Packing with wooden box**:** The Feeder was packed with wooden box and wrap PE membrane around the box.

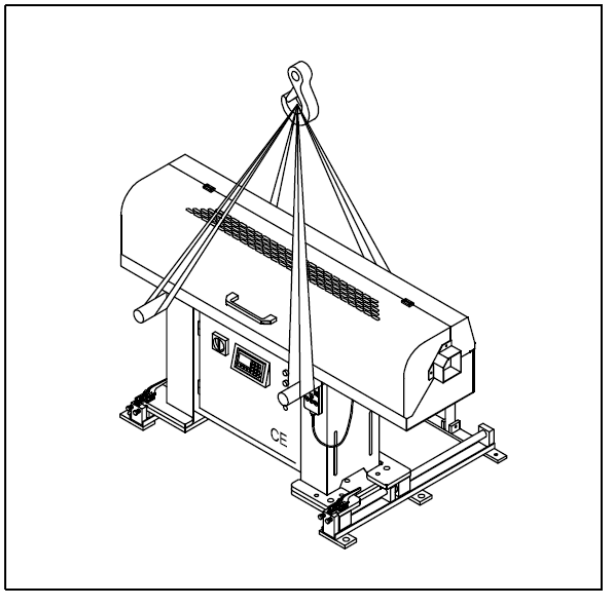


3.2 Transportation and hoist

3.2.1 Unpacking hoist

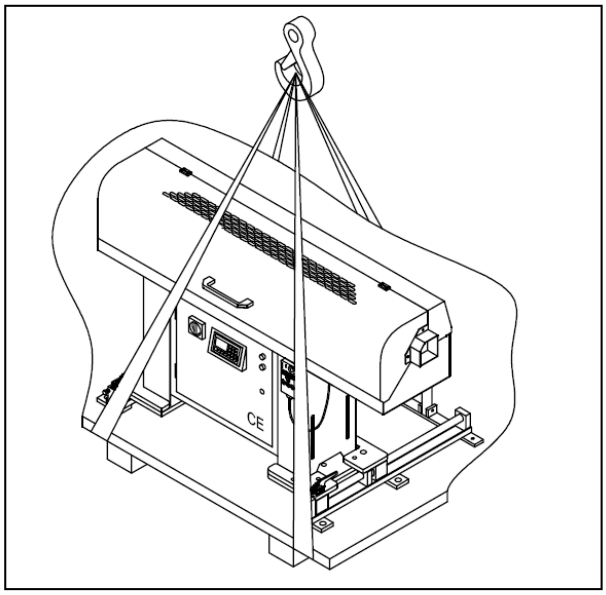
Putting two steel bars (Diameter：30mm, Length: 1M) under the bar feeder, using suitable steel ropes which are able to bear the weight to hoist the bar feeder.

Vs-65E	250kg(NET)	300kg
Vs-65LE	280kg(NET)	370kg



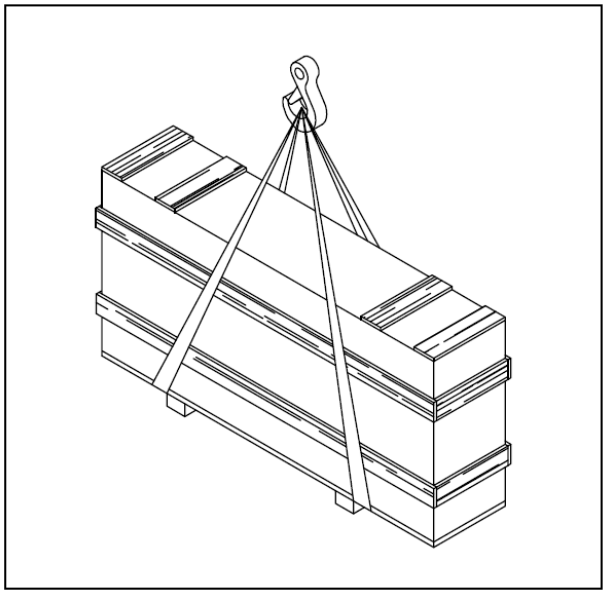
3.2.2 On the pallet

Using suitable steel ropes which are able to bear the weight to hoist the bar feeder.



3.2.3 Packing with wooden box

Using suitable steel ropes which are able to bear the weight to hoist the bar feeder.



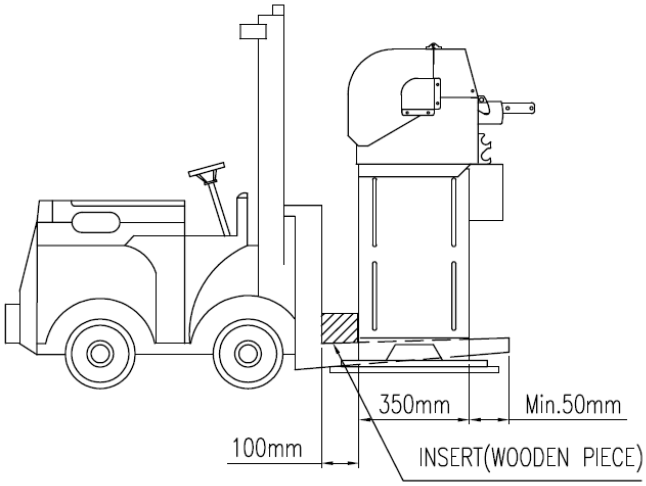
3.3 Forklift transportation

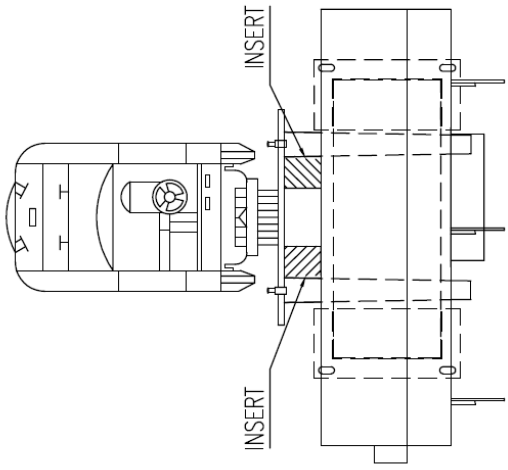
3.3.1 Safety regulation moved by forklift

1. The operator of forklift should have been trained.
2. Select the suitable forklift.
3. Make sure the weight and the center of gravity of the machine.
4. The forks should extend under the full length of the machine body during transportation.
5. Be sure the balance and don't lift too high.
6. Be careful when climbing or descending down a slope.
7. Be sure all wire connections have been removed before moving.
8. Someone should to guide the operator of the forklift.
9. Forklift truck must be a minimum of 7 tons capacity.
10. Make sure that forks do not touch any delicate part of the machine.
11. Make sure machine is in balance.

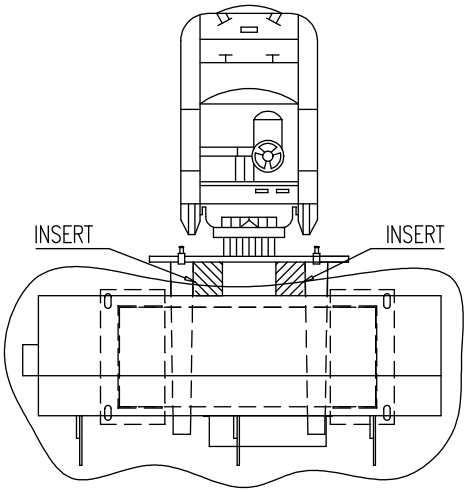
(Note) Machine weight approx.：Vs-65E------ 250kg (506lbs)
Vs-65LE---- 280kg (594lbs)

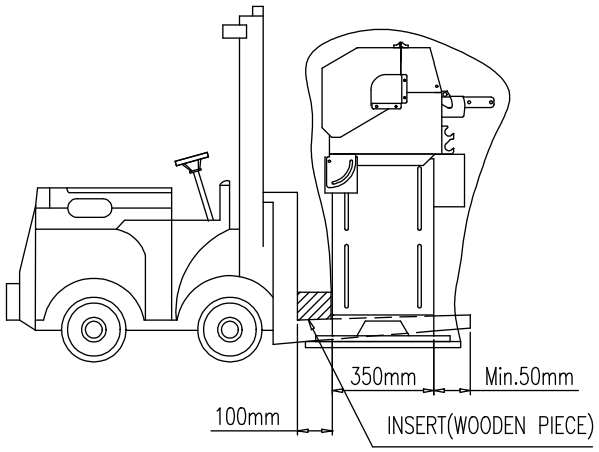
(1) Unpacking hoist





(2) On board transportation



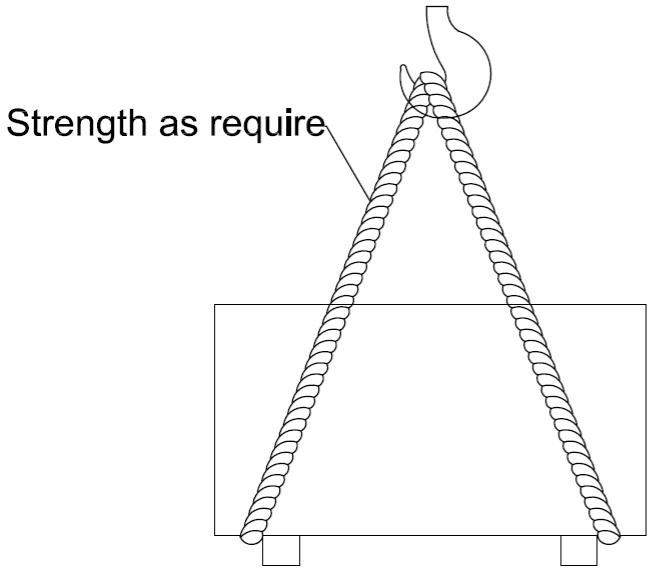


(3) Wooden transportation

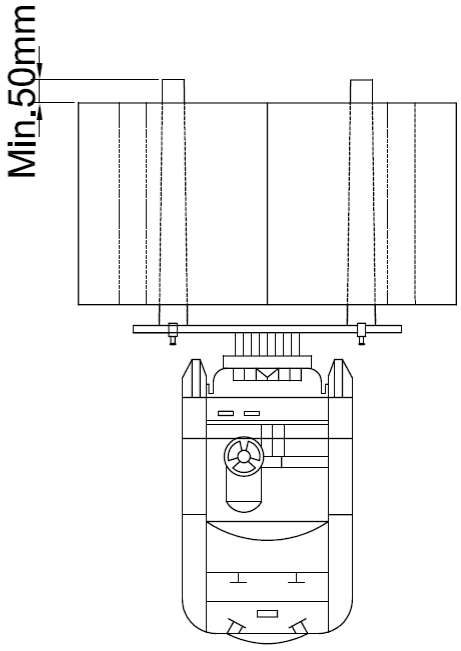
Machine weight approx.：Vs-65E------ 300kg (660lbs)

Vs-65LE---- 370kg (814lbs)

A. Moved by crane

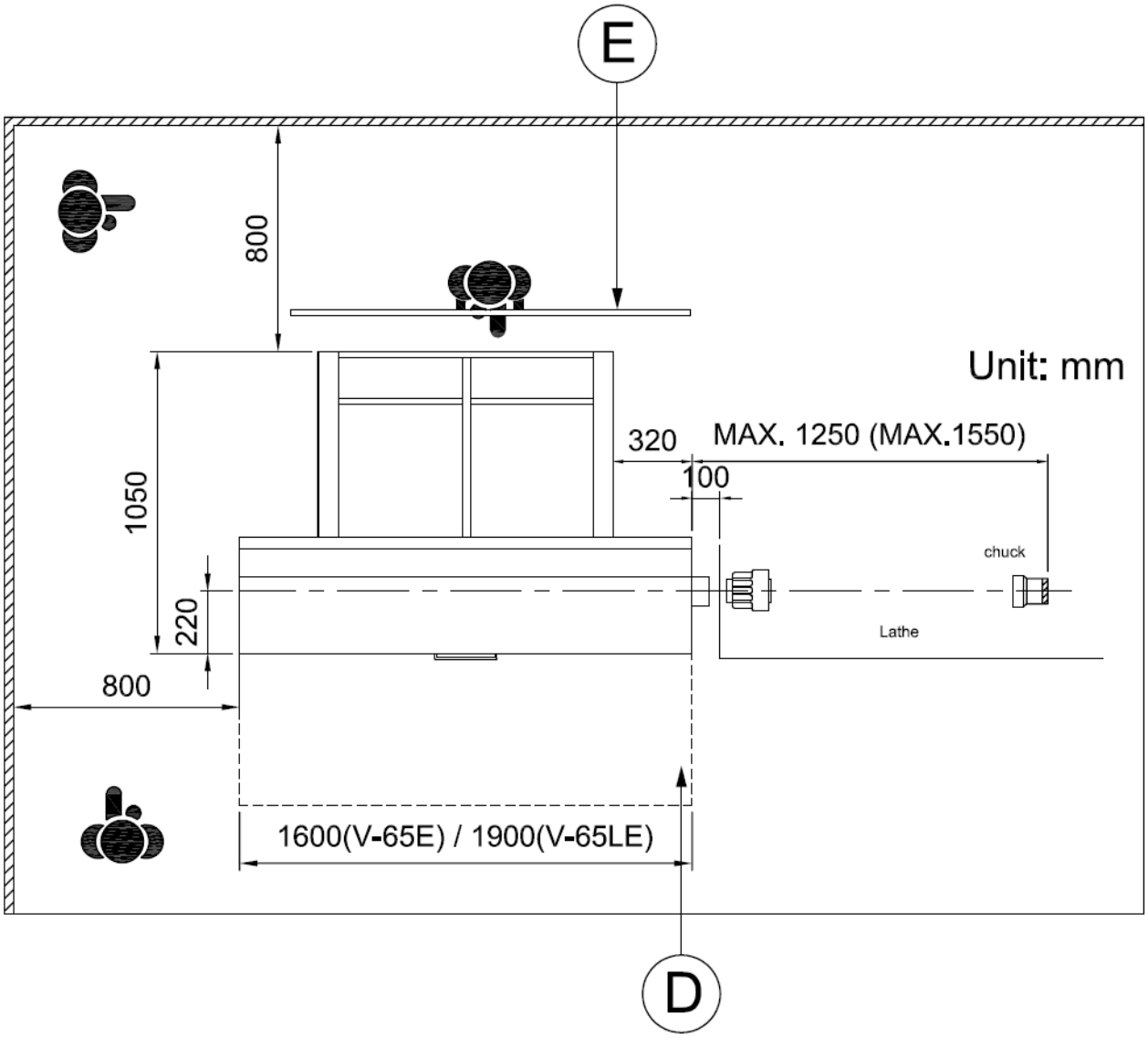


B. Moved by forklift



3.4 Installation area

In order to fix the feeder securely, the floor must be flat and firm.
According to the operation of the feeder to reserve a suitable area in advance.
Area：(D-operator area)，(E-supply area)，The space must be enough to avoid the feeder caused crashed by the operator.
The area of installation needs to have suitable lighting, outlet and compressed air joint.
The feeder can't adapt to explosive surrounding.



4. INSTALLATION

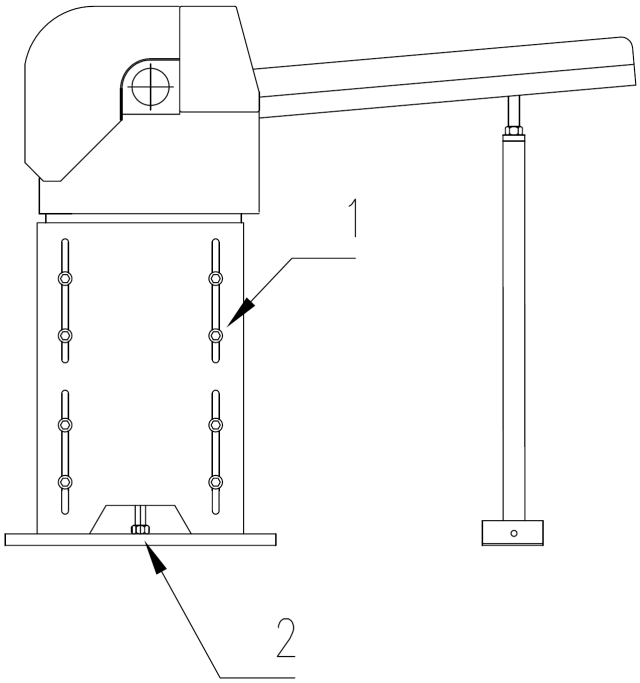
4.1 Bar feeder — Installation

Before installing the bar feeder, the spindle of the lathe must be horizontal and the Lathe is fixed on the ground strongly.

4.2 Adjustment of height

4.2.1 Disengage the screw（1）.

4.2.2 Adjust the screw（2）and shift from up to down. Adjust the height to a straight line between the center of the bar feeder and the center of the lathe.



4.3 Initial position

4.3.1 Distance between Vs-65E/LE and CNC-lathe

In order to use the automatic bar feeder in the best possible way you should see to it that the distance between the CNC-lathe and the bar feeder is not too short!!

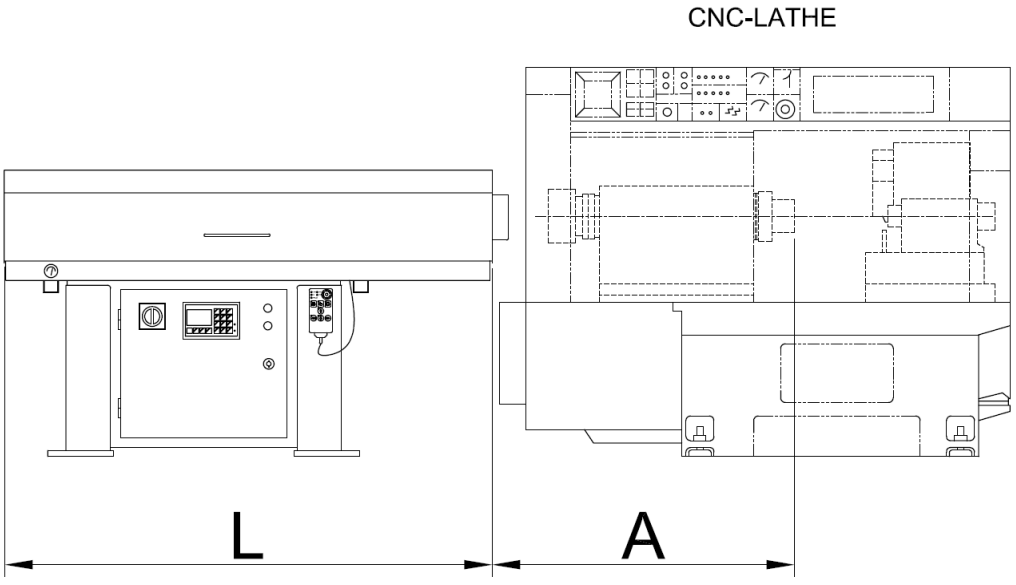
You may; however, load only bars whose length equals the spindle length of the CNC- lathe. The bar stock has to be fed completely into the lathe spindle.

The bar feeder, however, must not be too far from the CNC-lathe.

The Max distance between CNC-lathe and bar feeder can be seen from the following drawing.

If 1250mm should not be enough, you have to install a Vs-65LE to replace Vs-65E.

! IMPORTANT ! Be careful that – if several chucking devices are available-the max. Distance will never be exceeded.



	L	A
Vs-65E	1600mm	Max.1250mm
Vs-65LE	1900mm	Max.1550mm

4.4 Directional adjusting

! IMPORTANT !

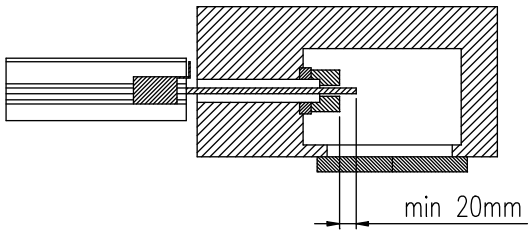
During directional adjusting the push bar must not touch the lathe spindle!!

The height must have been adjusted roughly beforehand and has to be readjusted if necessary.

The direction has to be adjusted rather exactly as the adjusting range for precision adjusting is limited.

Adjusting: You should be able to see through the spindle from the chuck and move the push bar forwards.

If the push bar does not go through the middle of the spindle, go back to final position " –Z " and adjust the bar feeder afterwards. Then check the direction of the push bar and repeat checking until the push bar is adjusted exactly.



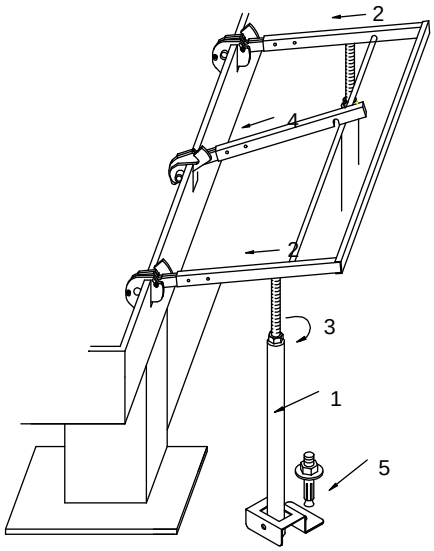
4.5 Mounting of the feeder frame

4.5.1 First, put the lever into support tube（1）.

4.5.2 The support profile fixed with the extension（2）and fastened in the suitable height with screw（3）.

4.5.3 Then the middle support profile fixed with the extension（4）.

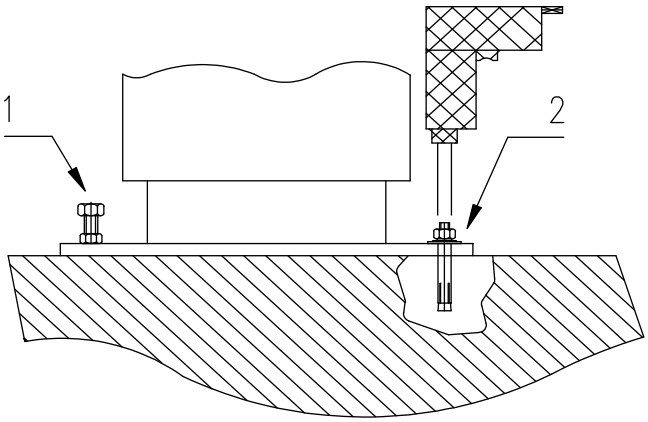
4.5.4 Finally securing with the screw（5）.



4.6 Securing and fastening of the bar feeder

4.6.1 Rotate 4 ground-screws（1）to touch the ground, and fix the nuts.

4.6.2 Drill ground（2）with drill bit Ø19mm（¾”）, and fix the spindle-screw.



4.7 Accessories installation

4.7.1 Axial displacement (optional)

4.7.1.1 Place two woods (height: about 10cm) under the bar feeder.

4.7.1.2 Place axial displacement by each side under stands of the bar feeder (axial displacement has two parts: right part and left part)

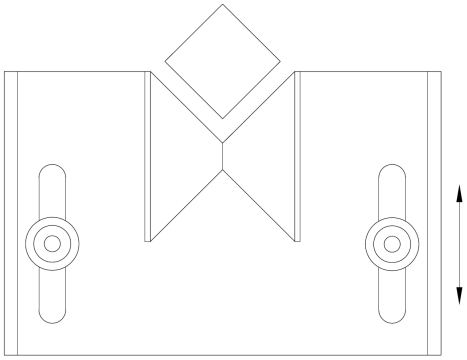
4.7.1.3 Push the stands to the end of axial displacement and fix. And then take woods away.

4.7.1.4 Drill ground with drill bit Ø 19mm（¾”）of bit, and fix the spindle-screw.

4.7.2 Auxiliary support stand (optional)

4.7.2.1 Place a bar on V-type holder and spindle of the lathe.

4.7.2.2 Place Auxiliary support stand in front of the bar feeder and then lift Auxiliary support stand to touch the bar and fix the screws.

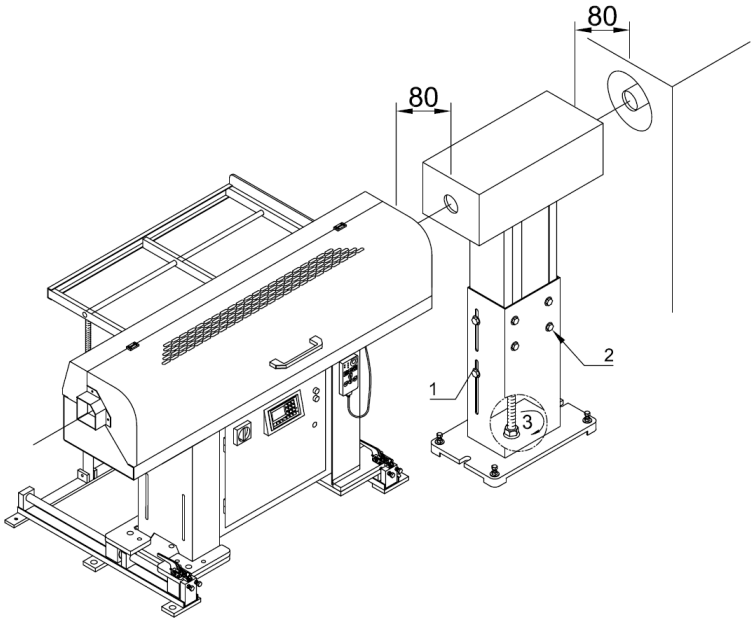


4.7.3 Auxiliary support stand (optional)

4.7.3.1 Place Auxiliary support stand between bar feeder and lathe.

4.7.3.2 Loose screws（1）and（2）, adjust screws（3）to suitable height so that the push bar into the center of the guide tube is accurately.

4.7.3.3 Tighten screws（1）and（2）.



4.7.4 Spindle liners

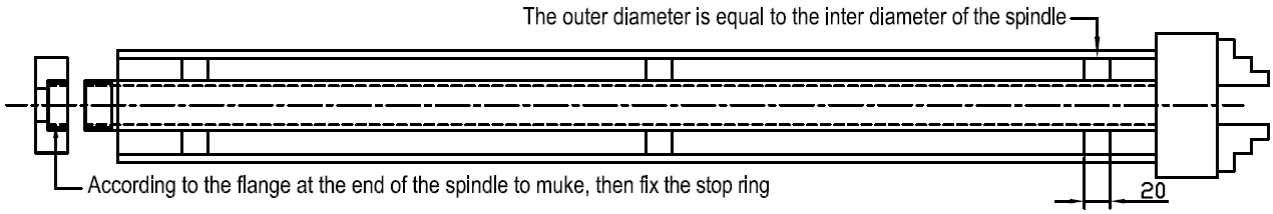
4.7.4.1 How to select correct spindle liners：

The inner diameter of the spindle has to be adjusted to the outer diameter of the bar stock. According to our experience, the diameter of spindle of blank bar stock should be bigger by 3mm to 5mm than the diameter of bar stock.

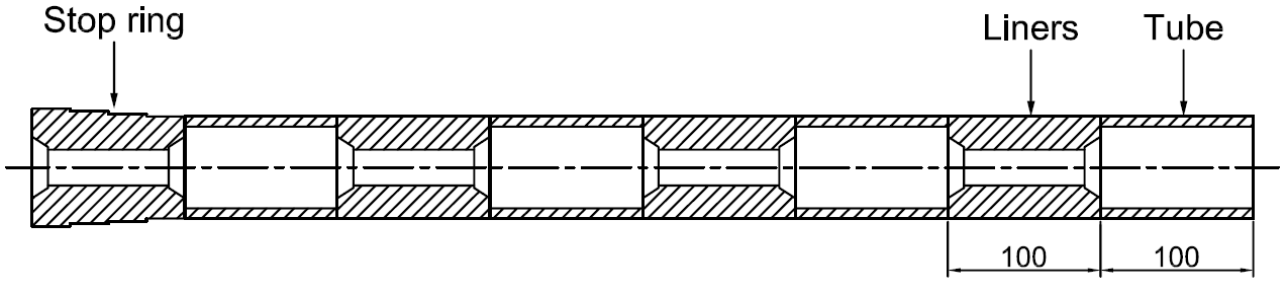
Even black bar stock can be machined by spindle liners.

4.7.4.2 How to make two kinds of spindle liners:

1 Iron tube：Choose tubes which internal diameter is bigger by 3mm to 5mm than the material to make.



2 PE：Choose PE or Teflon to make according to the following method.

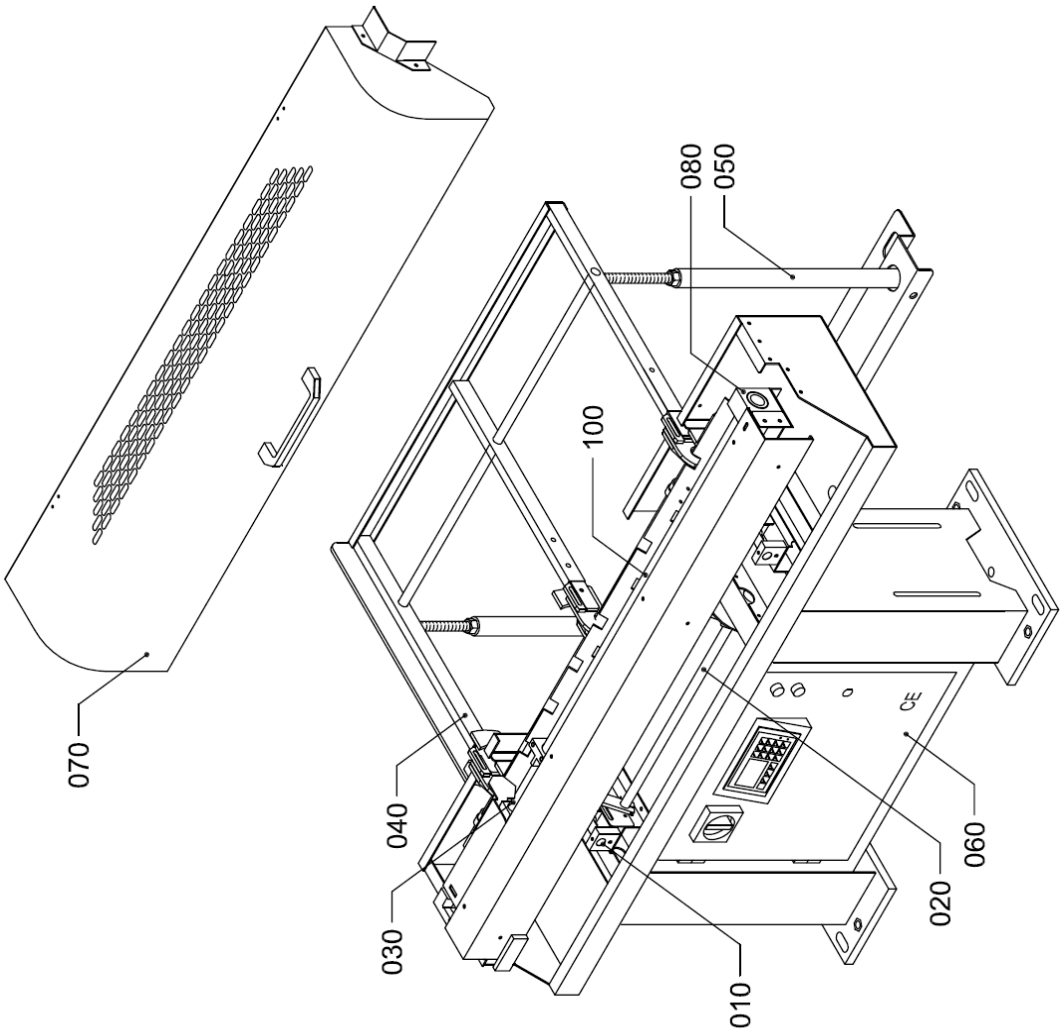


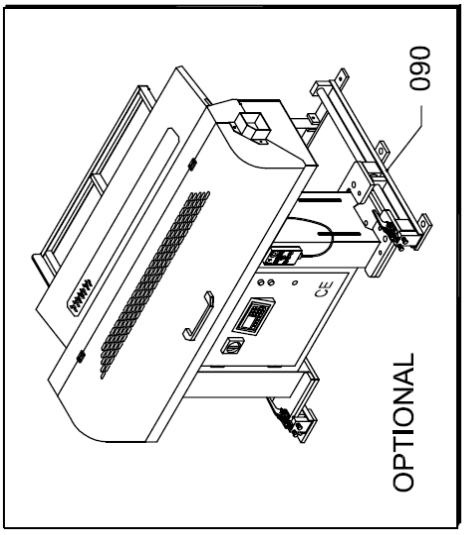
1. Tube：The thickness of the tube is 2mm to 3mm
2. Liners：Internal diameter of the lines should be bigger by 3mm to 5mm than the material.
3. Stop ring：In order to fasten the liners, the stop ring would be accorded with the inter diameter of the spindle to can make in the form of ladder.
4. When feeding different sizes of material, exchange the liners and stop ring.

※ The tube and the diameter of the liners must be smaller by 3mm to 5mm than the inter diameter of the spindle which prevent the tube was expanded.

5. ADJUSTMENTS AND SETTING

5.1 Structure of the bar feeder





010	BRACKET DEVICE
020	CHANGEOVER
030	BAR PUSHER
040	FEEDING-EXTRACTION CONTROL DEVICE
050	FRAME
060	STAND
070	COVER
080	FEEDING DEVICE
090	SLIDING RAIL (OPTIONAL)
100	AIR PRESSURE DIAGRAM

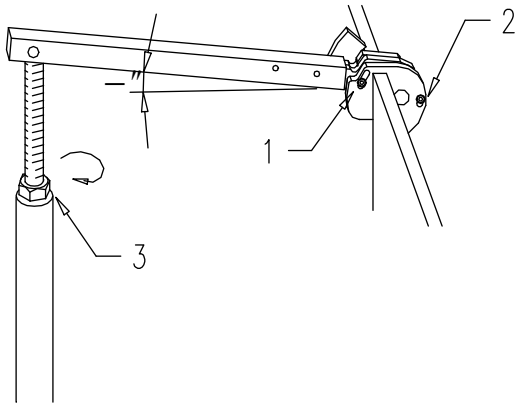
5.2 Adjustment and selection of the bar feeder

5.2.1 Adjustment of lever system

5.2.1.1 The inclination of the feeding frame depends on the kind of bar stock used： round bar stock：α about 5˚ ~ 8˚ hexagonal bar stock：α about 20˚ Disengage screw (1) and (2).

5.2.1.2 Adjust screw (3) to suitableαangle. The material can smooth to fall down.

5.2.1.3 Tighten screws (1) and (2).



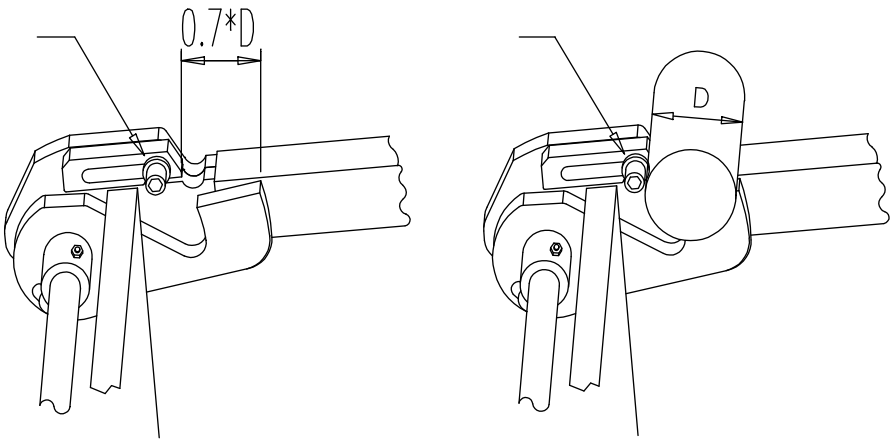
5.3 Adjustment of bar stop

5.3.1 Disengage screws I each.

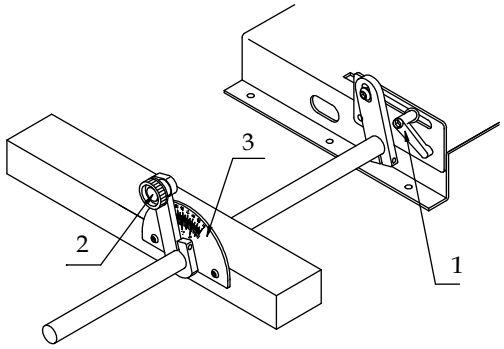
5.3.2 Adjust bar stop so that only I bar is loaded.

5.3.3 Tighten screws I.

5.3.4 Switch into manual mode , and go to position.



5.4 Adjustment of bar diameter



5.4.1 Turn to the manual position , and press until it is lighted.

5.4.2 Swing the handle (2) to adjust the graduation as same as the diameter of bar on a graduated meter (3).

5.4.3 Screw tightly the fixing-handle (1) on both sides.

5.4.4 Press until it is lighted, put a piece of material in V-type vessel.

5.4.5 Try to push forward the material into the spindle, and check the condition of adjustment.

※ Follow the step of 5.4.1, you may adjust again if any.

5.4.6 Move out the material, press until it is lighted, the adjustment is completed.

5.5 Selection of push bar:

The push bar has to be adjusted to the bar diameter：

Push bar	Bar stock
ø6mm	to ø15mm
ø12mm	ø15-25mm
ø20mm	from ø25mm

Changing of push bar：

※ remove headless PIN 2 from borne bushing；

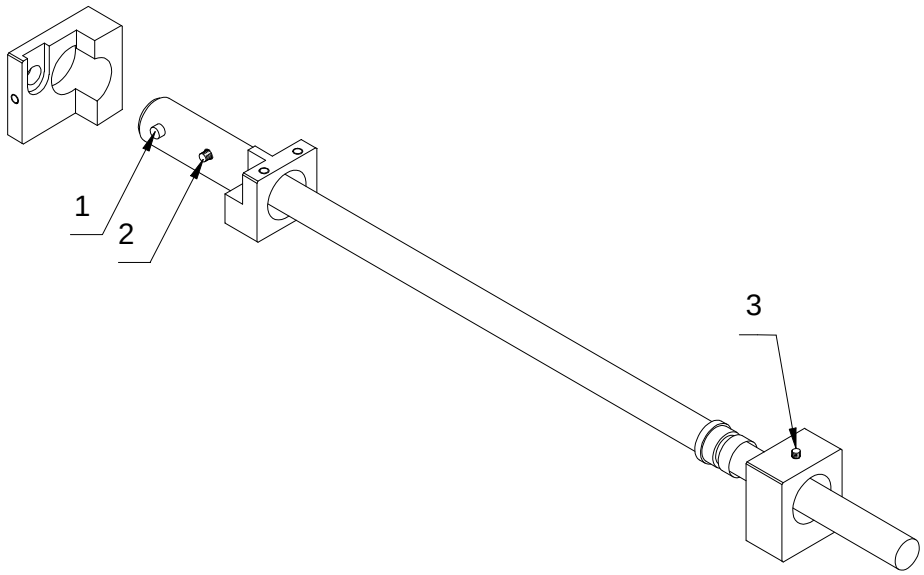
※ remove headless PIN 1 from fixing device；

※ shift borne bushing towards interior of bar feeder and remove push bar；

※ take desired push bar from cover and mount in opposite order；

※ store removed push bar in the frame；

!IMPORTANT! The headless PIN for the fixing device must not exceed clutch sleeve!



5.6 Optimizing remnant

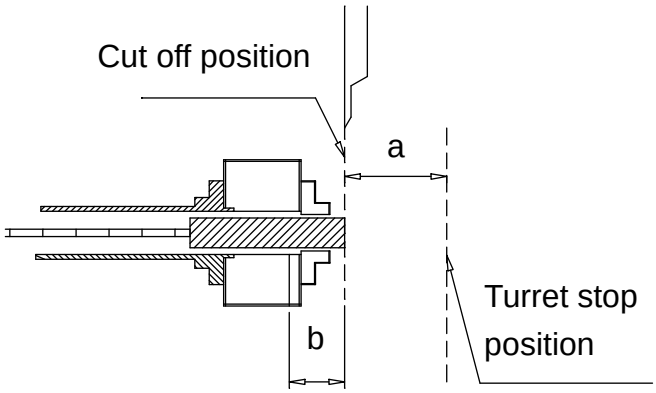
By observing the following items the remnant length will be reduced to a minimum:

5.6.1 ※ Exact adjustment of bar end.

5.6.2 ※ Machining and cutting off very close to chuck.

5.6.3 ※ Optimum breaking down of long bars.

Optimum breaking down:



A ..... max breaking down of bar length

L ..... bar stock length

a ..... bar stock length per work piece (length of work piece + facing length + cutting off width)

b ..... minimum chucking length

M ..... number of work pieces/bar

K ..... broken down bar length

Example：A bar (3200 long) is to be broken down in an optimum length.

EX：

A＝1200mm

L＝3200mm

a＝75mm

b＝40mm

$M = (A - b) / a$

$= (1200 – 40) / 75$

$= 15.5$

Each bar can produce 15 finish products.

$K = M \times a + b$

$=15 \times 75 + 40$

$=1165$

The bar stock (3200mm long) will be broken down into the following pieces:

Two pieces 1165mm each and one piece 870mm long.

The remnant of the 3200mm long bar is 40mm + 40mm + 45mm = 125mm

5.7 Maintain notice-key switch

5.7.1 If the safety cover is open, the bar feeder can't use the automatic mode, but it still can be use manual mode.

(1) Need to use the automatic mode when the safety cover is open. Please turn the key-switch 

to "OFF". The bar feeder can be use the automatic mode.

(2) If the bar feeder alarm and you have eliminated the breakdown. And then need to use the automatic mode, please close the power.

Turn the key-switch to "ON" 

, and close the safety cover. Then open the power and it can be operation on automatic mode.

! IMPORTANT! The key-switch has to turn to "ON" 

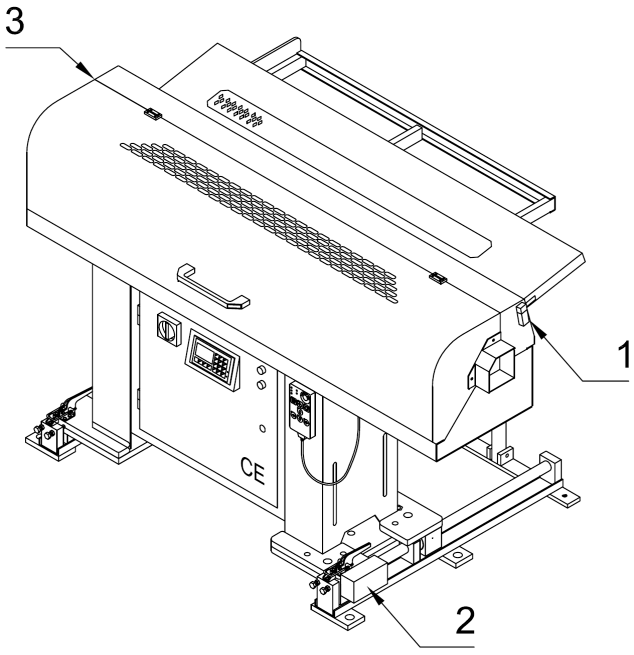
, --otherwise the program can't to determine alarm to be directed against the safety cover.

5.7.2 Check the safety-switch location

When LCD display "cover not close", please check 3 safety-switches (show as in Fig) whether they go back to the location. Then press "F3" at the same time and the bar feeder can be working in normal.

(Note)

1. In normal running, please don't open the safety cover lest to cause alarm.
2. Please don't pull out the connect plug from the remote control box lest to cause alarm.



6. OPERATIONS AND ILLUSTRATIONS

6.1 Material preparation

Caution & prevention

Please don't put the material out of standard.

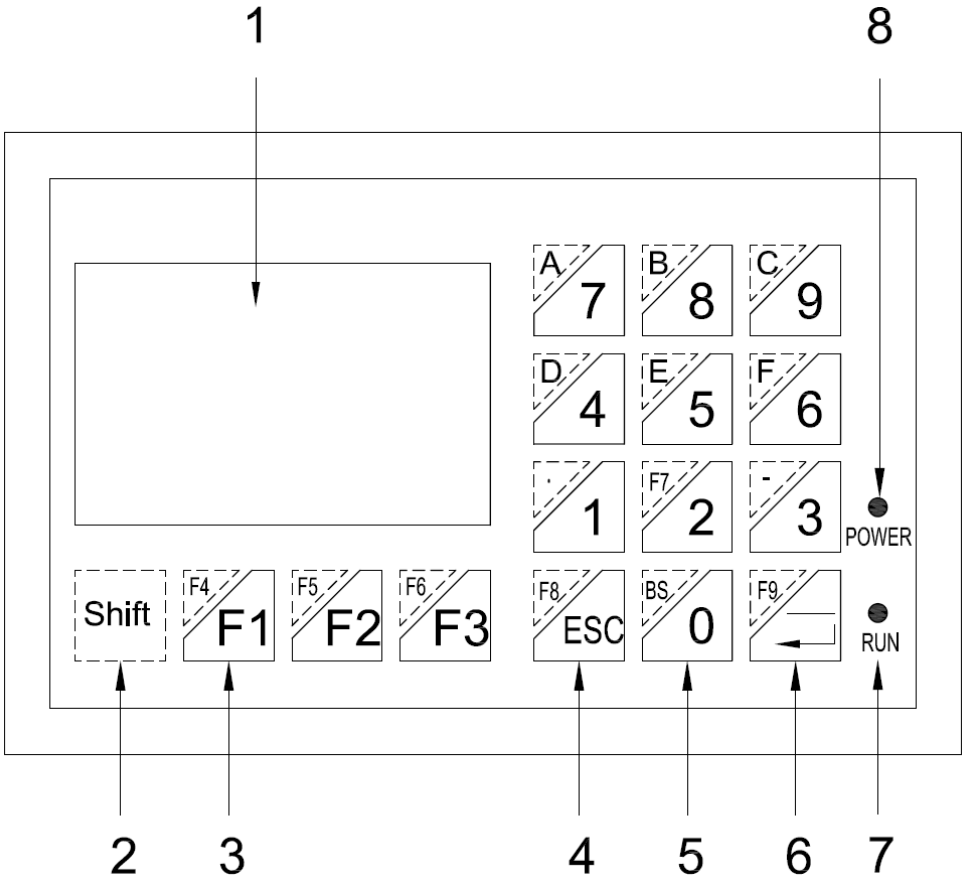
List1—The max length of material

Type	Mod	Max length mm
Vs-65E	1600	1250 Bar length depends on spindle length.
Vs-65LE	1900	1550 Bar length depends on spindle length.

The flatness of material must be within 0.5mm/M.

6.2 Operation description

6.2.1 H/M function description



NO.	Function
1	LCD Display area
2	Shift
3	Function
4	ESC
5	Number
6	Enter
7	Run light
8	Power light

6.2.1.1 Monitor function description：

Shift–display：Press the key according to the indication on the display.

（1） F1 ：Page up

（2） F2 ：Page down

（3） F3 ：Back main contents

6.2.1.2 Set up an input for numbers：

（1） Input numbers from 0~9, input the numbers as your request.

（2） Press F9 again, the input is finished. If you want to give up the input that you set, press F8 ESC for give up.

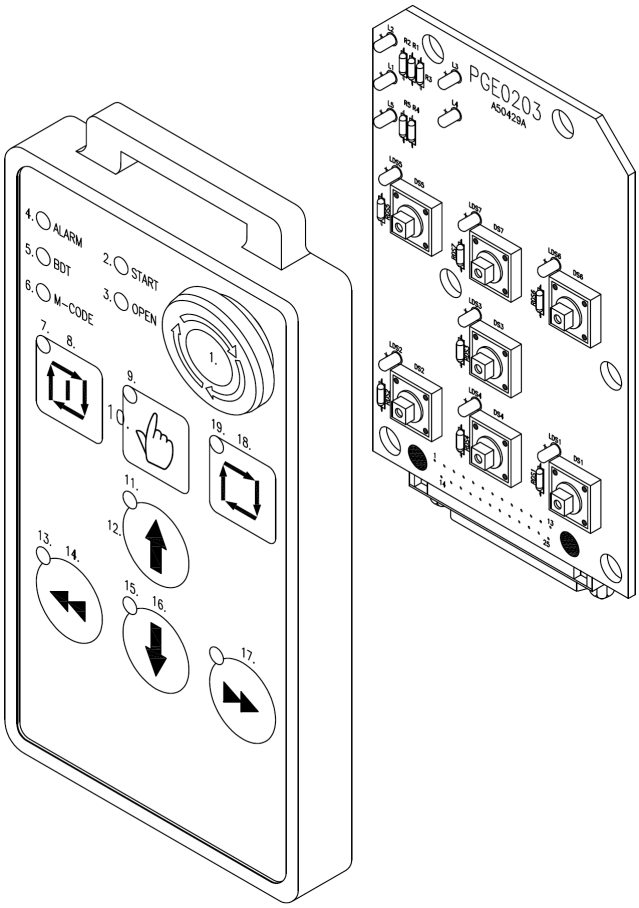
6.2.1.3 Usage of key from F1-F9：

（1） Select F1-F3, please press these three keys directly.

（2） Select F4-F9, please press and hold Shift key, and then select other keys as you want.

6.2.2 The function and operation of keys

6.2.2.1 Description of button and indication light

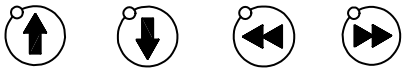


NO.	Code	Function	NO.	Code	Function
1	ES1	Emergency stop	11	LDS3	Clamping in light
2	L3	Start light	12	DS3	Manual clamping in/out
3	L4	Chuck open light	13	LDS2	+Z light(left)
4	L2	Alarm light	14	DS2	-Z Key
5	L1	Bar end light	15	LDS4	Shift light
6	L5	M-Code light	16	DS4	Shift keying
7	LDS5	Automatic start light	17	DS1	+Z Key
8	DS5	Automatic start	18	DS6	Automatic mode
9	LDS7	Manual mode light	19	LDS6	Automatic mode light
10	DS7	Manual mode			

6.2.3 Description of operation：

Manual operation:

Turn to the manual position  ; the following 4 keys can start operating.



Select Auto start-point：

- No material in the spindle：

  When  is lightened, it is under manual mode. At this time please press  until original point of push bar to lighten, press  loading a new bar to V channel. When  and  are lightened, please press  and  , then start to change the bar automatically.

- Material in the spindle：

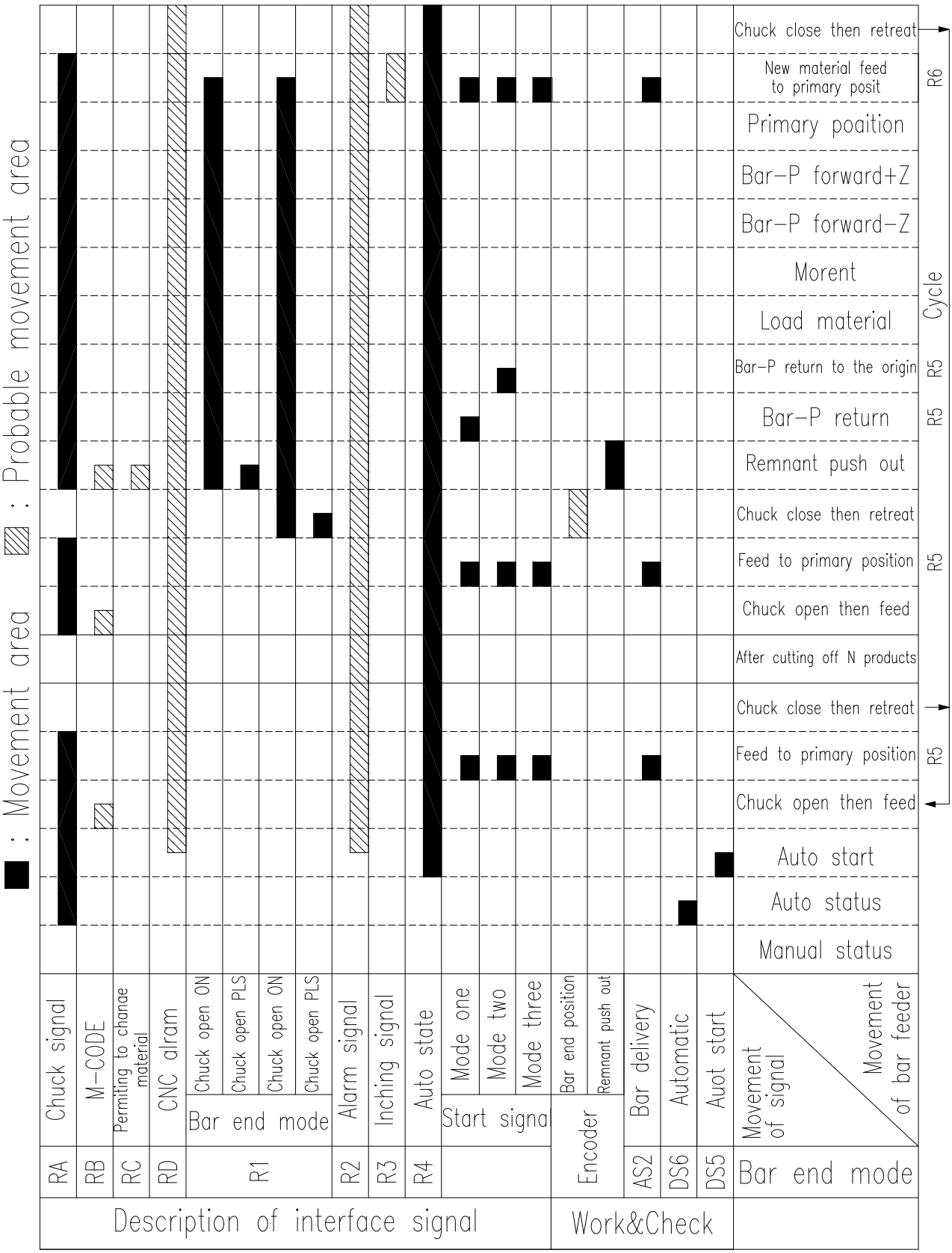
  When  is lightened, it is under manual mode. When  is lightened, at this time please press  and  , then start to manufacture automatically.

When you press the emergency stop, the power supply of motor will be shut off and it will show “Bar feeder emergency stop” on the human machine screen.

In Auto operation, if press the emergency stop or shift to manual or shut off power supply, it will be quitting of automatic mode. If you want to return to Auto operation, please return the emergency stop to the original status, and press automatic  , then press the start-key  .

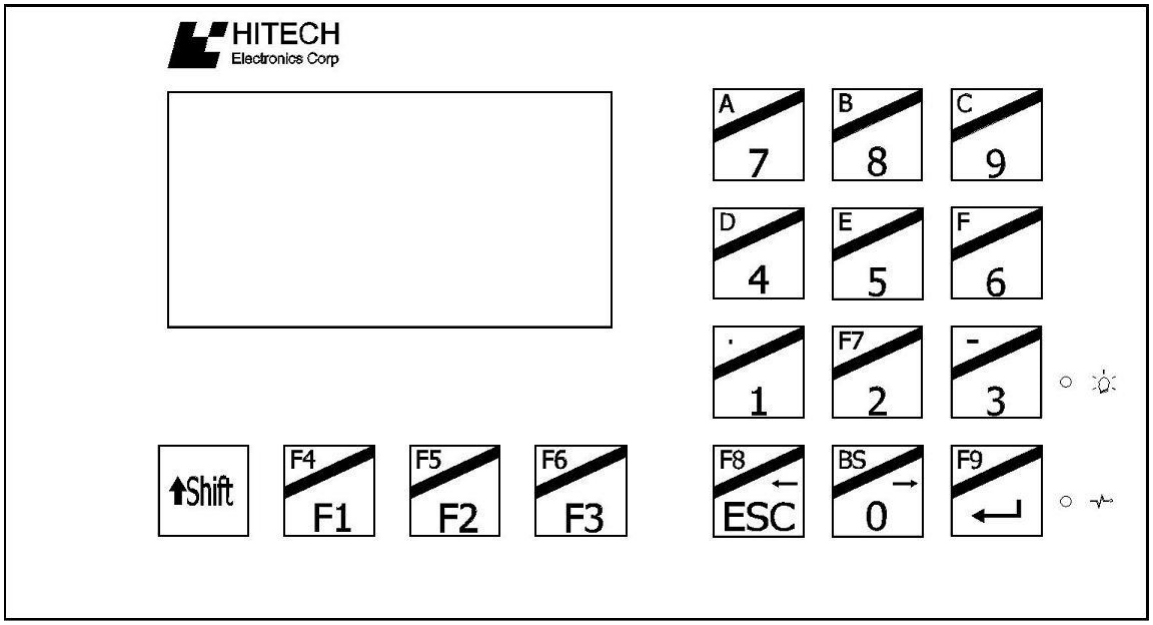
If the position of push bar cannot be in Zero while the push bar move backward in the origin please. Press   , then 3S will proceed the origin regression.

6.2.4 Working cycle—CNC lathe



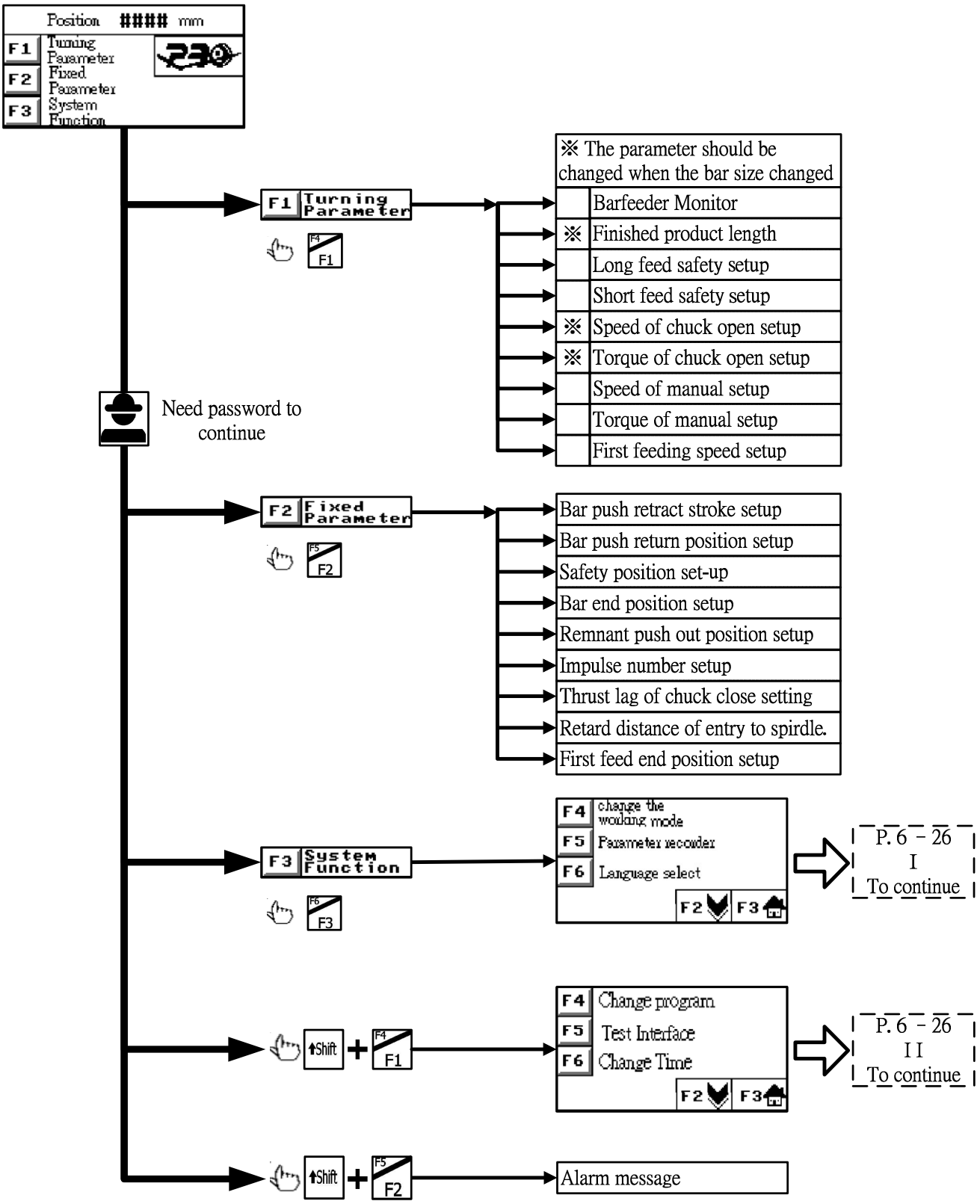
6.3 Description of settings and parameter

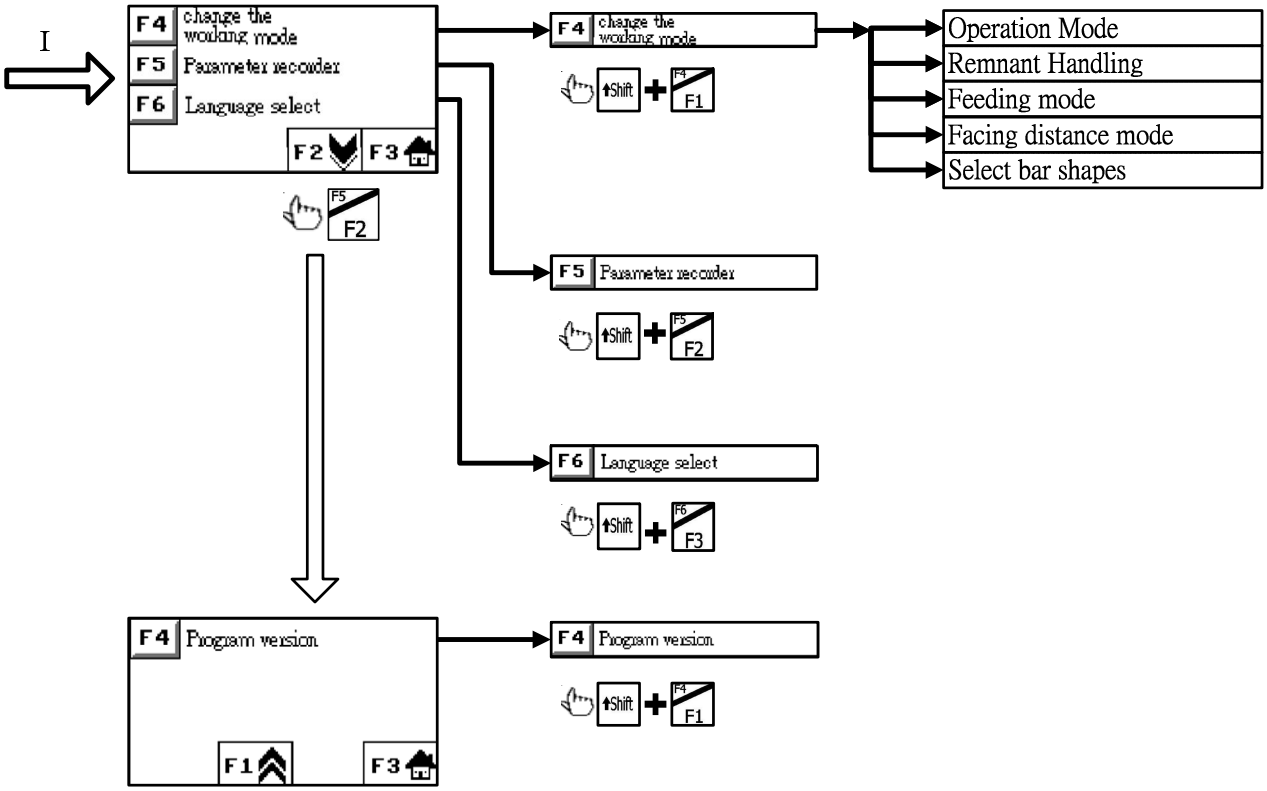
6.3.1 HMI Program selection

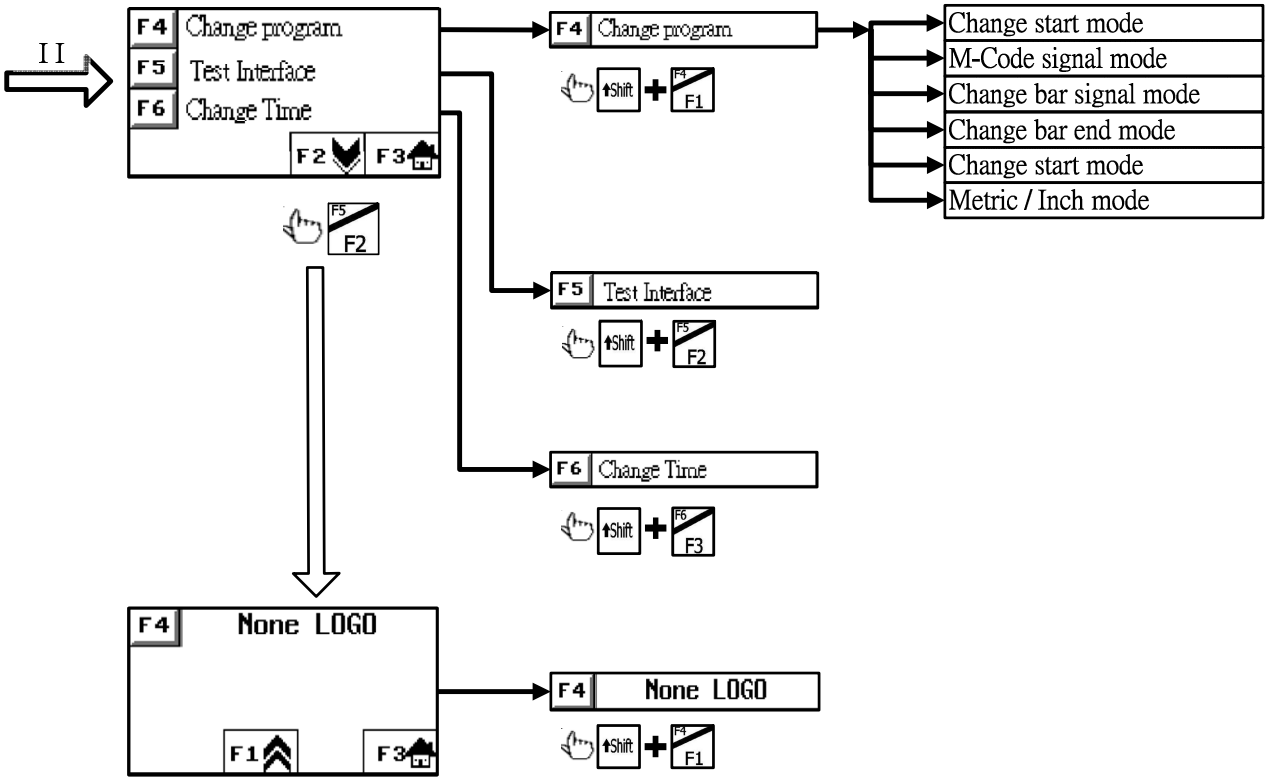


1. F1 F1 **Press the key :** F4 F1
2. F2 F2 **Press the key :** F5 F2
3. F3 F3 **Press the key :** F6 F3
4. F4 **Press the key :** Shift + F4 F1
5. F5 **Press the key :** Shift + F5 F2
6. F6 **Press the key :** Shift + F6 F3
7. F7 **Press the key :** Shift + F7 2
8. F8 **Press the key :** Shift + F8 ESC
9. F9 **Press the key :** Shift + F9

6.3.2 Parameter picture driftage

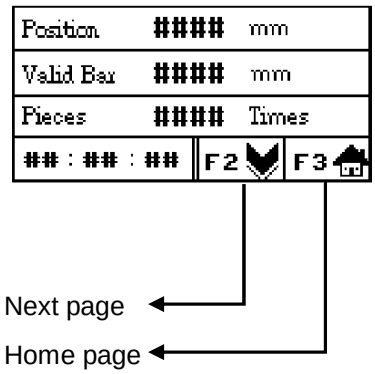



I
F4 change the working mode
F5 Parameter recorder
F6 Language select
F2
F3
F5 F2
F4 change the working mode
Shift + F4 F1
Operation Mode
Remnant Handling
Feeding mode
Facing distance mode
Select bar shapes
F5 Parameter recorder
Shift + F5 F2
F6 Language select
Shift + F6 F3
F4 Program version
F1
F3
F4 Program version
Shift + F4 F1

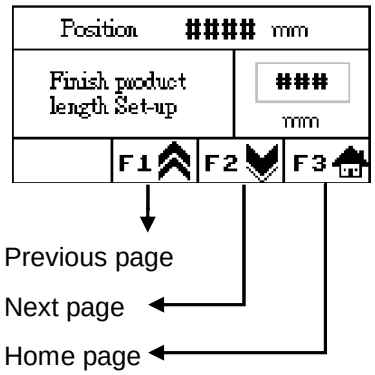

II
F4 Change program
F5 Test Interface
F6 Change Time
F2
F3
F5 F2
F4 Change program
Shift + F4 F1
Change start mode
M-Code signal mode
Change bar signal mode
Change bar end mode
Change start mode
Metric / Inch mode
F5 Test Interface
Shift + F5 F2
F6 Change Time
Shift + F6 F3
F4 None LOGO
F1
F3
F4 None LOGO
Shift + F4 F1

6.3.3 Description of settings and parameter

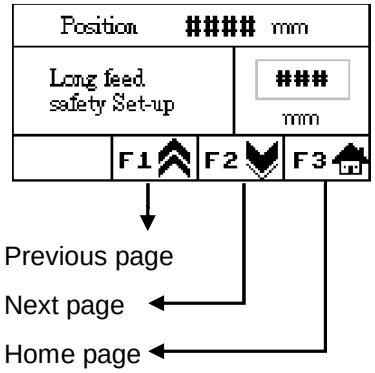
6.3.3.1 Turning parameter



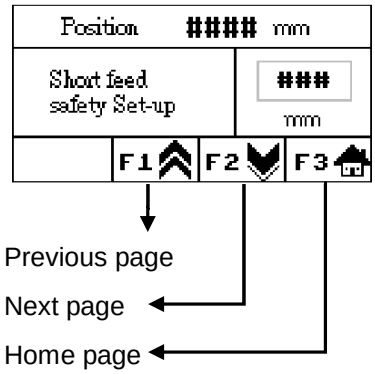
Parameter description：This monitor can watch present working status at any time. Watch item： 1：Push bar present position. 2：Remain effective working length of material. 3：Remain to wait for working quantities of work piece.			
1.2M Generally value：	NO	Setting range：	NO
1.5M Generally value：	NO	Setting value：	



Parameter description：The finished product length will be the workpiece length adding the cutter thickness. This parameter setting may affect the bar end setting. Setting method：Input the required length. For example：Workpiece 47mm + thickness of cutter 3mm = The finished product length 50mm . So we will set finished product Length to be 50mm.			
1.2M Generally value：	50 mm	Setting range：	0~500 mm
1.5M Generally value：		Setting value：	



Parameter description：This parameter setting will let feed material more stable and ensure the material to be sent to request location. But if no need to use this function that you can set it to be “ 0 ” directly. Setting method：This parameter will be finished product length to add 5 mm automatically after finished product length setting. This parameter can also be set finished product length to add tolerance. Ex： Finished product length + Tolerance = Long feed safety. Refer to figure 1：			
1.2M Generally value：	75 mm	Setting range：	0~500 mm
1.5M Generally value：		Setting value：	



Parameter description：This parameter setting will let feed material more stable and ensure the material to be sent to request location. But if no need to use this function that you can set it to be " 0 " directly.

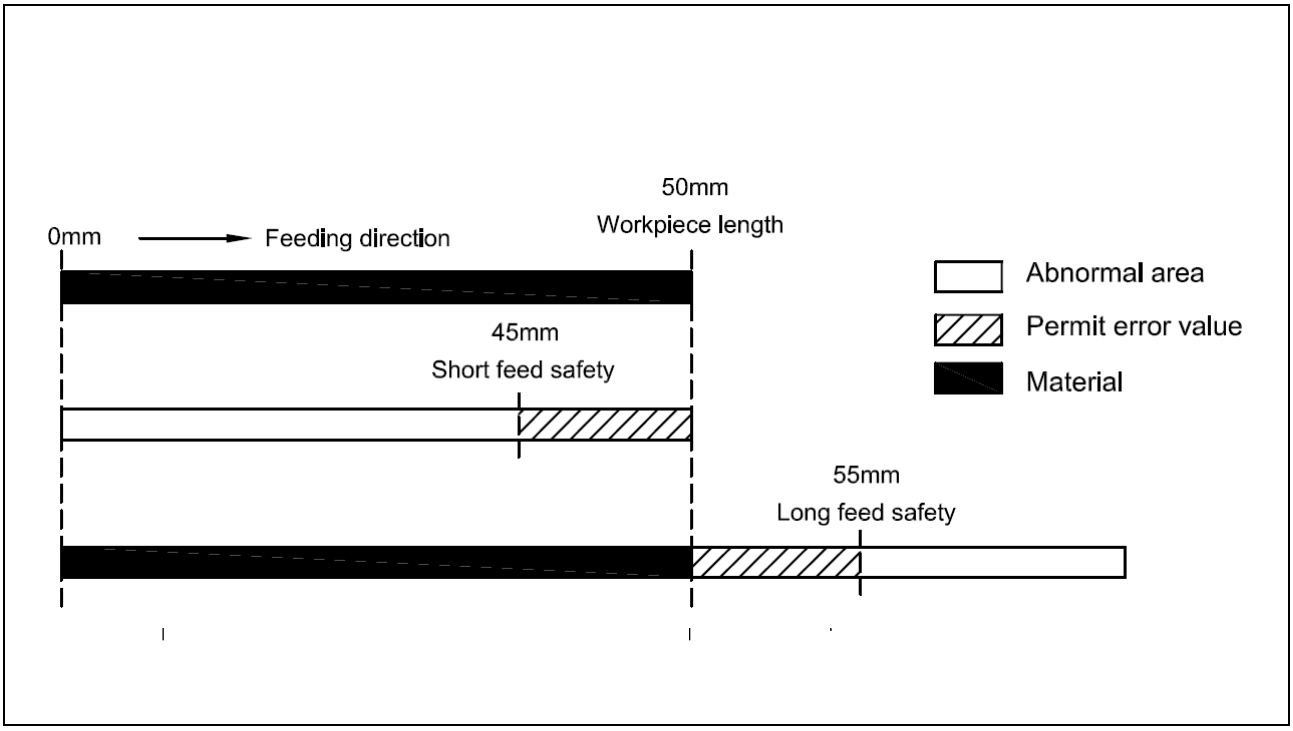
Setting method： This parameter will be finished product length to deduct 5 mm automatically after finished product length setting. This parameter can also be set finished product length to deduct tolerance.

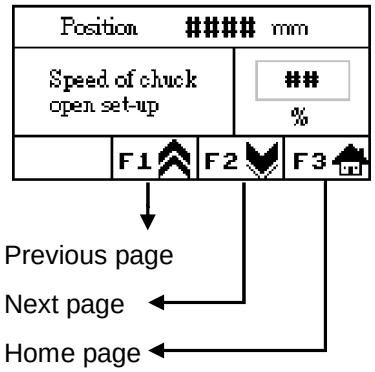
Ex： Finished product length - Tolerance = Short feed safety.

Refer to figure 1：

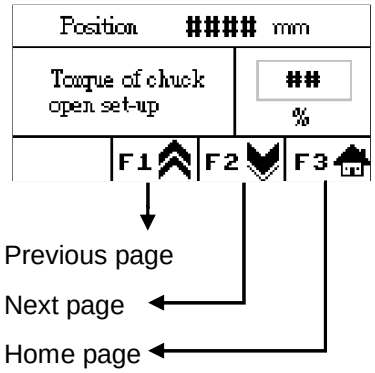
1.2M Generally value： 25 mm	Setting range： 0~500 mm
1.5M Generally value：	Setting value：

(Figure 1)

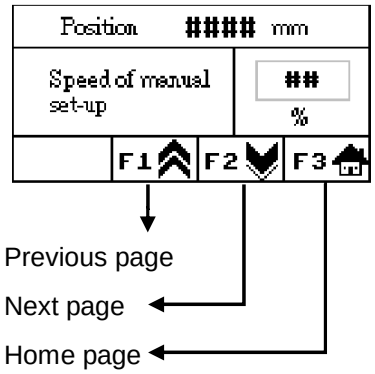




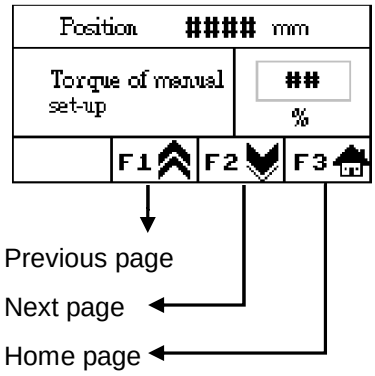
Parameter description：The speed of the pusher during in automatic mode when lathe chuck open.			
Setting method： According to the bar material size and torque of chuck close to adjust speed.			
Note： When setting value is too high it could cause servo failure.			
1.2M Generally value：	40 %	Setting range：	0~99 %
1.5M Generally value：		Setting value：	



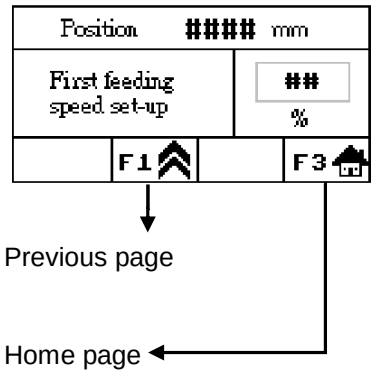
Parameter description：The torque of pusher moves forward when automatic mode and lathe chuck open.			
Setting method： According to the bar material size and speed of chuck open to adjust torque .			
Note： When setting value is too high it could cause servo failure.			
1.2M Generally value：	40 %	Setting range：	0~99 %
1.5M Generally value：		Setting value：	



Parameter description：The pusher speed of manual operation.			
Setting method： According to the required speed and manual operation torque to adjust speed.			
1.2M Generally value：	40 %	Setting range：	0~99 %
1.5M Generally value：		Setting value：	

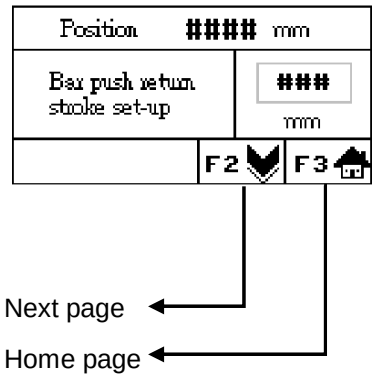


Parameter description：The torque of bar pusher moves forward in manual operation mode. Setting method： According to required torque and speed of manual operation mode to adjust torque.			
1.2M Generally value：	40 %	Setting range：	0~99 %
1.5M Generally value：		Setting value：	



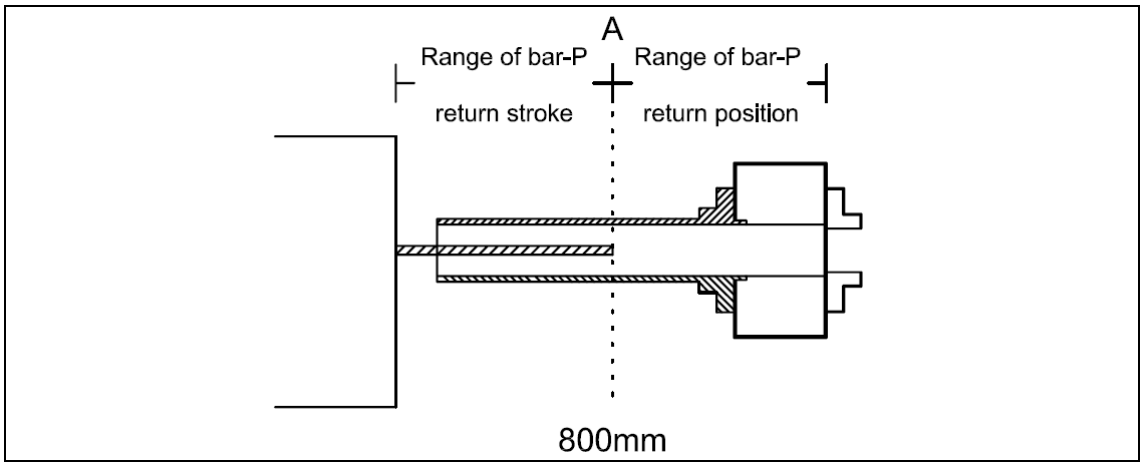
Parameter description：The first feeding block will require moving speed in a state of first feeding. Setting method： Input to require speed into the parameter of first feeding speed.			
1.2M Generally value：	60 %	Setting range：	0~99 %
1.5M Generally value：		Setting value：	

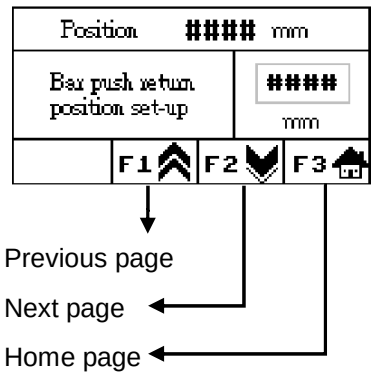
6.3.3.2 Fixed parameter / enter password “258”



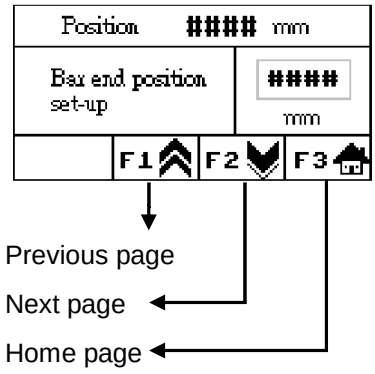
Parameter description：If bar pusher position is less than setting value that pusher will retreat to setting position when chuck close. Setting method： Input the required pusher retreating distance. For example： If the value of parameter is set to 30mm and the bar pusher is within the A area, the bar pusher will retract to 30mm after chuck closed. Reference figure 2：			
1.2M Generally value：	50 mm	Setting range：	0~300 mm
1.5M Generally value：		Setting value：	

(Figure 2)





Parameter description：If bar pusher position is over than setting value that pusher will retreat to setting position when chuck close. In order to prevent friction and vibration caused from pusher going into the lathe spindle too long. Setting method： By manual operation let the bar pusher move into the spindle inside around 1 / 3 of its length. To ensure not to touch the spindle and input the current position. For example： If the value of parameter is set to 800mm and the bar pusher is out of the A area, the bar pusher will retract to 800mm after chuck closed. Reference figure 2：			
1.2M Generally value：	500 mm	Setting range：	0~1500 mm
1.5M Generally value：		Setting value：	



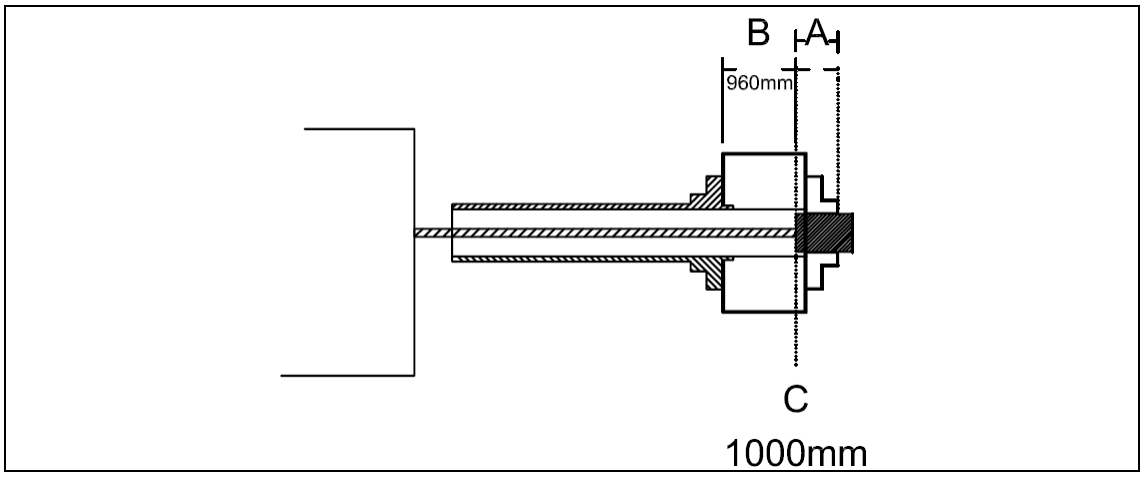
Parameter description：This position is the maximum working limit. If pusher position value is bigger than bar end setting that bar feeder will offer a bar end signal to notice lathe to prepare loading new bar material

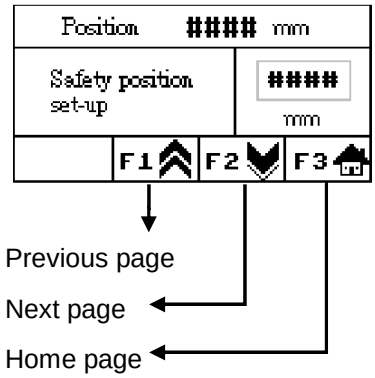
Setting Mode for fixed lathe：In the manual mode let pusher into lathe spindle until 5~10mm before lathe chuck . Then confirm the value of monitor to input it to be bar end position.

Ex： Reference figure 3, the distance of A is about 30 mm , C is the parameter of “Bar End Position”. If the length of product is 40 mm, the area of bar end range is 960 mm to1000 mm.

1.2M Generally value：	800 mm	Setting range：	0~1700 mm
1.5M Generally value：	1100 mm	Setting value：	

(Figure 3)





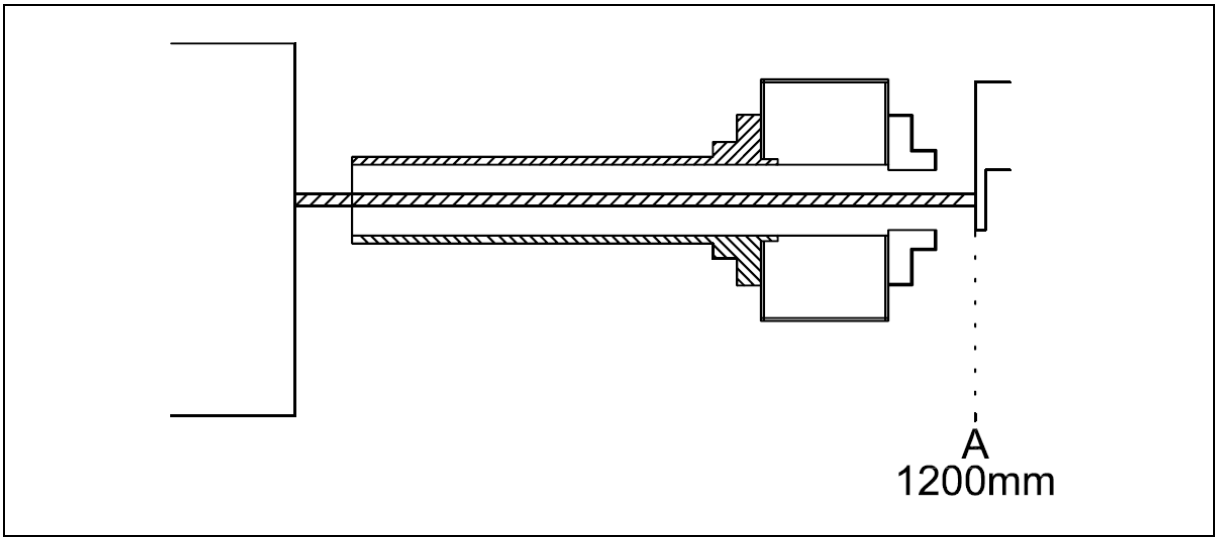
Parameter description：Chuck facing position is the distance between cutter facing detection to cutter facing position. We cannot know if the new bar material has been pushed to chuck facing position until loading a new bar material.

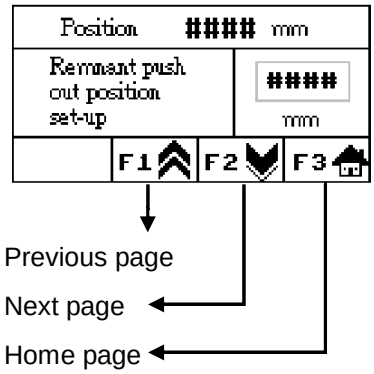
Setting method： To measure the distance between chuck facing detection position and cutter position after center adjustment.

Ex： Reference figure 4,push the bar pusher to the turret(position A),if the value display on Man Machine is 1200mm, so that 1700mm is the value of “Facing position”.

1.2M Generally value：	900 mm	Setting range：	0~2000 mm
1.5M Generally value：	1200 mm	Setting value：	

(Figure 4)





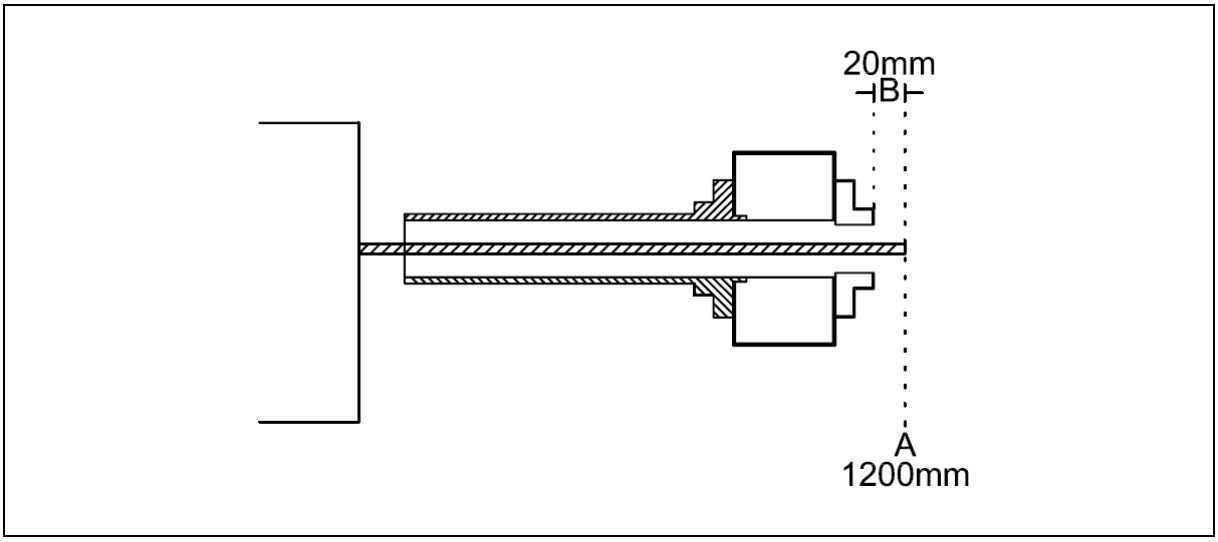
Parameter description：This distance is the position that bar pusher pushes out the remnant into the lathe.

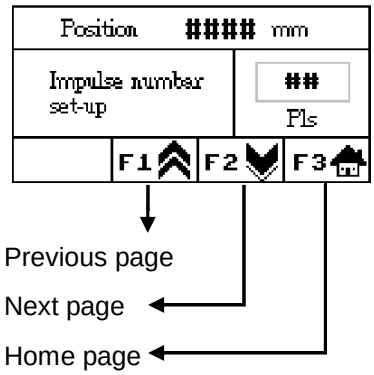
Setting method： Push the pusher to exceed chuck position 20mm by manual operation. Then confirm the value showing in monitor and input this value.

Ex： Reference figure 5 ,the distance of B is about 20mm ; the Position A is about 1200mm for the parameter of “Remnant Push out position.

1.2M Generally value：	900 mm	Setting range：	0~1700 mm
1.5M Generally value：	1200 mm	Setting value：	

(Figure 5)

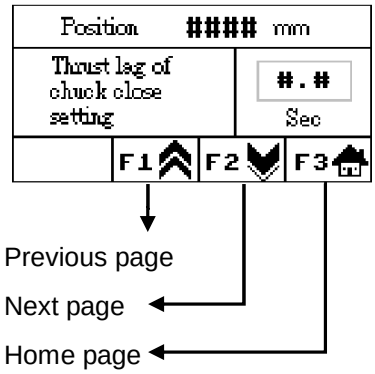




Parameter description：If the pusher cannot push the new bar material to chuck facing position because it is blocked or other reasons that the pusher will have inching movement. But if it exceeds setting frequency that bar feeder will Alarm17.

Setting method： Input the required frequency.

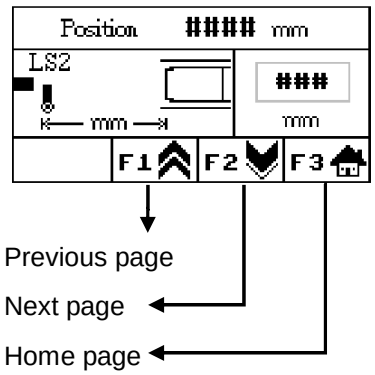
1.2M Generally value：	5	Setting range：	0~50
1.5M Generally value：		Setting value：	



Parameter description：In automatic working mode , pusher pushes bar material into lathe and chuck close to work. To ensure that material will not move during the chuck close. Set the delay time for bar pusher to change the speed and torque.

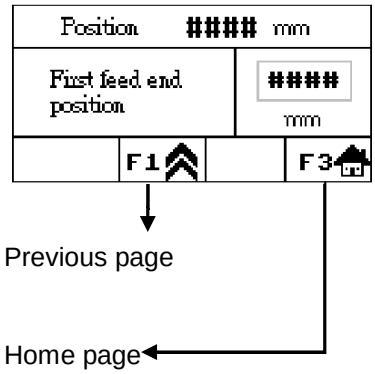
Setting method： Input the required time.

1.2M Generally value：	0.5	Setting range：	0~9.9
1.5M Generally value：		Setting value：	



Parameter description：This setting is for LS2 of the bar feeder to detect the position of the opening of the lathe, which has not judged by bar feeder. Please input indeed

1.2M Generally value：	200 mm	Setting range：	0~1000 mm
1.5M Generally value：		Setting value：	

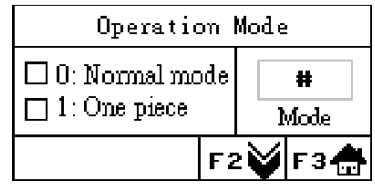


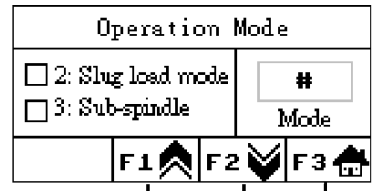
Parameter description：The pre-feeding pusher will push the bar material forward until the bar material can go into collet smoothly when bar pusher is up.

Setting method： Push pre-feeding pusher to stop position and input current position.

1.2M Generally value：	1295 mm	Setting range：	0~1700
1.5M Generally value：	1595 mm	Setting value：	

6.3.3.3 System function / enter password “258”





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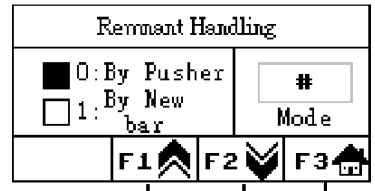
Parameter description：

“0：Normal”： Normal working.

“1 & 2：One piece machining”：Under working status, the bar feeder just can push one time, the bar feeder will change bar. When the chuck is open next time, the pusher bar will push the new bar in of the spindle, then next working.

“3：Sub-spindle Mode”： Under Auto working, when the chuck open, the material pull out sub-spindle of the lathe, The pusher bar won’t push, but the bar feeder will still calculate the end of bar position for change bar.

1.2M Generally value：	00	Setting range：	0~3
1.5M Generally value：		Setting value：	



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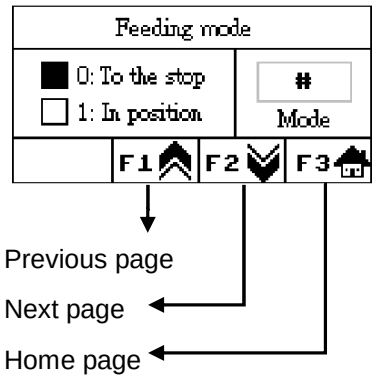
Parameter description：

“0：By Pusher”：Under Auto working status, when the chuck is open next time, pusher bar will push the remains out of the spindle, then changing a bar.

“1：By New Bar”：Under Auto working status, After the end of bar, bar feeder will change bar, When the chuck is open next time; the new bar will push the remains out of the spindle, then next working.

1.2M Generally value：	0	Setting range：	0~1
1.5M Generally value：		Setting value：	

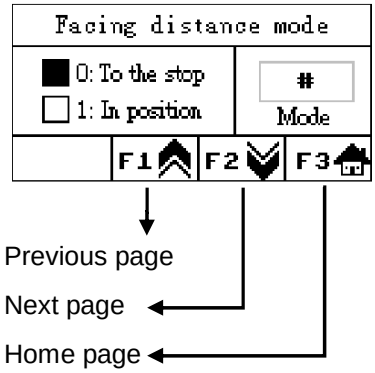


Parameter description：

"0：Stop point"： Under Auto working status, when the chuck is open, the pusher bar will send the material to required finish product length, at this time the cutter must be situated in outer of the spindle to wait the material. When the material has been sending to hit the cutter, bar feeder will wait the chuck to close.

"1：Position point"：Under Auto working status, when the chuck is open, the pusher bar will send the material to required finish product length, when the material arrives, the pusher bar will stop the movement, awaiting the chuck to close.

1.2M Generally value：	0	Setting range：	0~1
1.5M Generally value：		Setting value：	

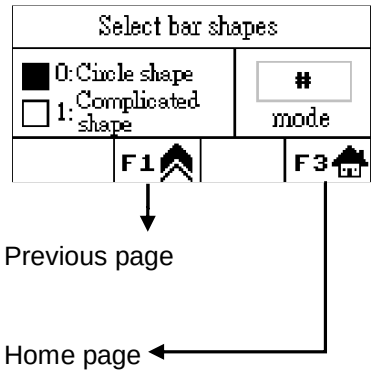


Parameter description：Select either one mode of bringing a new bar to facing position automatic or a new bar pushed to the setting facing position by bar pusher during bars changed.

"0：To the stop "： The new bar will be pushed to the chuck facing position and keep pushing until the lathe chuck closed.

"1：In position "： The new bar will be pushed to the setting chuck facing position by the parameter and the bar pusher will stop right away.

1.2M Generally value：	0	Setting range：	0~1
1.5M Generally value：		Setting value：	



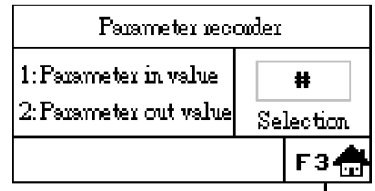
Parameter description："0：Circle shape"：

While the bar feeder had the action of inching then the bar feeder will send the signal of inching to lathe.

"1：Complicated shape"：

While the bar feeder had the action of inching then, bat the signal of inching won't send out.

1.2M Generally value：	0	Setting range：	0~1
1.5M Generally value：		Setting value：	



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Parameter description：Set up this function especially for user in order to user can record and save all present setting parameters. If need to save parameter, please press enter parameter; If want to read the saving parameter out, please press read parameter. It will be covered with original saving parameter if new parameter was saved every time.

1.2M Generally value：	NO	Setting range：	1~2
1.5M Generally value：	NO	Setting value：	

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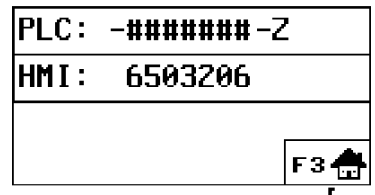
Parameter description：Select the proper language of the information displayed：

0：Traditional Chinese

1：English

2：Simplified Chinese

1.2M Generally value：	1	Setting range：	0~2
1.5M Generally value：	1	Setting value：	



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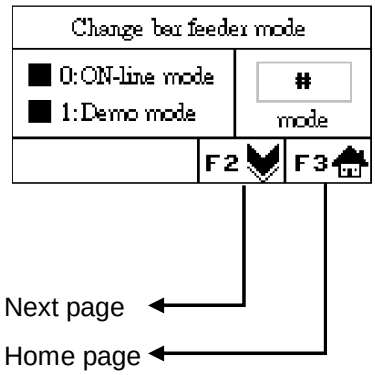
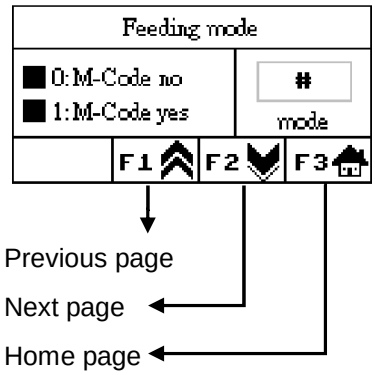
Parameter description：To verify the version number of PLC and HMI programs.

1.2M Generally value：		Setting range：	NO
1.5M Generally value：		Setting value：	

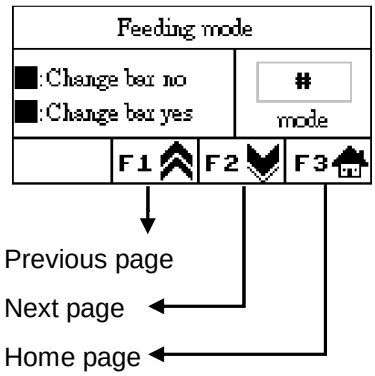
6.3.3.4 Particular program modify / enter password “258”



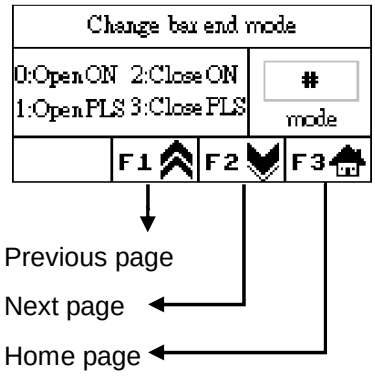
Parameter description：Set two modes to normally operate, if set the mode to “0：ON-line mode”, bar feeder starts operating along with lathe. If need bar feeder to cycle automatically without connective, please set the mode for “1：Demo mode”.			
1.2M Generally value：	0	Setting range：	0~1
1.5M Generally value：	0	Setting value：	



Parameter description：The lathe gives a feeding signal to the bar feeder are two modes: 1. Chuck Signal 2. M-Code. If the interface of lathe and bar feeder only connect “Chuck Signal”, please set for “0: M-Code No Use”. If the interface of lathe and bar feeder connect “Chuck Signal” and “M-Code”, please set for “1: M-Code Use”.			
1.2M Generally value：		Setting range：	0~1
1.5M Generally value：		Setting value：	

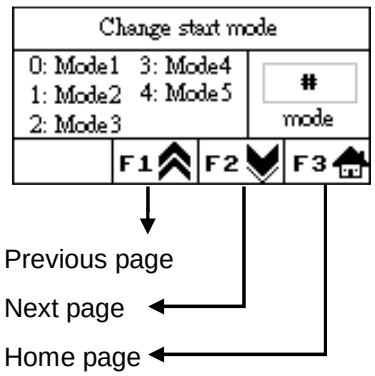


Parameter description：The lathe gives a changing bar signal to the bar feeder are two modes: 1. Chuck Signal 2. Permit to change bar signal. If the interface of lathe and bar feeder only connect “Chuck Signal”, please set for “0: Permit to change bar signal No Use”. If the interface of lathe and bar feeder connect “Chuck Signal” and “Permit to change bar signal”, please set for “1: Permit to change bar signal Use”.			
1.2M Generally value：		Setting range：	0~1
1.5M Generally value：		Setting value：	



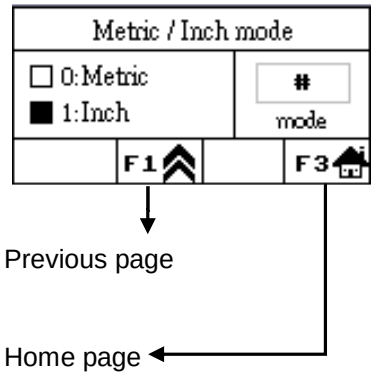
Parameter description：This is the bar feeder required a bar end signal to send the timing for CNC program, relative to the description of sequence, please refer to the description of sequence of movement signal in article 6.2.4.

1.2M Generally value：	2	Setting range：	0~3
1.5M Generally value：		Setting value：	



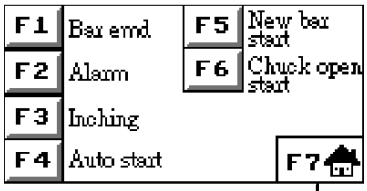
Parameter description：This is the bar feeder required a start signal to send the sequence for CNC program, relative to the description of sequence, please refer to the description of sequence of movement signal in article 6.2.4.

1.2M Generally value：	0	Setting range：	0~4
1.5M Generally value：		Setting value：	



Parameter description：Feeder pusher position display and parameter setting of the benchmark changes.
This fixed parameter will affect other setting.
If you change this parameter that it should return the initial value as soon as possible.
So we suggest that do not change this parameter as possible.

1.2M Generally value：	0	Setting range：	0~1
1.5M Generally value：		Setting value：	



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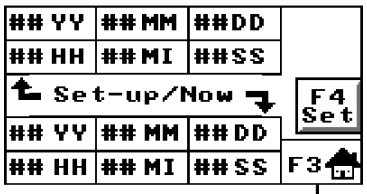
Parameter description：This parameter allow technician to test each signal output on interface is continued to lathe.

Setting method： To executive this parameter must be under manual mode both lathe and bar feeder or could cause danger.

1.2M Generally value：	NO	Setting range：	NO
1.5M Generally value：	NO	Setting value：	



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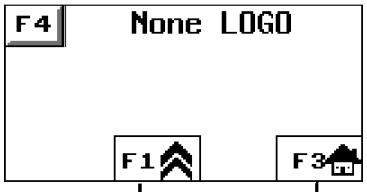
Parameter description：Set the date and time of system to record data.

1.2M Generally value：	NO	Setting range：	NO
1.5M Generally value：	NO	Setting value：	



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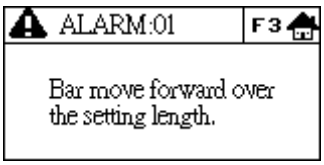
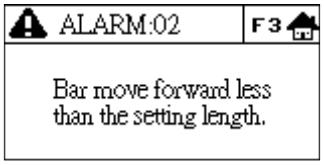
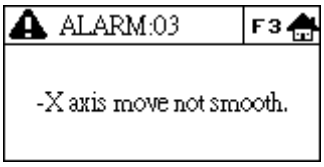
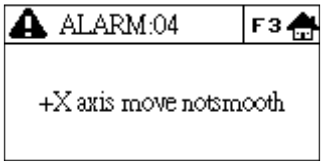
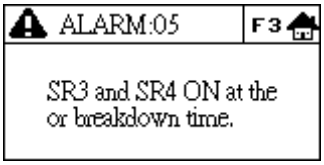
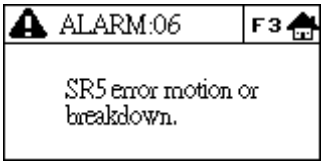
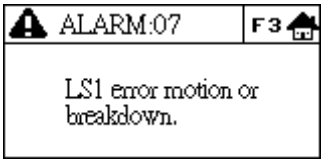
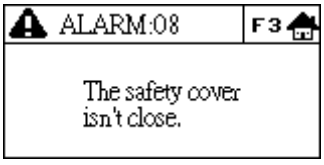
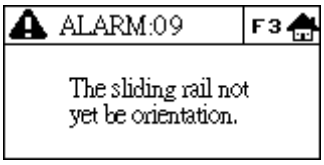
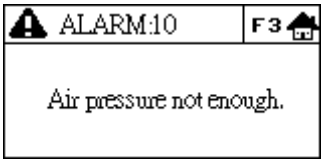
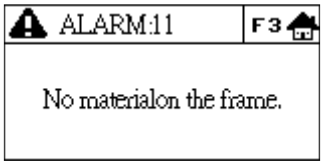
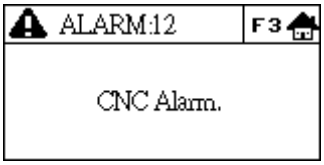
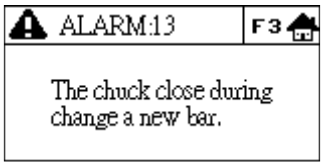
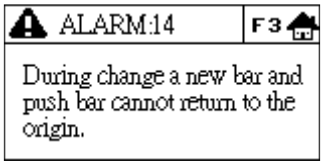
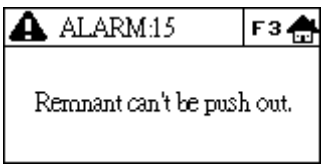
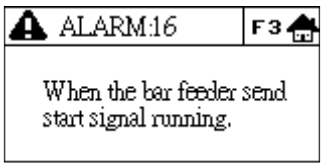
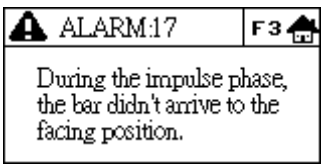
Parameter description：This function can shift the Logo on the screen of the man machine.

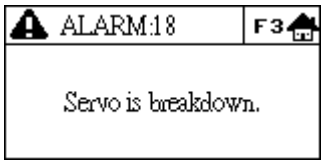
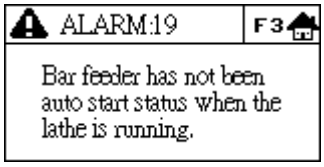
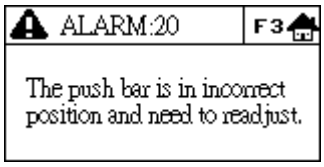
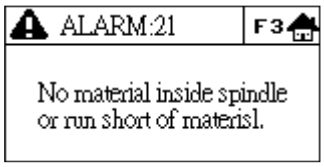
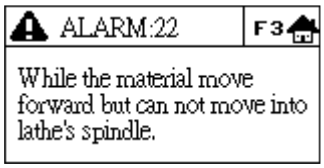
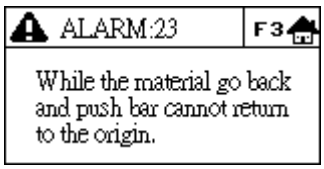
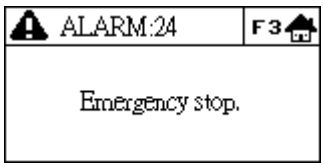
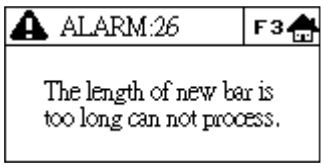
1.2M Generally value：	NO	Setting range：	NO
1.5M Generally value：	NO	Setting value：	

6.4 Refer alarm message

6.4.1 HMI Alarm Message

ERROR / CAUSE	CURE
	※ Please check the value of long feed safety is correct ※ Check the turret whether it is at correct position of stopping material
	※ Please check whether the setting value of shortest length would be proper. ※ Check the turret whether it is at correct position of stopping material.
	※ Check compressed air whether it is enough. ※ Pull out the tube of the F.R.L combination and then insert the tube again.
	※ Check compressed air whether it is enough. ※ Pull out the tube of the F.R.L combination and then insert the tube again.
	※ Please refer to **(6.2)**, check **SR3** and **SR4** whether have unidentified object to adhere to them.
	※ Please refer to **(6.2)**, check whether **LS2** was blocked by any unidentified objects.
	※ Please refer to **(6.2)**, check whether **LS1** was blocked by any unidentified objects.
	※ Please refer to **(6.2)**, **LS3** and **LS4** are operative while **SS1** is opened. ※ Please close the covers.

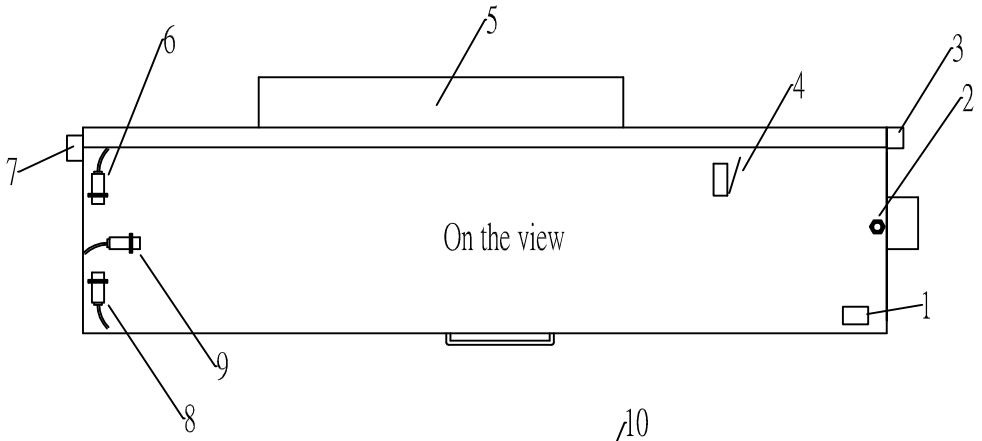
ERROR / CAUSE	CURE
	※ Please refer to **(6.2)**, **LS5** is operative while **SS1** is opened. ※ Please push the bar feeder to correct position of working.
	※ Check the pressure of the compressed air. ※ Please refer to **(6.2.1)**, check whether **AS1** has a breakdown.
	※ Please check whether have any materials on the bar feeder or in the spindle.
	※ Before machining, please solve the alarm of **CNC**.
	※ Please check the start signal was sent from the bar feeder whether it is correct with **CNC's** sub-program.
	※ Remove unidentified object.
	※ When the **CNC** program runs to sub-program, check whether the return stroke of axis **Z** is enough to push out remnant. ※ Check whether the value of "Remnant push out" is correct, Setting method refer to(page**6.8.1**).
	※ Please check whether the interface signal code **R5 Relay** has a motion. ※ Check whether the lathe receive the signal from **R5 Relay**.
	※ Please check the setting of facing position. Please refer to (page **6.8.1**).

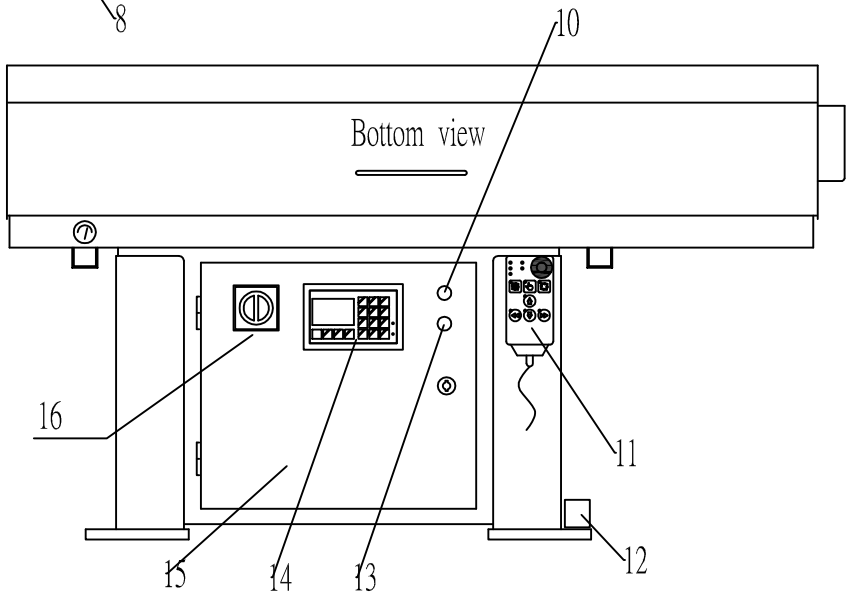
ERROR / CAUSE	CURE
	※ Check the **alarm** No. on **LCD** display of servo whether it is abnormal. If yes, please inform the relevant technician about abnormal code to analyze reasons.
	※ Check the bar feeder was in auto status when CNC i machining normally, otherwise bar feeder can't feed material.
	※ Please refer to the description of returned original point in article **(6.3.6)**.
	※ Check spindle inside whether has a material. ※ Change a enough bar for length.
	※ Check whether has an unidentified object to block the front of the bar.
	※ Check whether has an unidentified object to obstruct the push block.
	※ Please release the button of emergency stop.
	※ Please check whether the setting of facing position would be correct. ※ The length of new bar whether would be suitable.

6.4.2 SV List of alarm message

LIST OF SERVO DRIVER ALARM		
	Display	**Name**
ALARMS	AL. 10	Under voltage
	AL. 12	Memory error 1
	AL. 13	Clock error
	AL. 15	Memory error 2
	AL. 16	Encoder error 1
	AL. 17	Board error 1
	AL. 19	Memory error 3
	AL. 20	Encoder error 2
	AL. 24	Ground fault
	AL. 25	Absolute position erase
	AL. 30	Regenerative error
	AL. 31	Overspeed
	AL. 32	Overcurrent
	AL. 33	Overvoltage
	AL. 35	Command pulse frequency alarm
	AL. 37	Parameter error
	AL. 45	Main circuit high heat
	AL. 46	Servo motor overheat
	AL. 50	Overload 1
	AL. 51	Overload 2
	AL. 52	Error excessive
	AL. 8A	Overtime
	AL. 8E	error
	88888	time-out warning
WARNINGS	AL. 92	Open battery cable warning
	AL. 96	Zero setting error
	AL. 9F	Battery warning
	AL. E0	Excessive regenerative load warning
	AL. E1	Overload warning
	AL. E3	Absolute position counter warning
	AL. E5	ABS time-out warning
	AL. E6	Servo emergency stop
	AL. E9	Main circuit off warning
	AL. EA	ABS SV ON warning

A4





NO.	PART NO.	CODE	NAME
1.	J311701	SS1	SAFETY SWITCH
2.	J310403	LS2	DETECT MATERIAL
3.	J311801	LS4	DETECT BACK COVER
4.	J311201	LS1	DETECT FOR LOADING
5.			SOLENOID VALVES(refer P.04)
6.	J310308	SR3	DETECT PRIMARY POSITION
7.	J311801	LS3	DETECT THE FRONT COVER
8.	J310309	SR4	DETECT MOVEMENT
9.	J310307	SR2	DETECT -Z POINT
10.	J310705	PB1	POWER ON SWITCH
11.			CONTROL BOX (REFER TO P.03)
12.	J311802	LS5	DETECT AXIAL DISPLACEMENT
13.	J310701+J620205	ES2	EMERGENCY STOP
14.	J210502	HMI	HUMAN MACHINE INTERFACE
15.			REMOTE CONTROL BOX
16.	J310502	CS1	POWER SWITCH

BAR FEEDER TYPE: VS-65E/LE(CE)

LATHE NAME:

LATHE TYPE:

EDGE TECHNOLOGIES
A DIVISION OF HYDROMAT INC

FIRST DATE	REVISION DATE	MAIN VOLTAGE	SIGNAL VOLTAGE	PAGE
2014 / 09 / 10	2016 / 05 / 17	220 VAC 3-PHASE	24VDC	P. 01

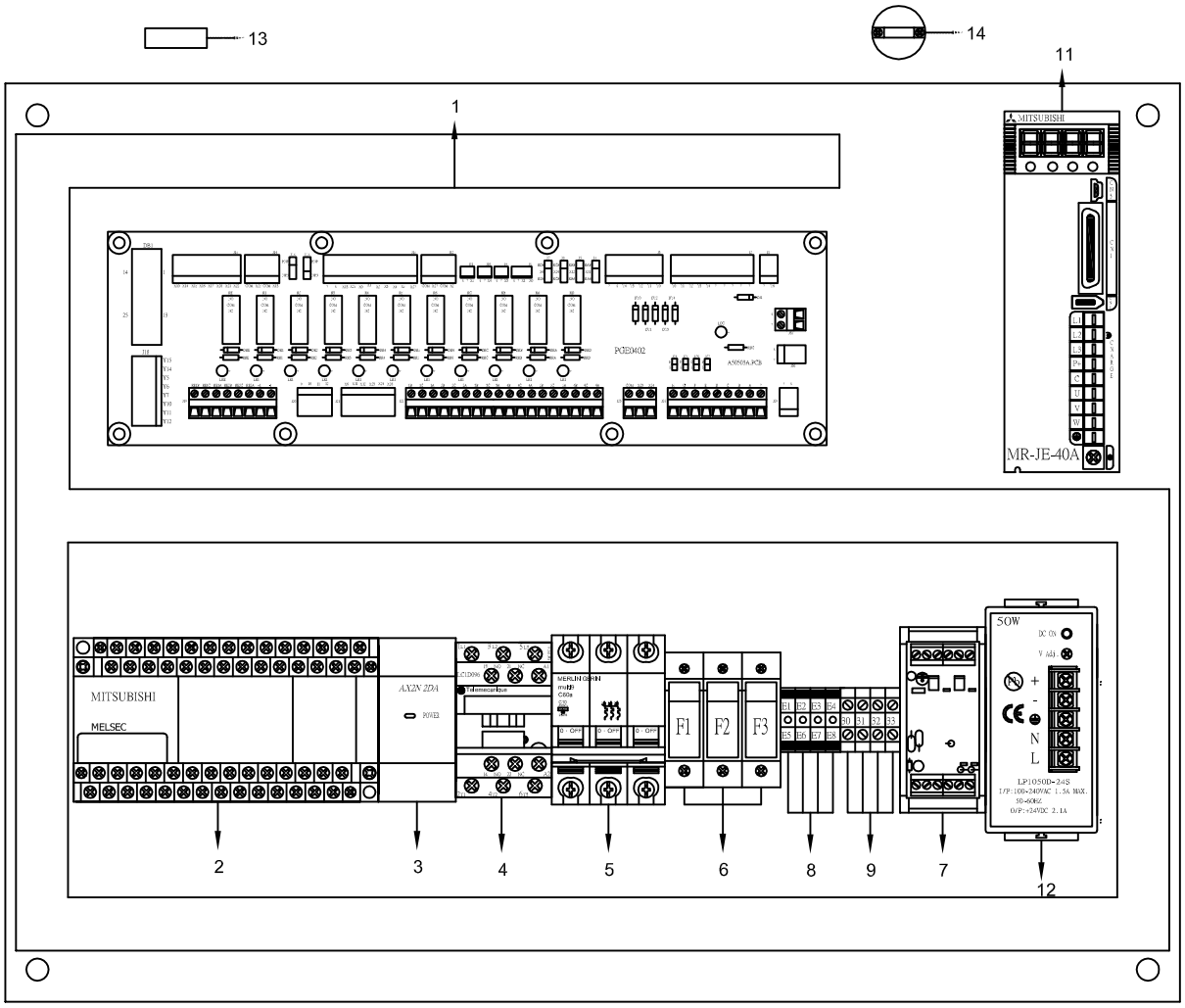
DRAWN BY:

CHECKED BY:

DESCRIPTION: Machine electricity position

DRAWING NO.: JV-VS651(CE)(MIX)-EG

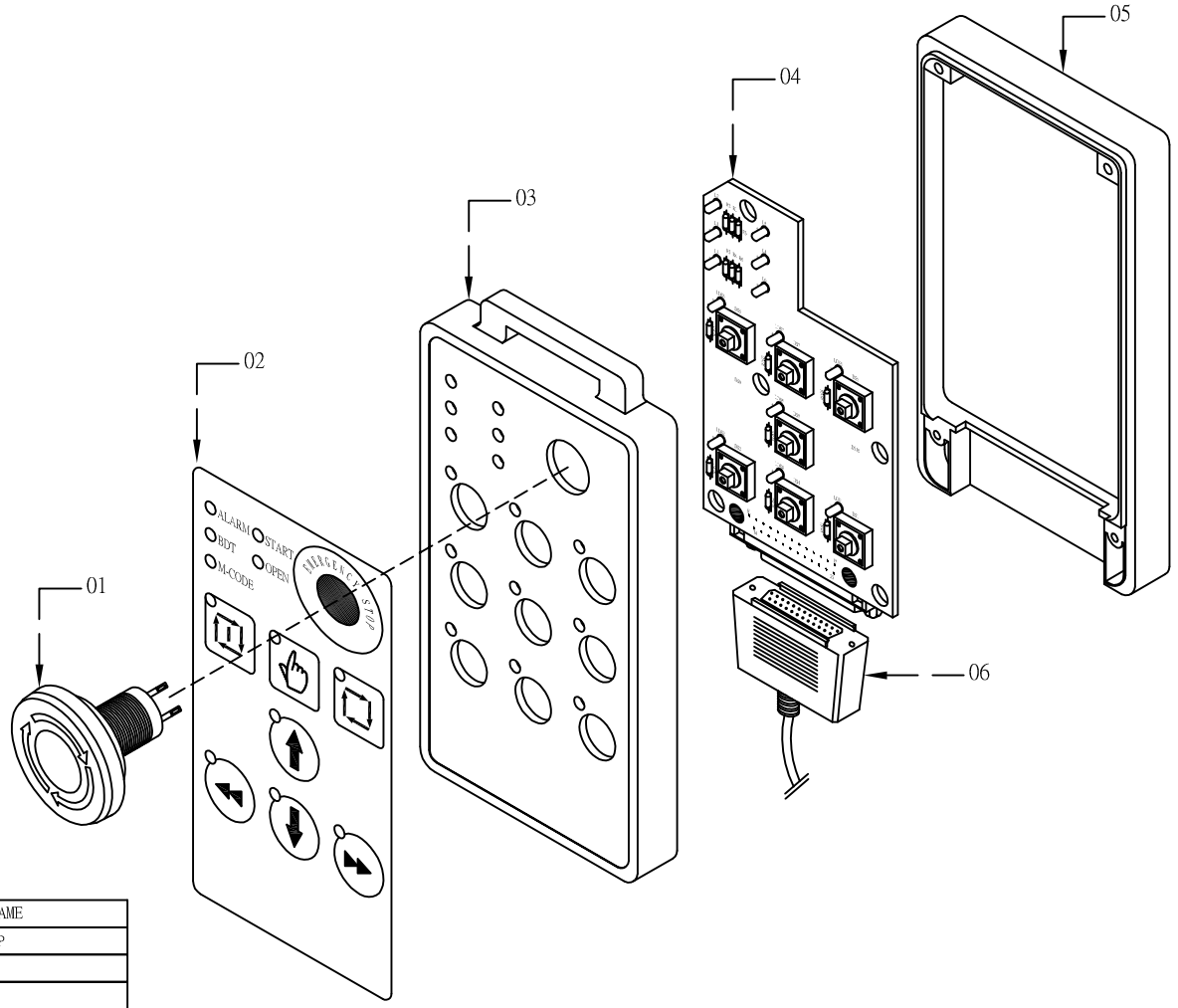
VERSION: B0

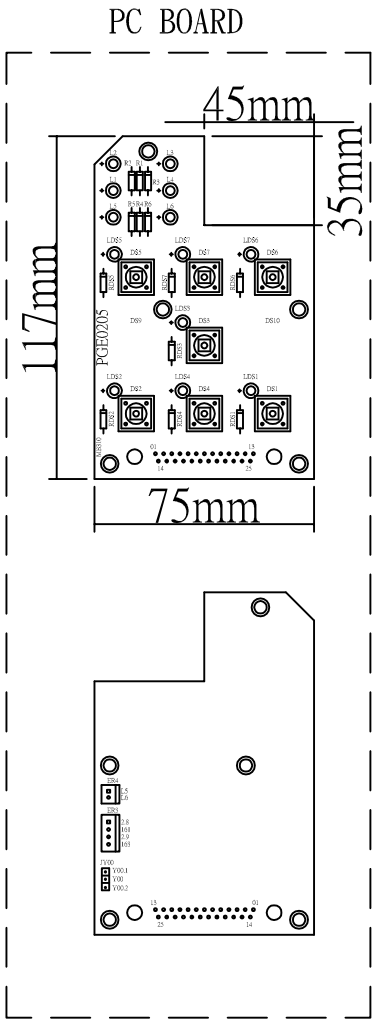


NO.	PART NO.	CODE	NAME
1.	J511400	PCB1	MAIN PC RELAY BOARD
2.	J221010	PLC	PLC FX3G-40MR
3.	J220201	2DA	DIGITAL.ANALOG.MODULES
4.	J312702	MC	MAGNETIC CONTACTOR
5.	J310523	NFB	BREAKER 3P 10A
6.	J312102	F1	FUSE + BLOCK 4A
	J312102	F2	FUSE + BLOCK 4A
	J312102	F3	FUSE + BLOCK 4A
7.	J224106	PCB3	PULSE CONVERSION BOARD
8.	J610502	TB	TERMIANL (GREEN)
9.	J610501	TB	TERMIANL (GRAY)
10.			
11.	J221021	SERVO	Servo drives MR-JE-40A
12.	J230101	PS	POWER SUPPLY
13.	A12120300	AS1	DETECT PRESSURE
14.	J312200	BZ	BUZZER

BAR FEEDER TYPE: VS-65E/LE(CE)		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 02
LATHE NAME		DRAWN BY	CHECKED BY	DESCRIPTION: Distribution of Electric parts		
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0

EDGE TECHNOLOGIES
A DIVISION OF HYDROMAT INC



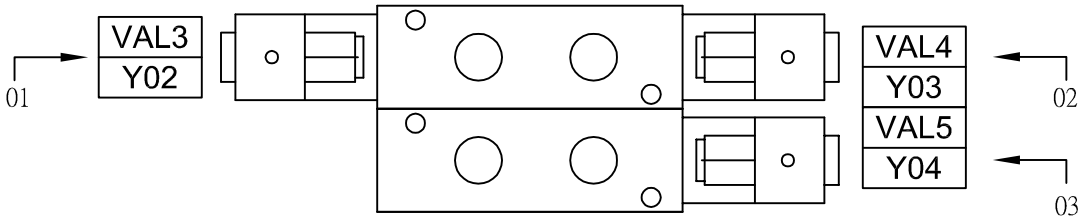


NO.	PART NO.	CODE	NAME
01	J310702 + J460340	ES2	EMERGENCY STOP
02	G91120401		PASTER
03	G91120500		TOP
04	J510500	MPCB	PC BOARD
05	G91120600		BOTTOM
06	J420600		CABLE

BAR FEEDER TYPE: VS-65E/LE(CE)		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 03
LATHE NAME		DRAWN BY	CHECKED BY	DESCRIPTION: DECOMPOSITION OF REMOTE CONTROL PENDANT		
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0

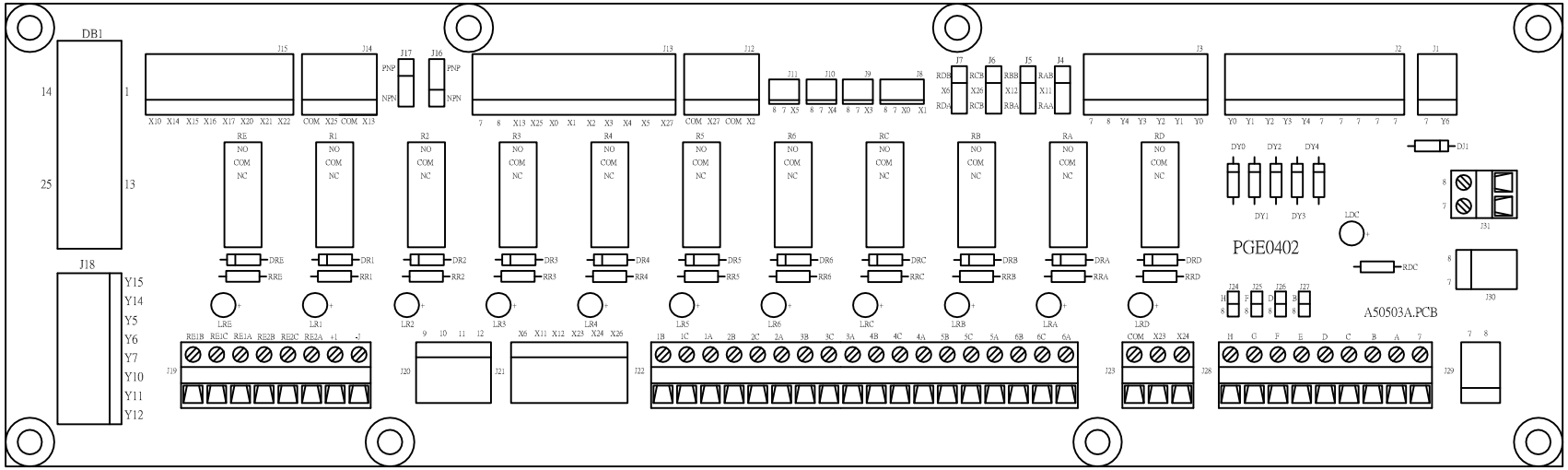
EDGE TECHNOLOGIES
A DIVISION OF HYDROMAT INC

SOLENOID VALVE DIAGRAM 1



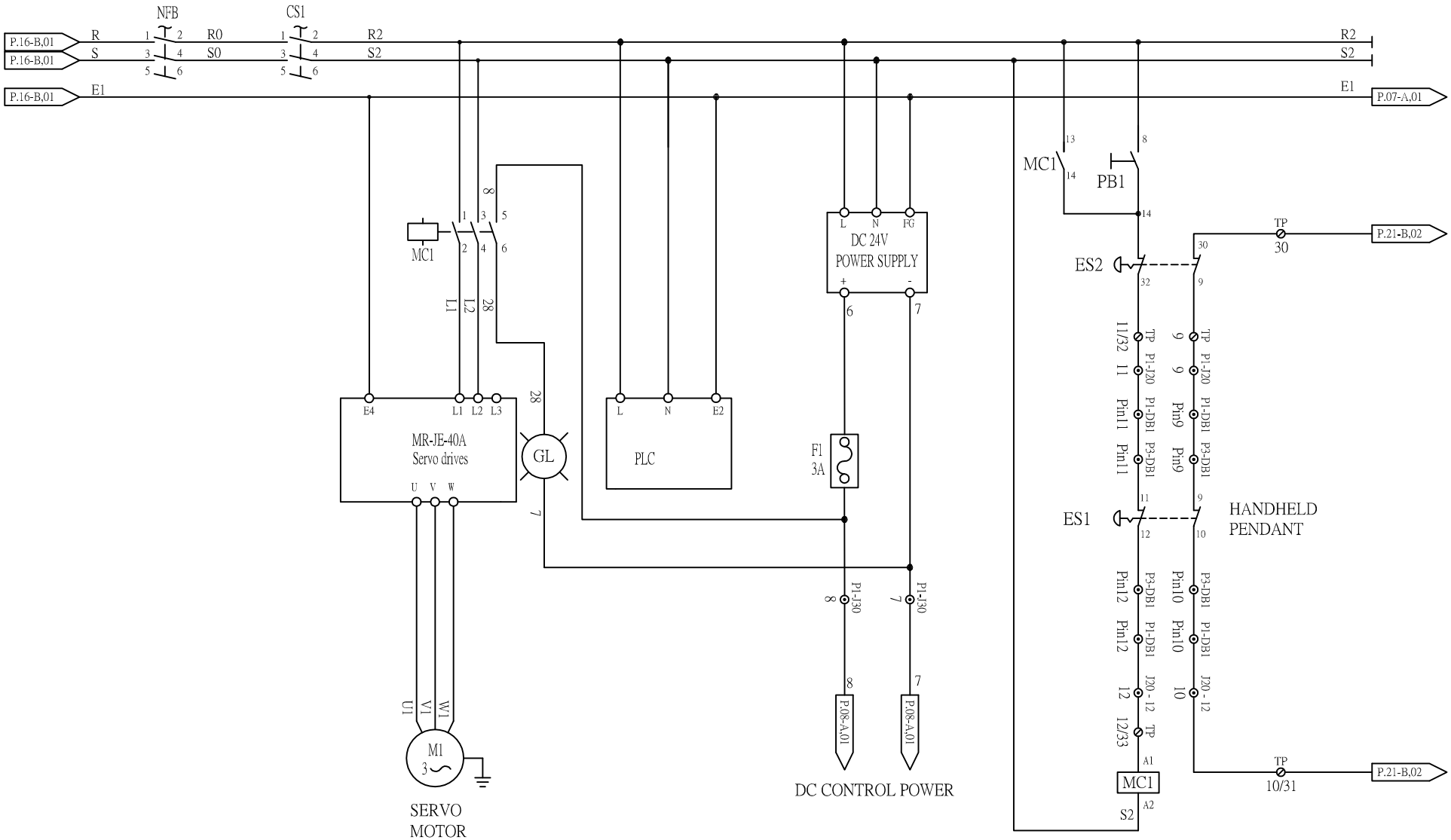
NO.	PART NO.	CODE	NAME
01	A12120200	VAL3	MOTION OF PRIMARY POSITION
02		VAL4	MOTION OF MOVING
03	A12120100	VAL5	MOTION OF LOADING MATERIAL

BAR FEEDER TYPE VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	FIRST DATE 2014 / 09 / 10	REVISION DATE 2016 / 05 / 17	MAIN VOLTAGE 220 VAC 3-PHASE	SIGNAL VOLTAGE 24VDC	PAGE P. 04
LATHE NAME		DRAWN BY	CHECKED BY	DESCRIPTION Solenoid valves position		
LATHE TYPE				DRAWING NO. JV-VS651(CE)(MIX)-EG		VERSION B0

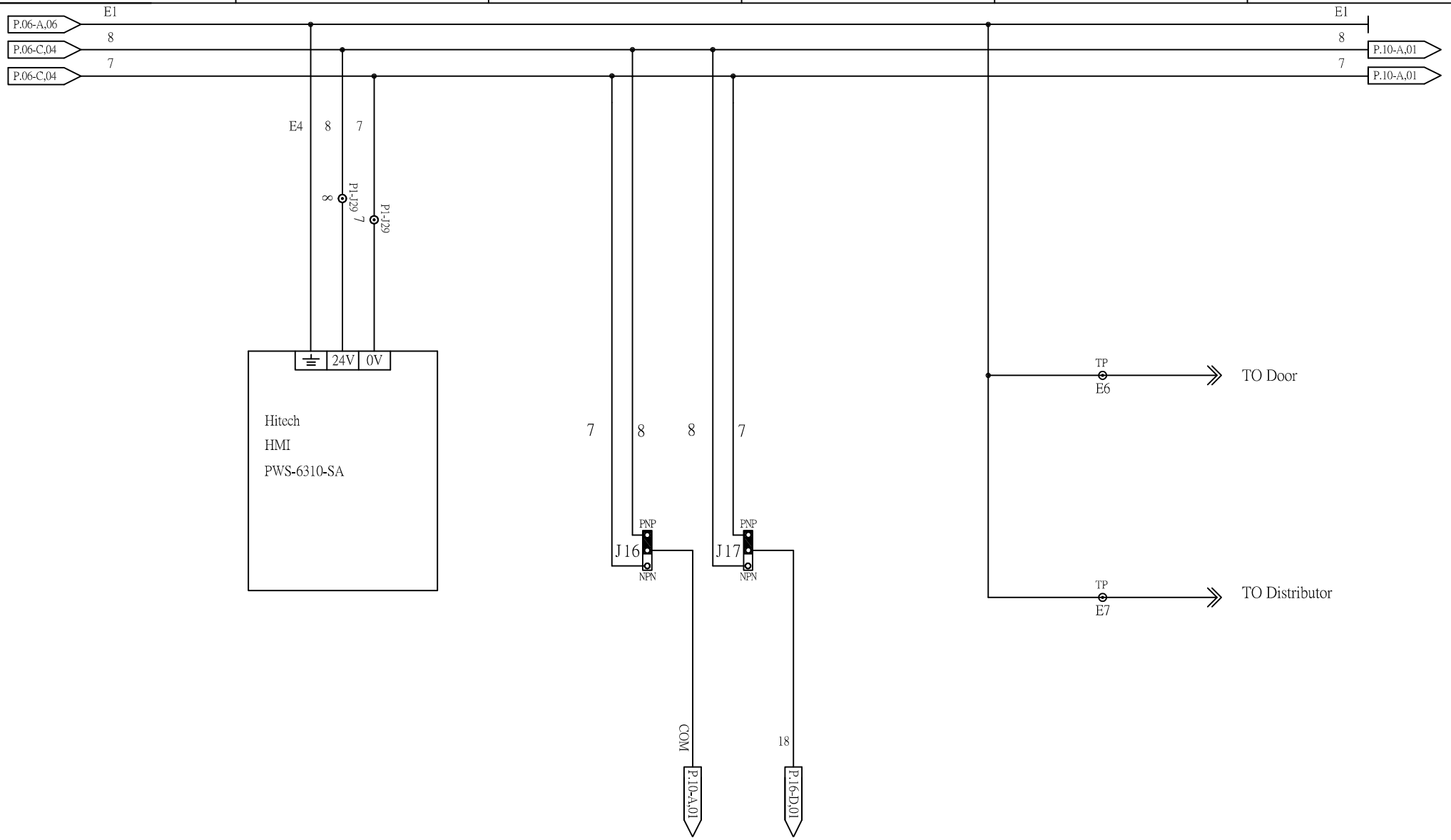


NO.	PART NO.	CODE	NAME
01	J310201	R1~R16	Relay

BAR FEEDER TYPE: VS-65E/LE(CE)		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 05
LATHE NAME	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	DRAWN BY	CHECKED BY	DESCRIPTION: Main PC board		
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0

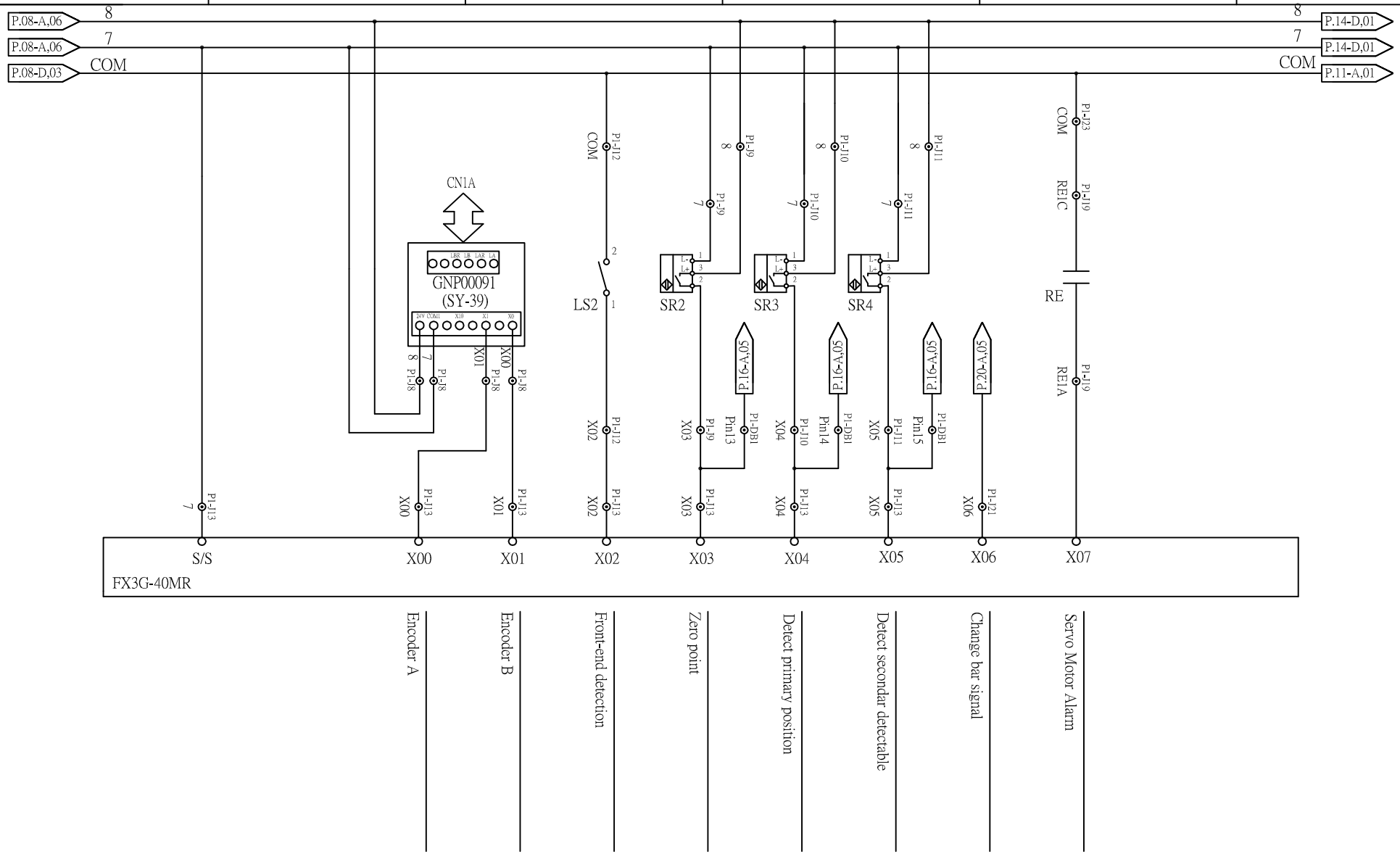


BAR FEEDER TYPE: VS-65E/LE(CE)			FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 06
LATHE NAME	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC		DRAWN BY	CHECKED BY	DESCRIPTION: Main circuit 1		
LATHE TYPE					DRAWING NO.: JV-VS651(CE)(MIX)-EG	VERSION: B0	

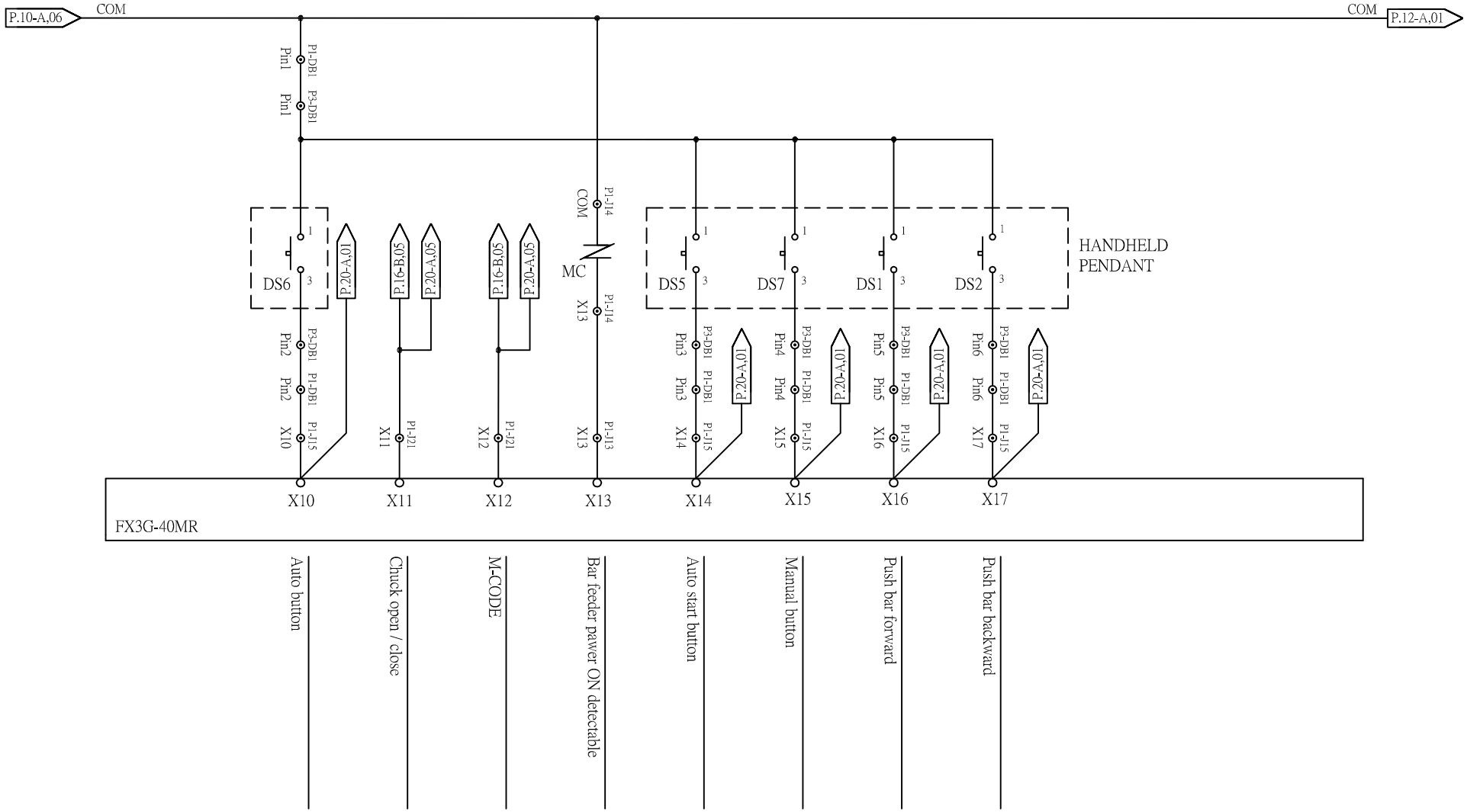


BAR FEEDER TYPE: VS-65E/LE(CE)		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 08
LATHE NAME:		DRAWN BY:	CHECKED BY:	DESCRIPTION: Main circuit 2		
LATHE TYPE:				DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0

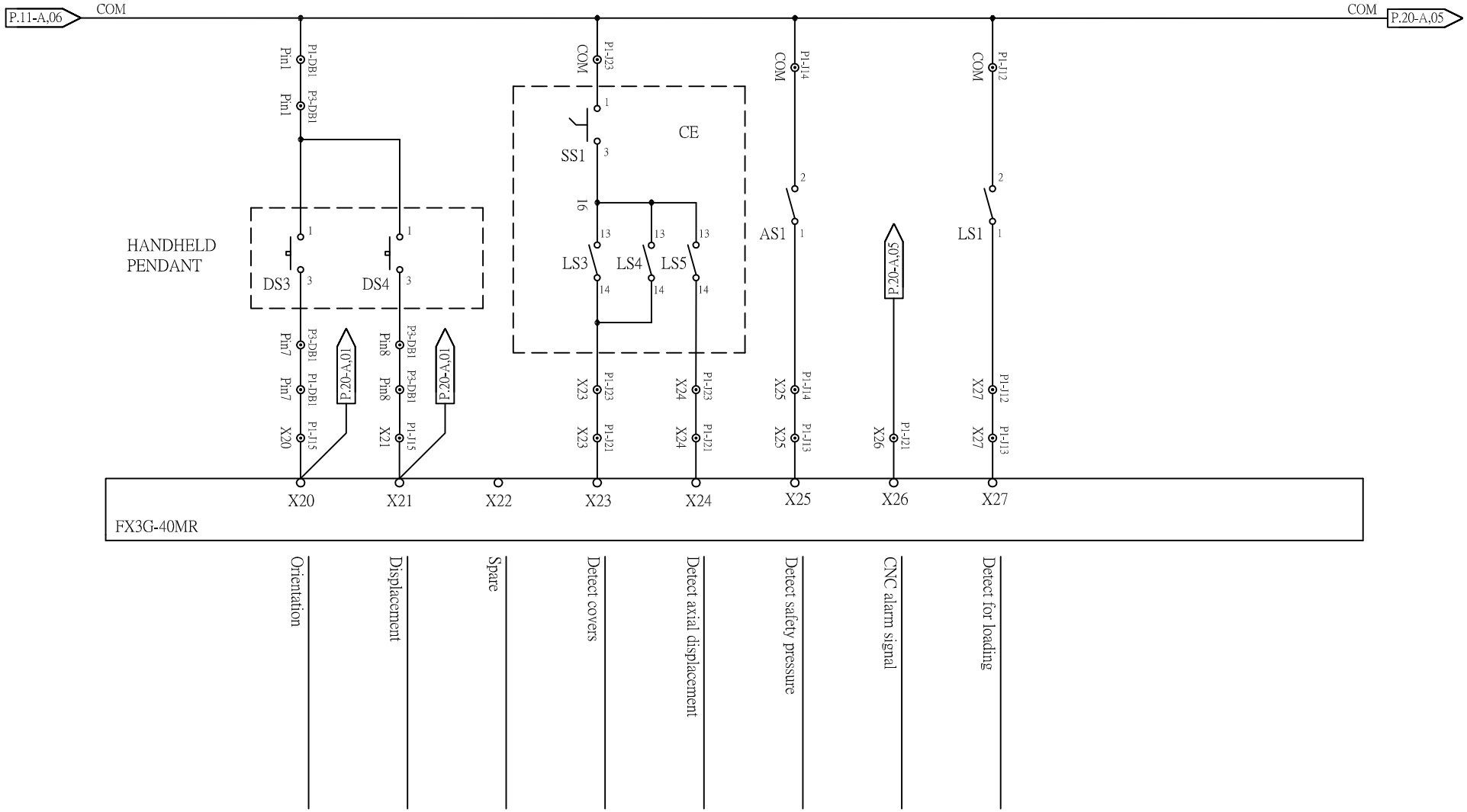
EDGE TECHNOLOGIES
A DIVISION OF HYDROMAT INC



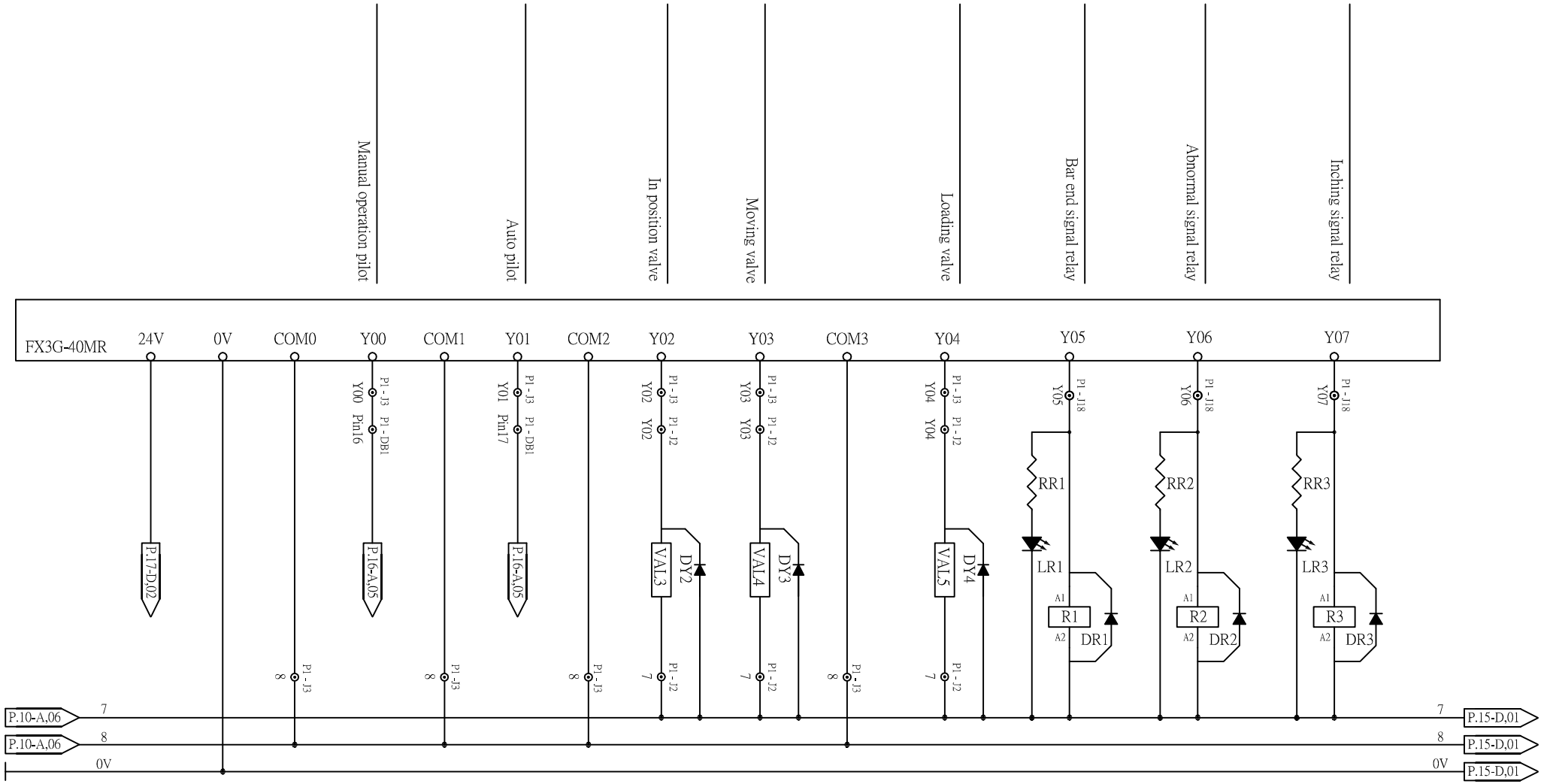
BAR FEEDER TYPE: VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 10
LATHE NAME			DRAWN BY	CHECKED BY	DESCRIPTION: PLC INPUT		
LATHE TYPE					DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0



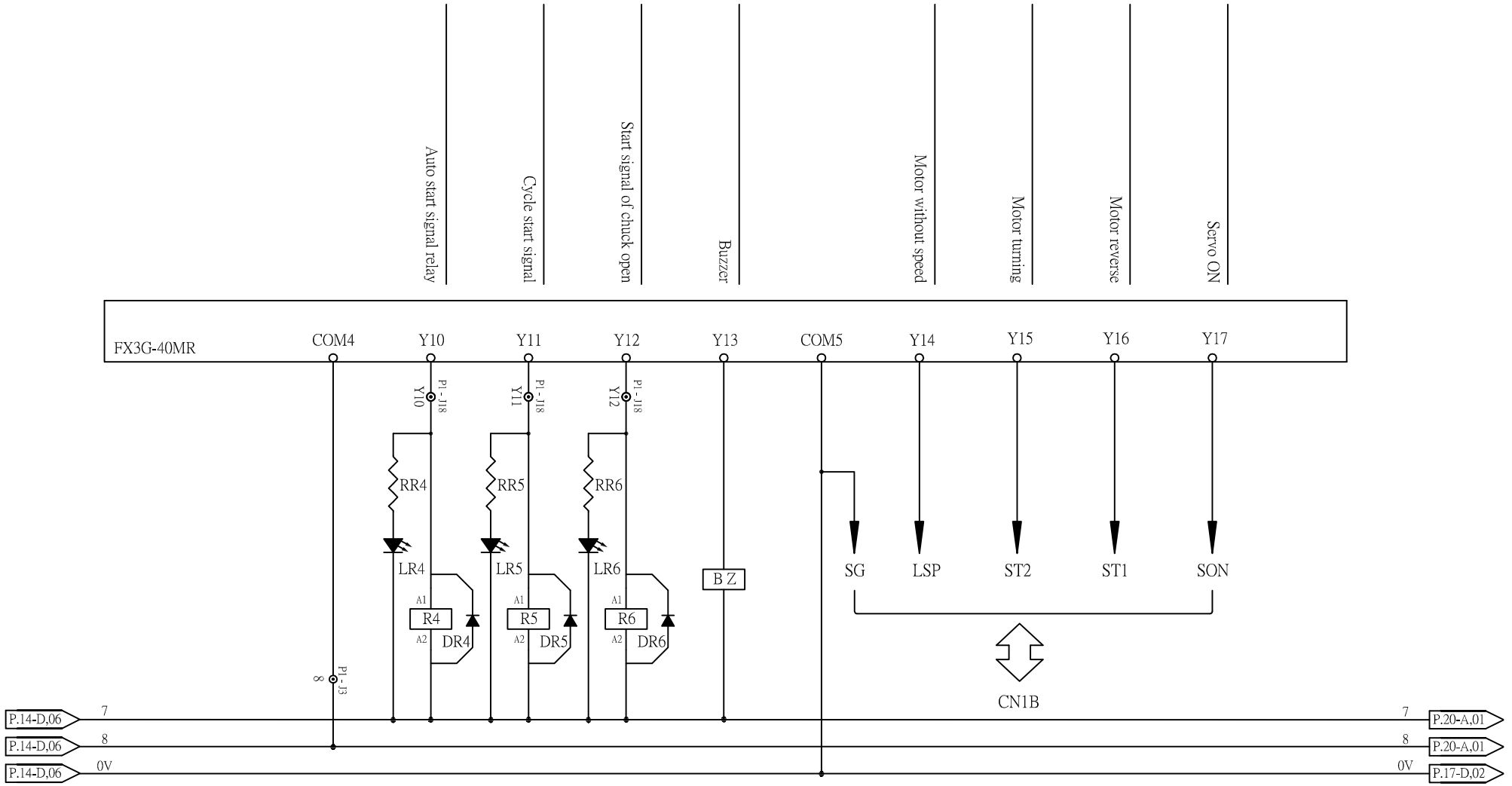
BAR FEEDER TYPE			FIRST DATE	REVISION DATE	MAIN VOLTAGE	SIGNAL VOLTAGE	PAGE
VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC		2014 / 09 / 10	2016 / 05 / 17	220 VAC 3-PHASE	24VDC	P. 11
LATHE NAME			DRAWN BY	CHECKED BY	DESCRIPTION		
					PLC INPUT		
LATHE TYPE					DRAWING NO.		VERSION
					JV-VS651(CE)(MIX)-EG		B0



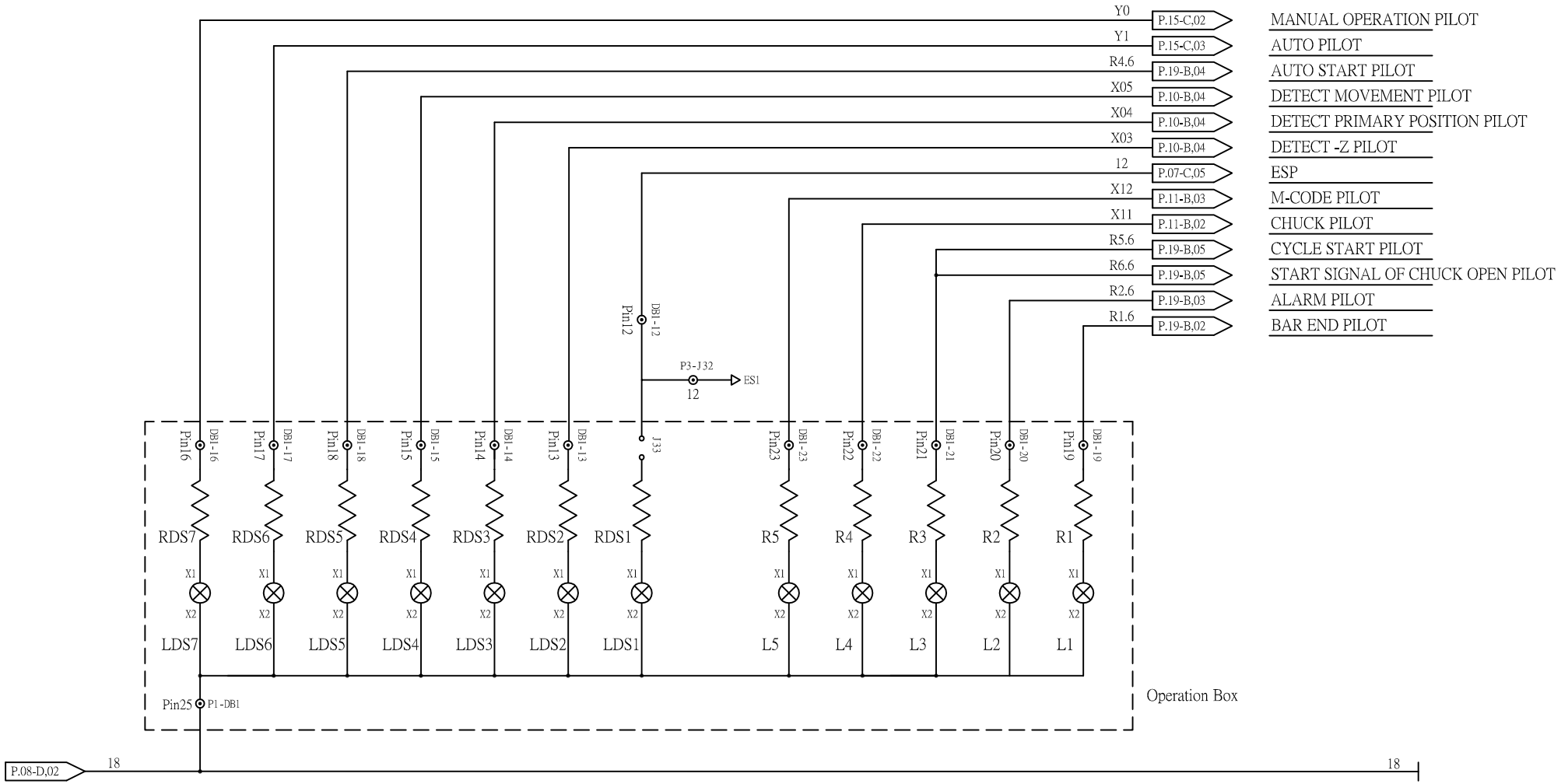
BAR FEEDER TYPE: VS-65E/LE(CE)			FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 12
LATHE NAME	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC		DRAWN BY	CHECKED BY	DESCRIPTION: PLC OUTPUT		
LATHE TYPE					DRAWING NO.: JV-VS651(CE)(MIX)-EG	VERSION: B0	



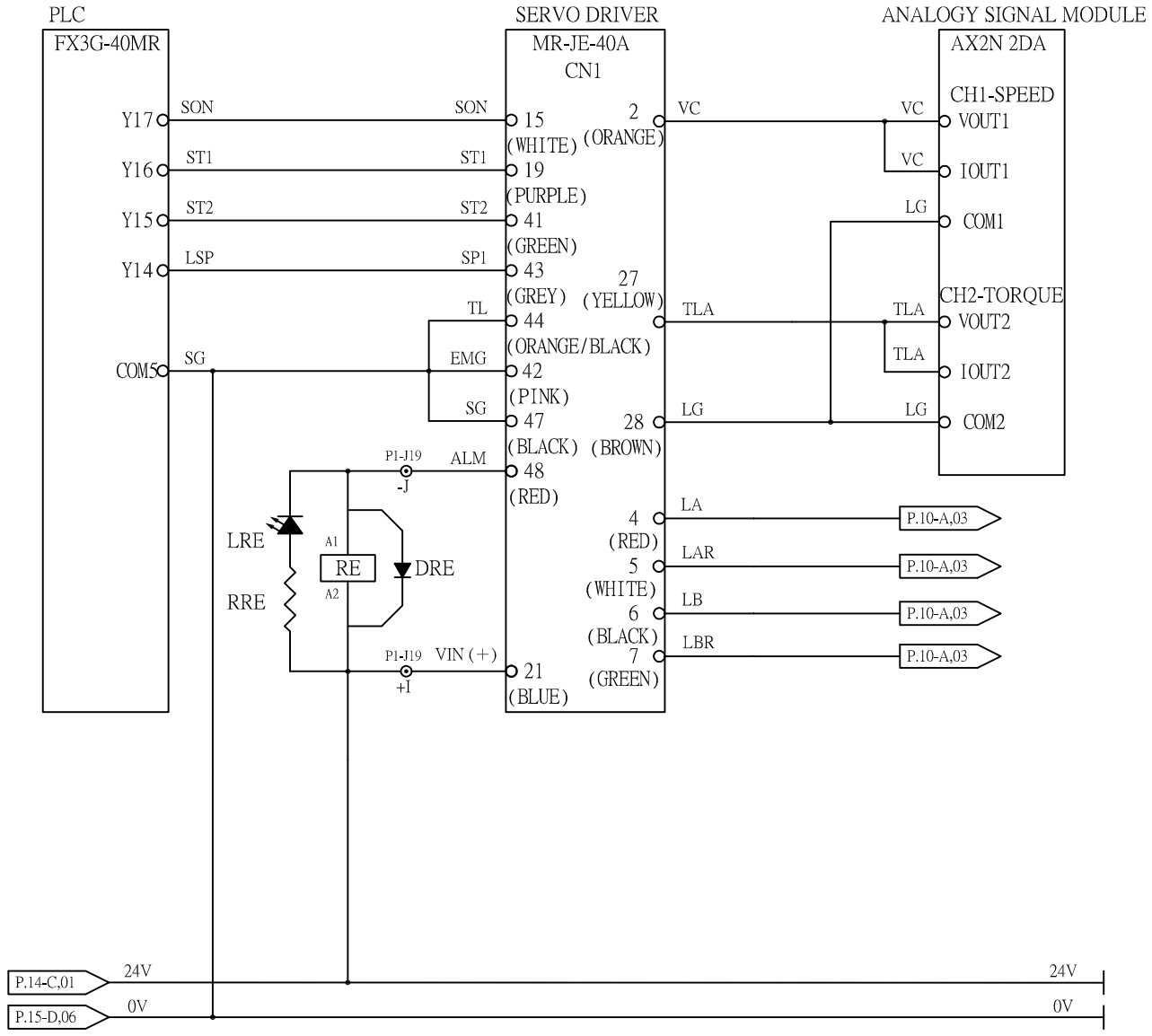
BAR FEEDER TYPE: VS-65E/LE(CE)		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC / PAGE: P. 14
LATHE NAME	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	DRAWN BY	CHECKED BY	DESCRIPTION: PLC OUTPUT	
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG	VERSION: B0



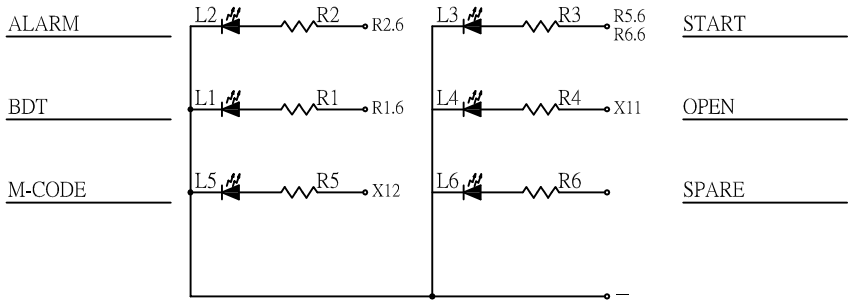
BAR FEEDER TYPE: VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 15
LATHE NAME		DRAWN BY	CHECKED BY	DESCRIPTION: PLC OUTPUT		
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0



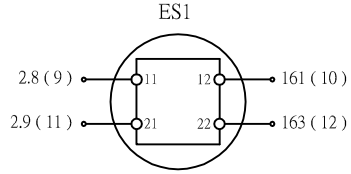
BAR FEEDER TYPE: VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 16
LATHE NAME		DRAWN BY	CHECKED BY	DESCRIPTION: LED circuit of Remote control pendant		
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0

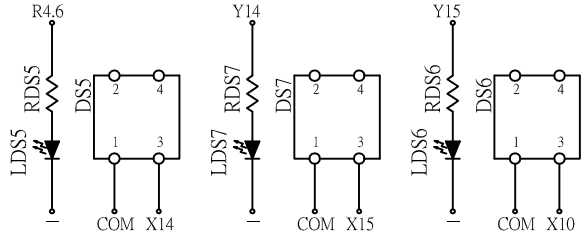


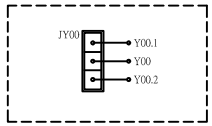
BAR FEEDER TYPE: VS-65E/LE(CE)			FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 17
LATHE NAME	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC		DRAWN BY	CHECKED BY	DESCRIPTION: Driver circuit of Servo motor		
LATHE TYPE					DRAWING NO.: JV-VS651(CE)(MIX)-EG	VERSION: B0	

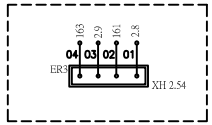


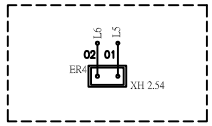
PGE 0205 KEY BOARD

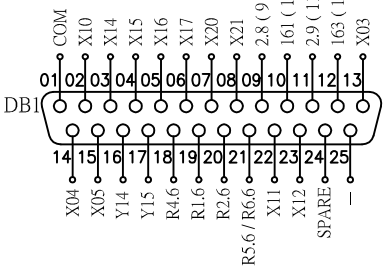


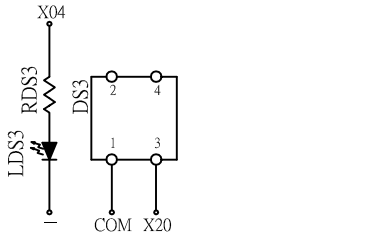


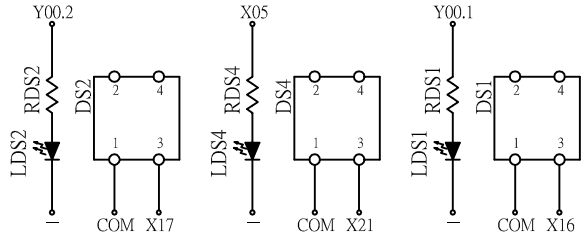




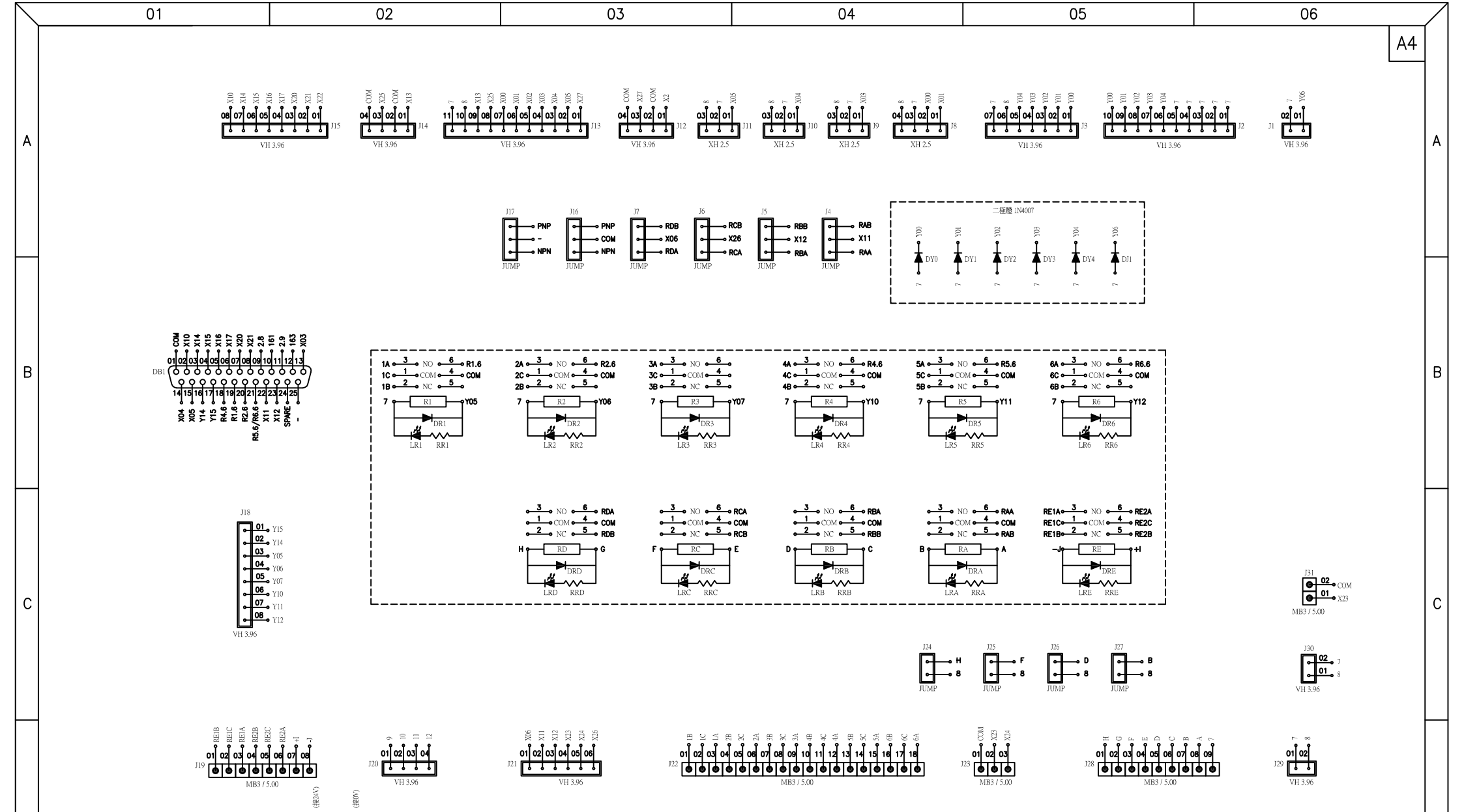




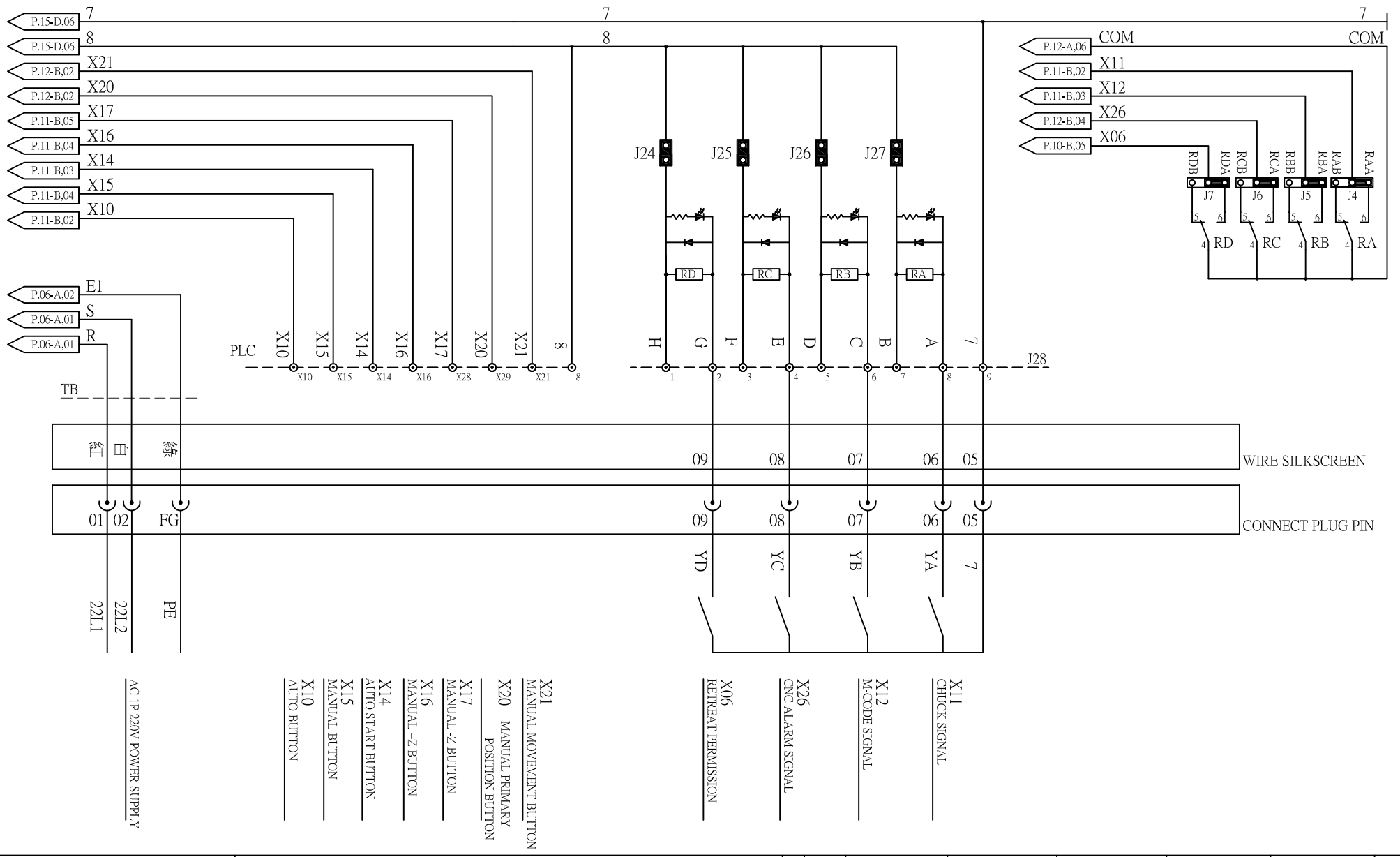




BAR FEEDER TYPE: VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 18
LATHE NAME			DRAWN BY	CHECKED BY	DESCRIPTION: PC board circuit of Remote control pendant		
LATHE TYPE					DRAWING NO.: JV-VS651(CE)(MIX)-EG		VERSION: B0

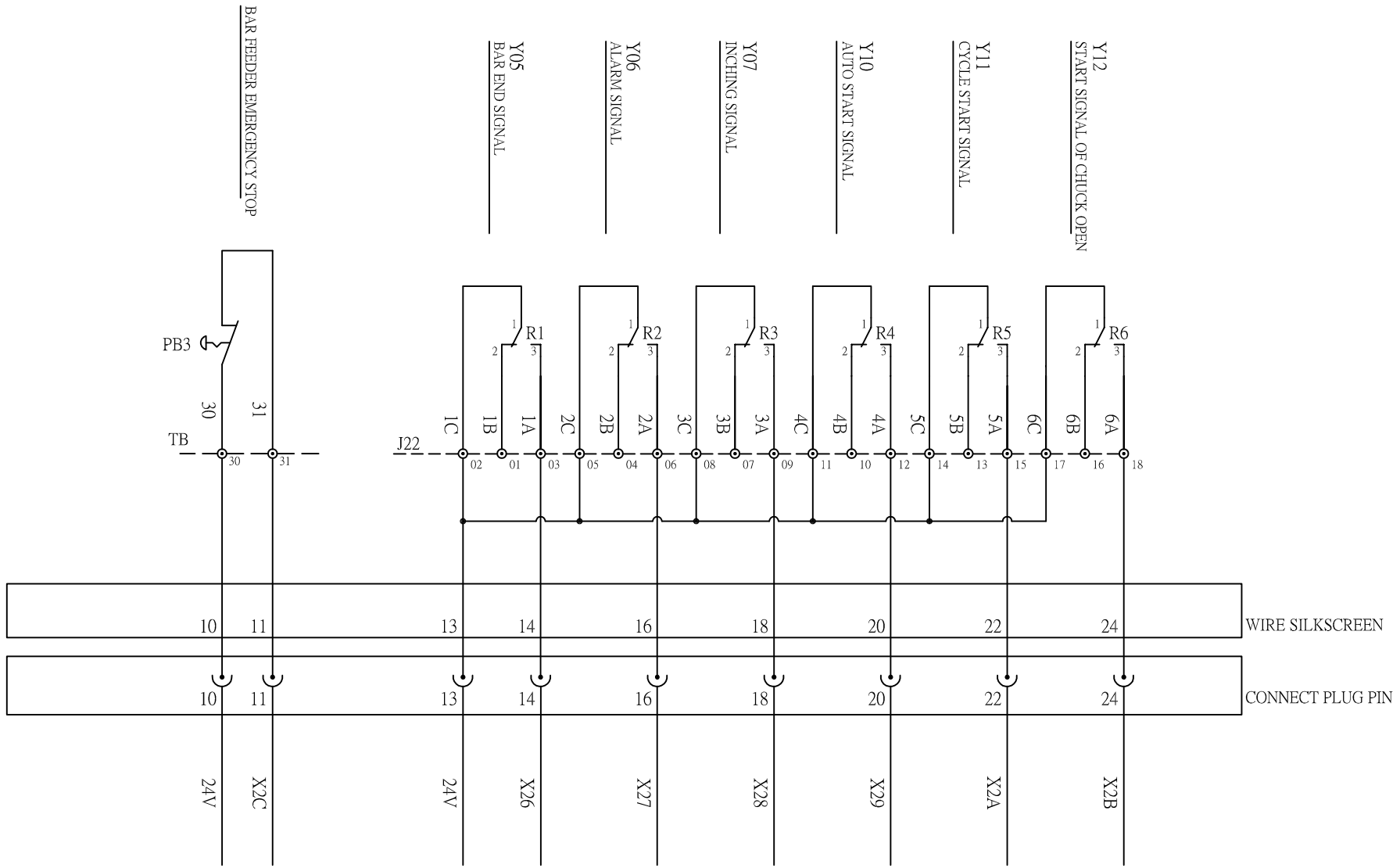


BAR FEEDER TYPE: VS-65E/LE(CE)		FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 19
LATHE NAME	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	DRAWN BY	CHECKED BY	DESCRIPTION: Main PC board circuit		
LATHE TYPE				DRAWING NO.: JV-VS651(CE)(MIX)-EG	VERSION: B0	

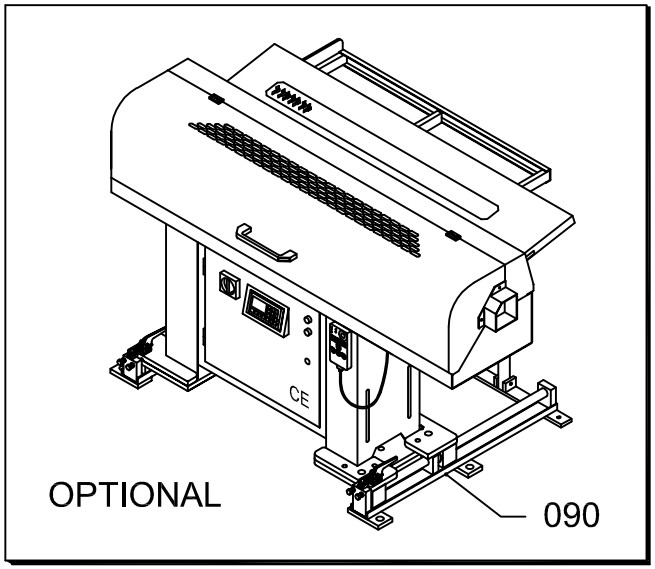


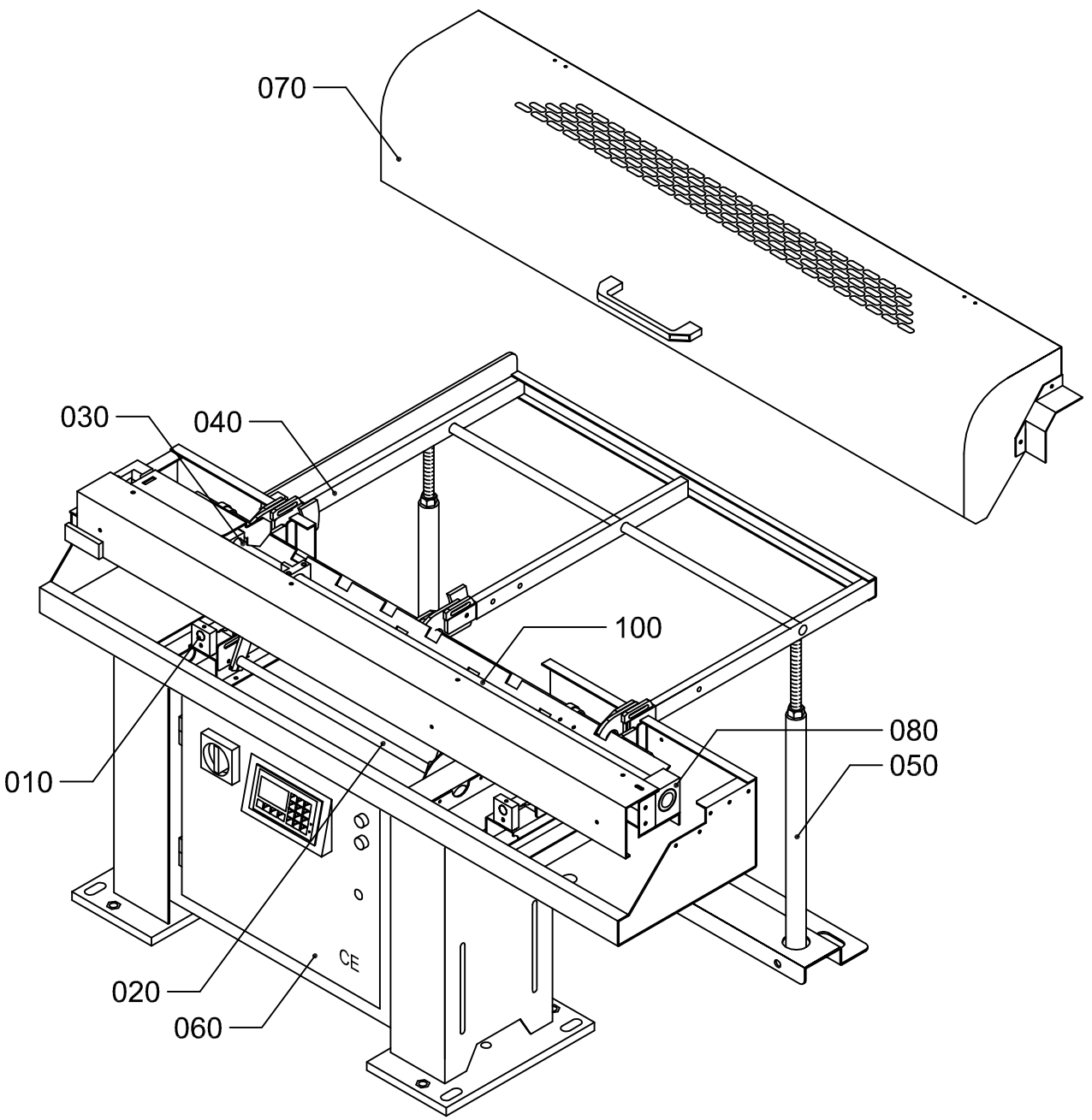
A4

BAR FEEDER TYPE: VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	Interface Connector	Male	M-HR11-101-24-45-I	FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE / SIGNAL VOLTAGE: 24VDC / PAGE: P. 20
LATHE NAME				L = 4.5 M	DRAWN BY	CHECKED BY	DESCRIPTION: Interface
LATHE TYPE			Female	F-HR01-101-24-15-I			DRAWING NO.: JV-VS651(CE)(MIX)-EG / VERSION: B0
				L = 1.5 M			



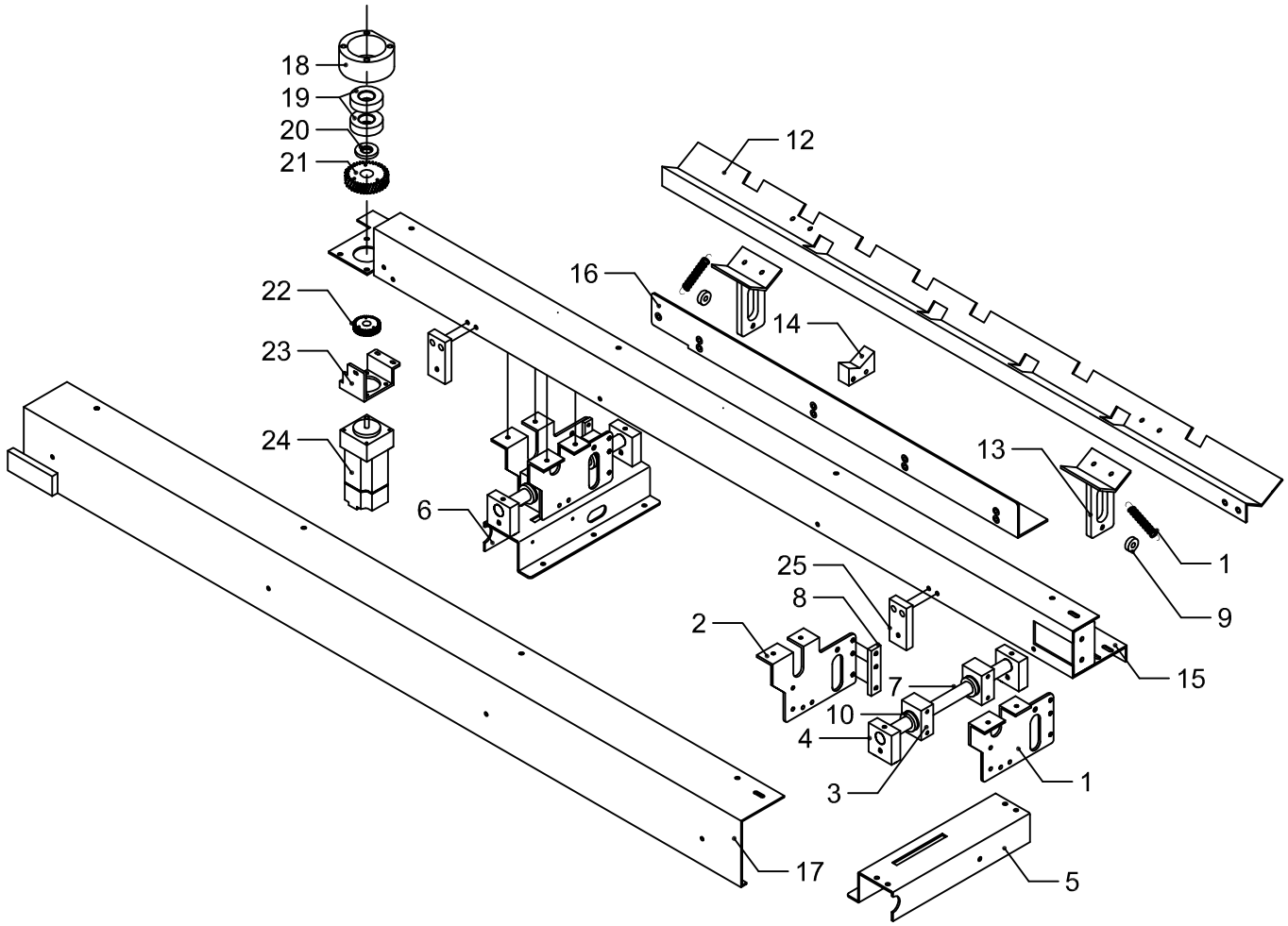
BAR FEEDER TYPE: VS-65E/LE(CE)	EDGE TECHNOLOGIES A DIVISION OF HYDROMAT INC	Interface Connector	Male	M-HR11-101-24-45-I	FIRST DATE: 2014 / 09 / 10	REVISION DATE: 2016 / 05 / 17	MAIN VOLTAGE: 220 VAC 3-PHASE	SIGNAL VOLTAGE: 24VDC	PAGE: P. 21
LATHE NAME				L = 4.5 M	DRAWN BY	CHECKED BY	DESCRIPTION: Interface		
LATHE TYPE			Female	F-HR01-101-24-15-I			DRAWING NO.: JV-VS651(CE)(MIX)-EG	VERSION: B0	
				L = 1.5 M					

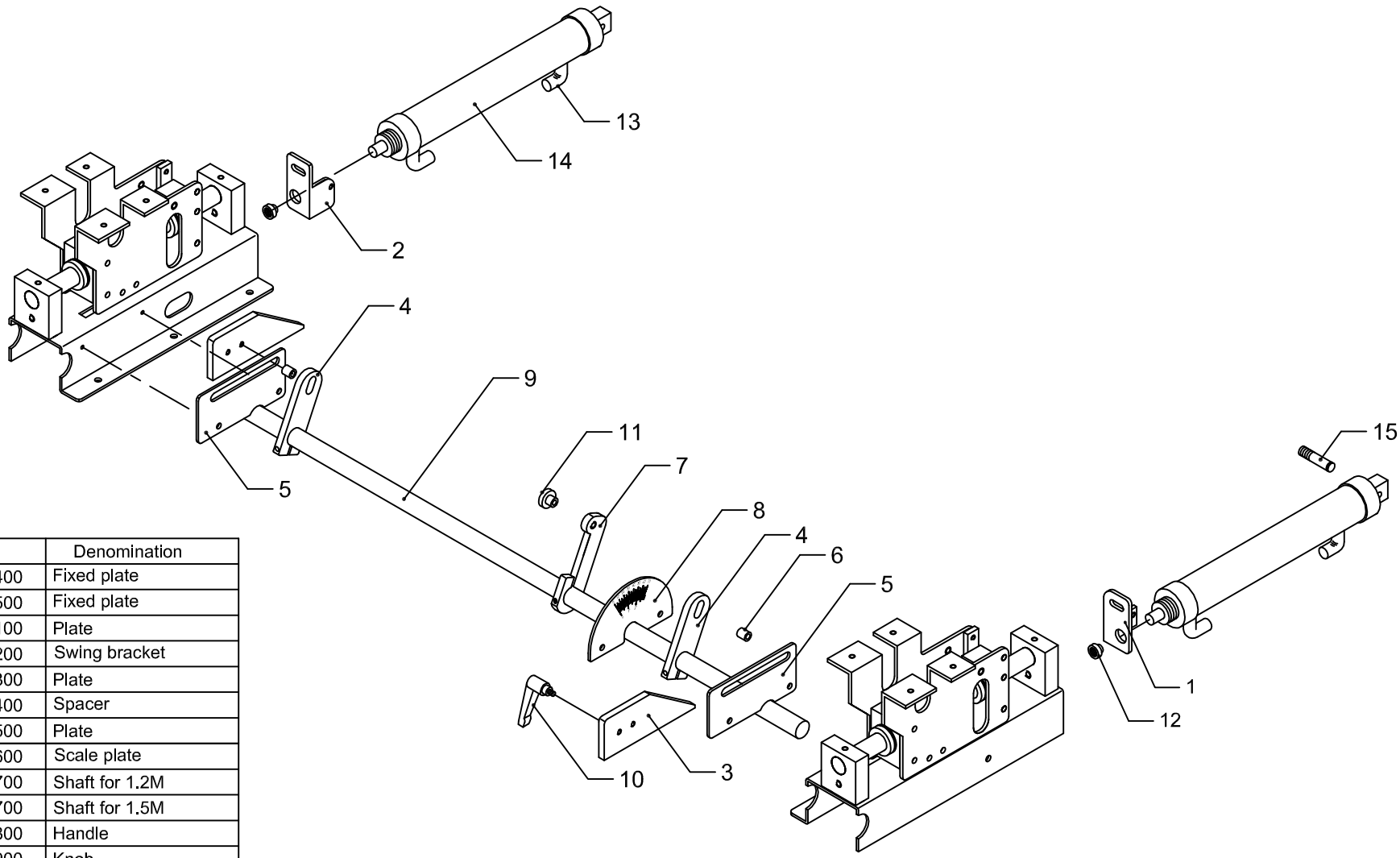




010	BRACKET DEVICE
020	CHANGEOVER
030	BAR PUSHER
040	FEEDING-EXTRACTION CONTROL DEVICE
050	FRAME
060	STAND
070	COVER
080	FEEDING DEVICE
090	SLIDING RAIL (OPTIONAL)
100	AIR PRESSURE DIAGRAM

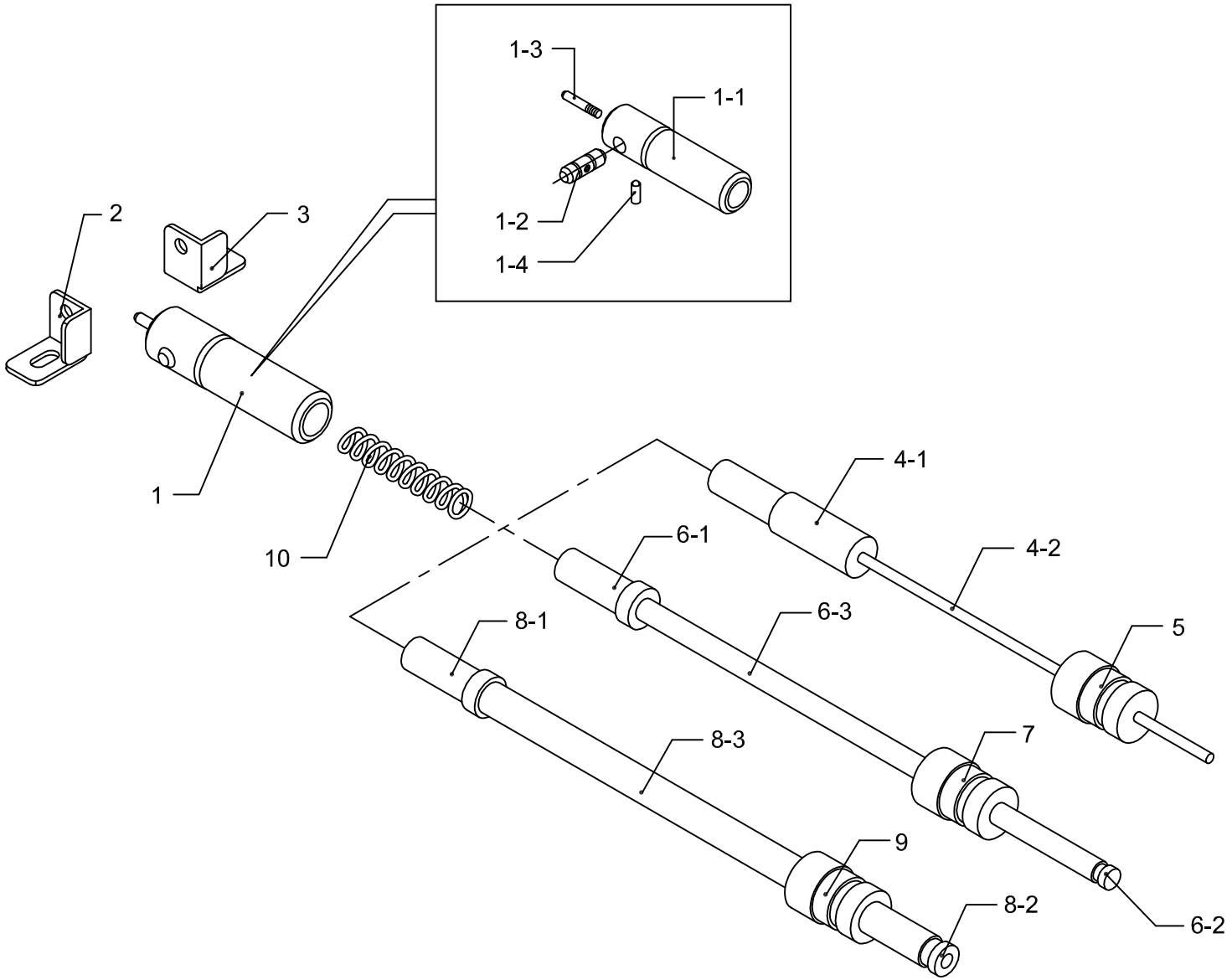
N.	Code	Denomination
1	G52120100	Support
2	G52120101	Support
3	G52120200	Bearing anchor
4	G52120400	Anchor
5	G52120500	Anchor
6	G52120501	Anchor
7	G52120700	Arbor
8	G52120900	Plate
9	B 608ZZ	Bearing
10	G51121000	Bearing
11	G52121100	Spring
12	G54120100	V Plate for 1.2M
12	G54150100	V Plate for 1.5M
13	G54120200	Plate
14	G54120300	Anchor
15	G41120200	Beam for 1.2M
15	G41150200	Beam for 1.5M
16	G71120400	Sheel steel for 1.2M
16	G71150400	Sheel steel for 1.5M
17	G41120300	Cover for 1.2M
17	G41150300	Cover for 1.5M
18	G42120100	Collet
19	B6004ZZ	Bearing
20	P13200600	Bush
21	G42120500	Gear wheel Z=55
22	G42120400	Gear wheel Z=20
23	G42120300	Plate
24	J221002	Motor
25	G41120400	Plate

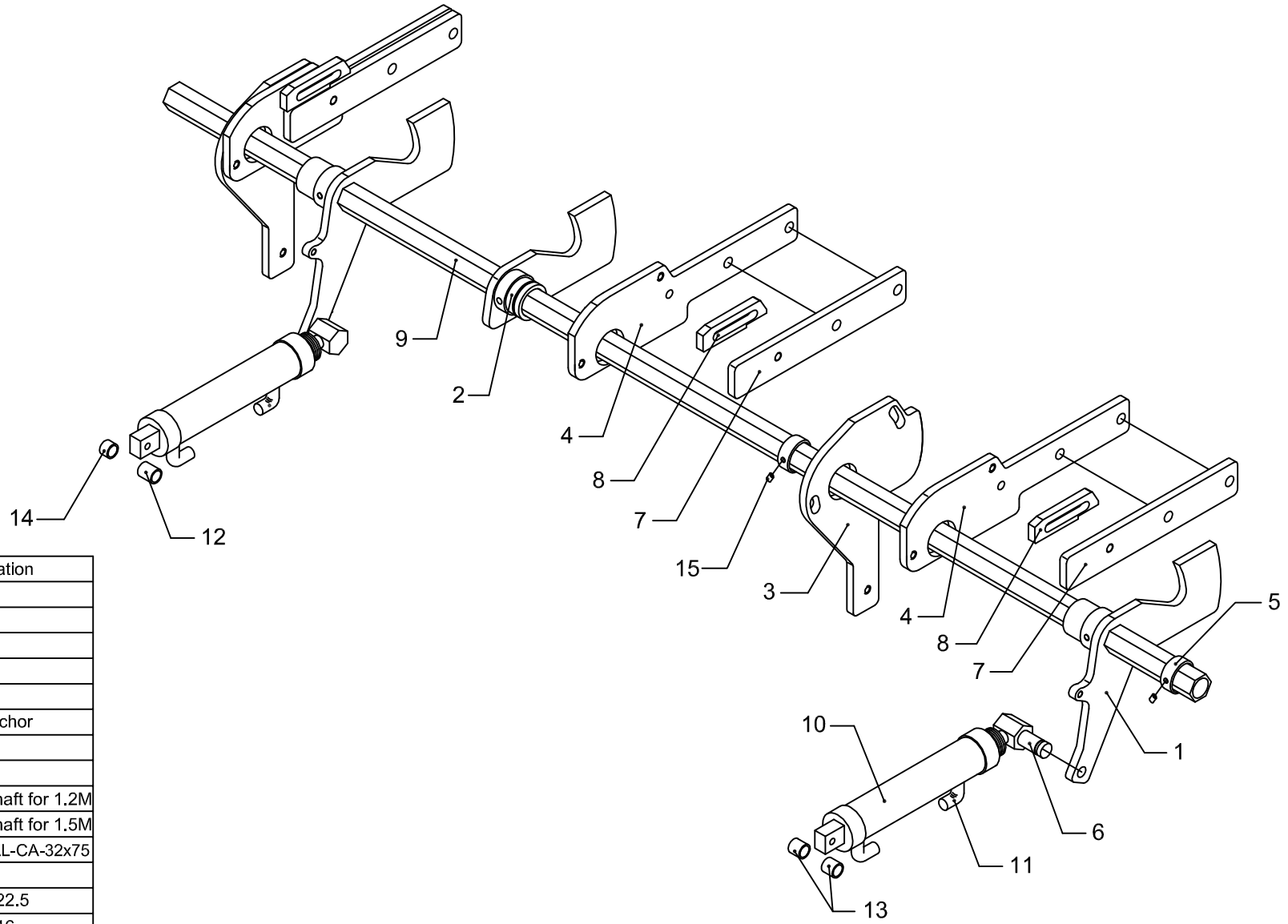




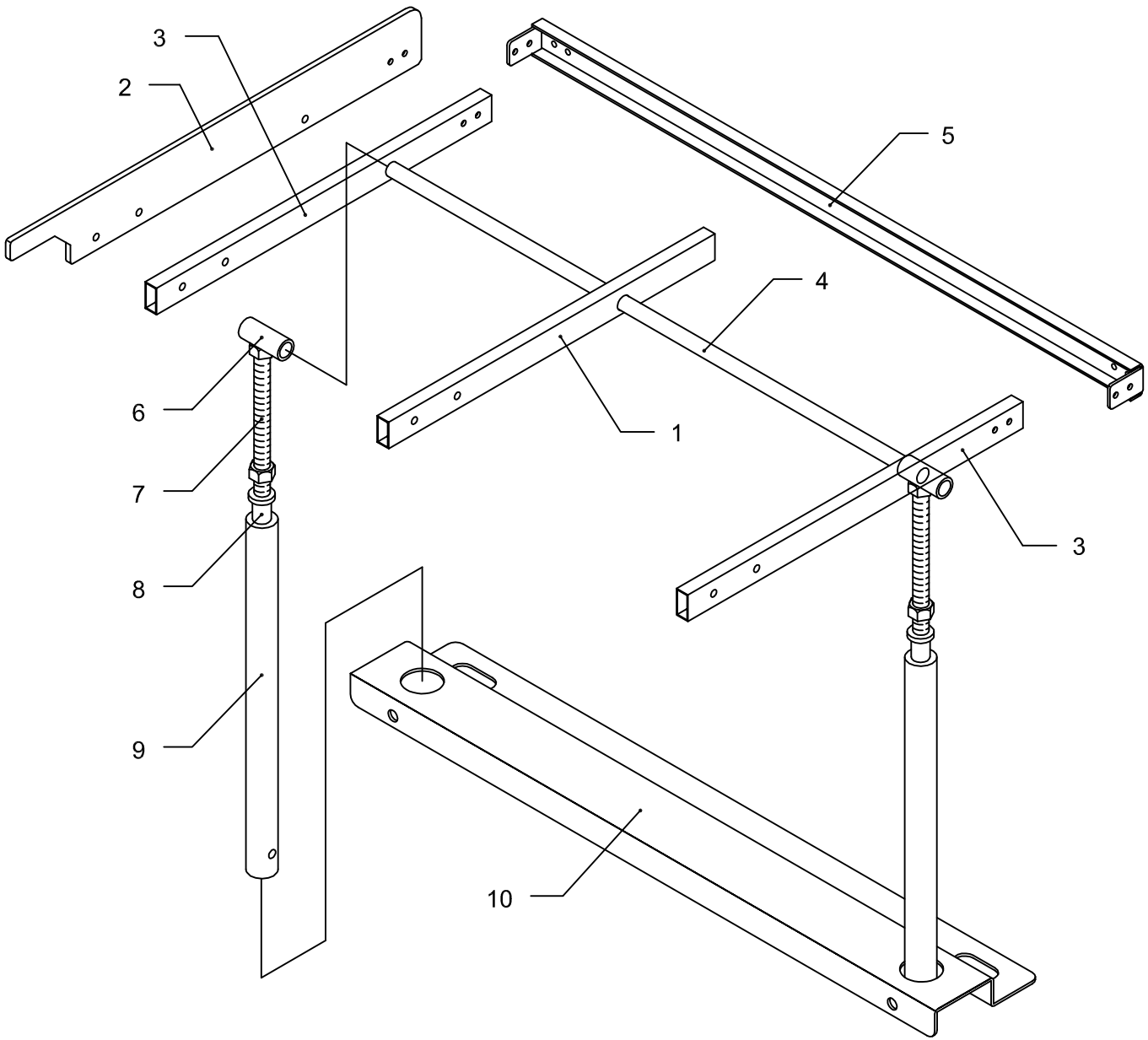
N.	Code	Denomination
1	G52121400	Fixed plate
2	G52121500	Fixed plate
3	G53120100	Plate
4	G53120200	Swing bracket
5	G53120300	Plate
6	G53120400	Spacer
7	G53120500	Plate
8	G53120600	Scale plate
9	G53120700	Shaft for 1.2M
9	G53150700	Shaft for 1.5M
10	G53120800	Handle
11	G53120900	Knob
12	G52121600	Spacer
13	A13120300	Bended connectir
14	A11110100	Piston cylinder
15	G61121300	Bolt

N.	Code	Denomination
1	G55120110	Support
1-1	G55120100	Support
1-2	G55120200	Rod
1-3	G55120300	Arbor
1-4	G55120900	Steel ball
2	G55120400	Plate
3	G55120401	Plate
4	G55120500	Push bar for 1.2M
4	G55150500	Push bar for 1.5M
4-1	G55120501	Anchor rod
4-2	G55120503	Bar for 1.2M
4-2	G55150503	Bar for 1.5M
5	G51120306	PE rod
6	G55120600	Push bar for 1.2M
6	G55150600	Push bar for 1.5M
6-1	G55120601	Anchor rod
6-2	G55120602	Piston
6-3	G55120603	Bar for 1.2M
6-3	G55150603	Bar for 1.5M
7	G51120312	PE rod
8	G55120700	Push bar for 1.2M
8	G55150700	Push bar for 1.5M
8-1	G55120701	Anchor rod
8-2	G55120702	Piston
8-3	G55120703	Bar for 1.2M
8-3	G55150703	Bar for 1.5M
9	G51120320	PE rod
10	G55120800	Spring

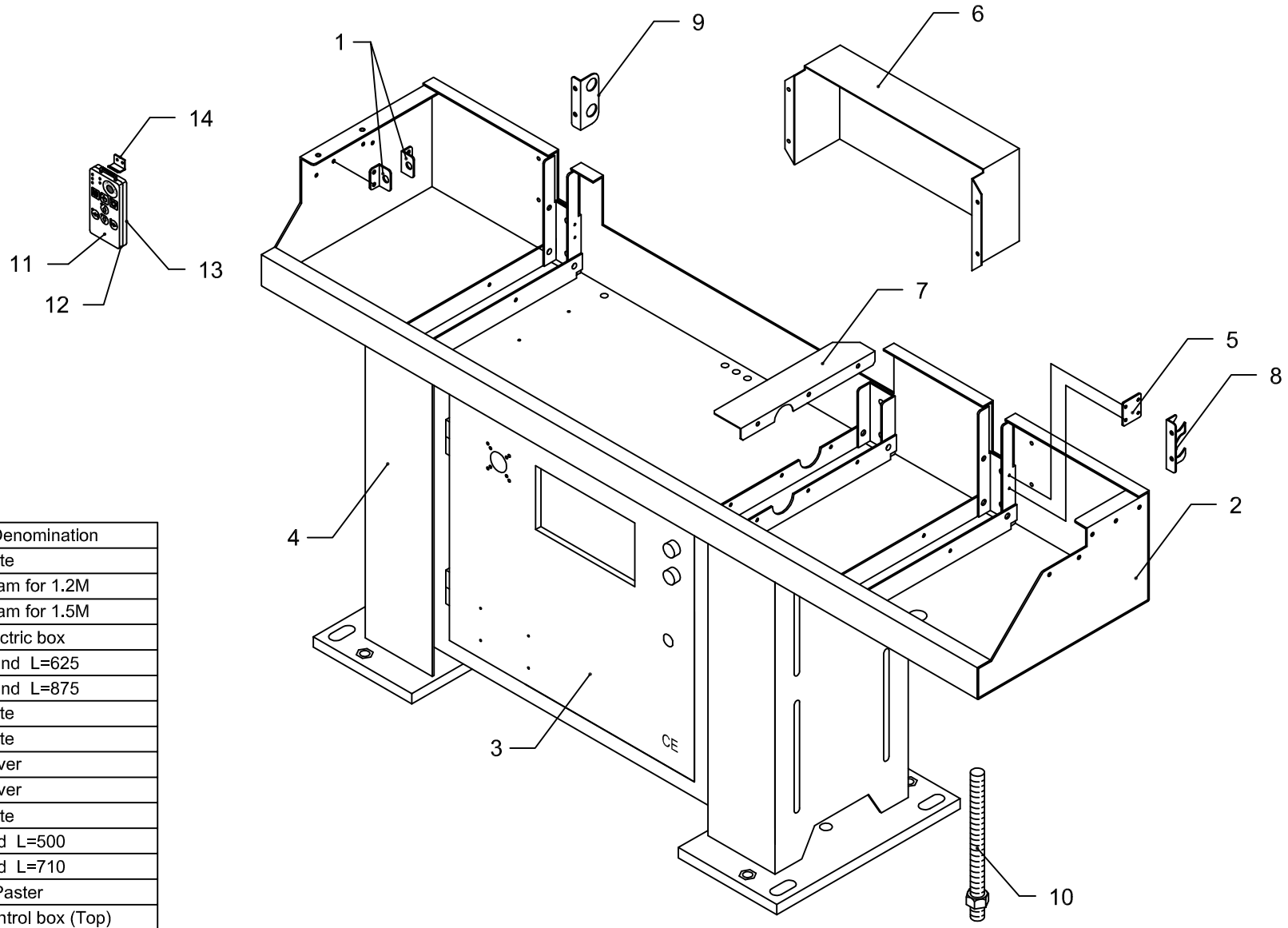




N.	Code	Denomination
1	G61120100	Plate
2	G61120200	Plate
3	G61120301	Plate
4	G61120400	Plate
5	G61120500	Spacer
6	P53200400	Cylinder anchor
7	G61120700	Plate
8	G61120800	Plate
9	G61120900	Hexagon shaft for 1.2M
9	G61150900	Hexagon shaft for 1.5M
10	A11110100	Cylinder MAL-CA-32x75
11	A13110100	L type joint
12	G61121000	Spacer L=22.5
13	G61121100	Spacer L=16
14	G61121200	Spacer L=9
15	G53120400	Spacer L=12



N.	Code	Denomination
1	G62120100	Support
2	G62120200	Plate
3	G62120300	Plate
4	G62120400	Bar for 1.2M
4	G62150400	Bar for 1.5M
5	G62120500	Plate for 1.2M
5	G62150500	Plate for 1.5M
6	G62120600	Spacer
7	G62120700	Thread bar
8	G62120800	Spacer
9	G62120900	Support
10	G62121000	Plate



N.	Code	Denomination
1	G71120300	Plate
2	G72120100	Beam for 1.2M
2	G72150100	Beam for 1.5M
3	G72120300	Electric box
4	G72120400	Stand L=625
4	G72120410	Stand L=875
5	G72120600	Plate
6	G72120700	Plate
7	G72120800	Cover
8	G81120700	Cover
9	G81120800	Plate
10	G62120701	Rod L=500
11	G62120700	Rod L=710
11	G91120400	V-Paster
12	G91120500	Control box (Top)
13	G91120600	Control box (Bottom)
14	G91120700	Plate

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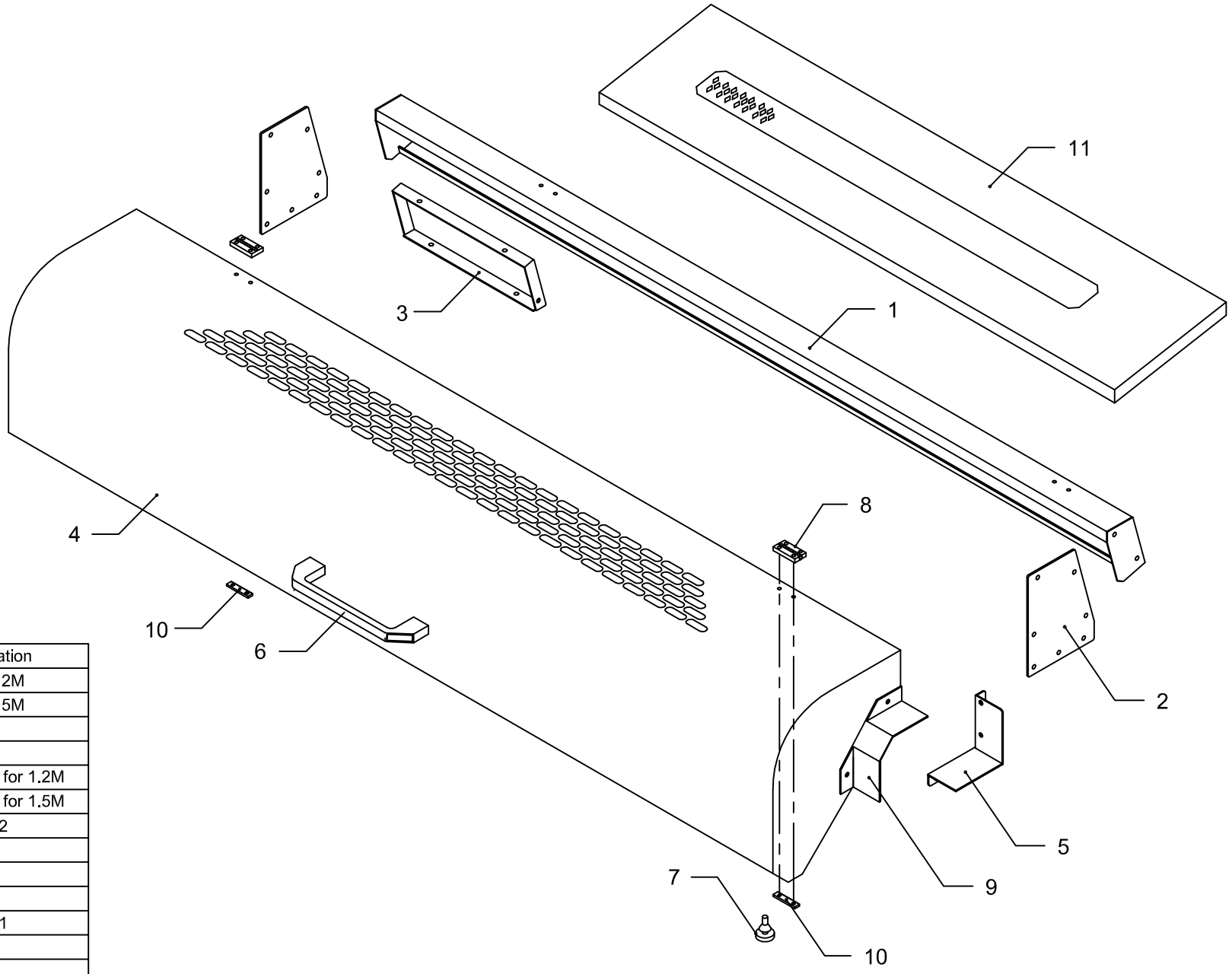
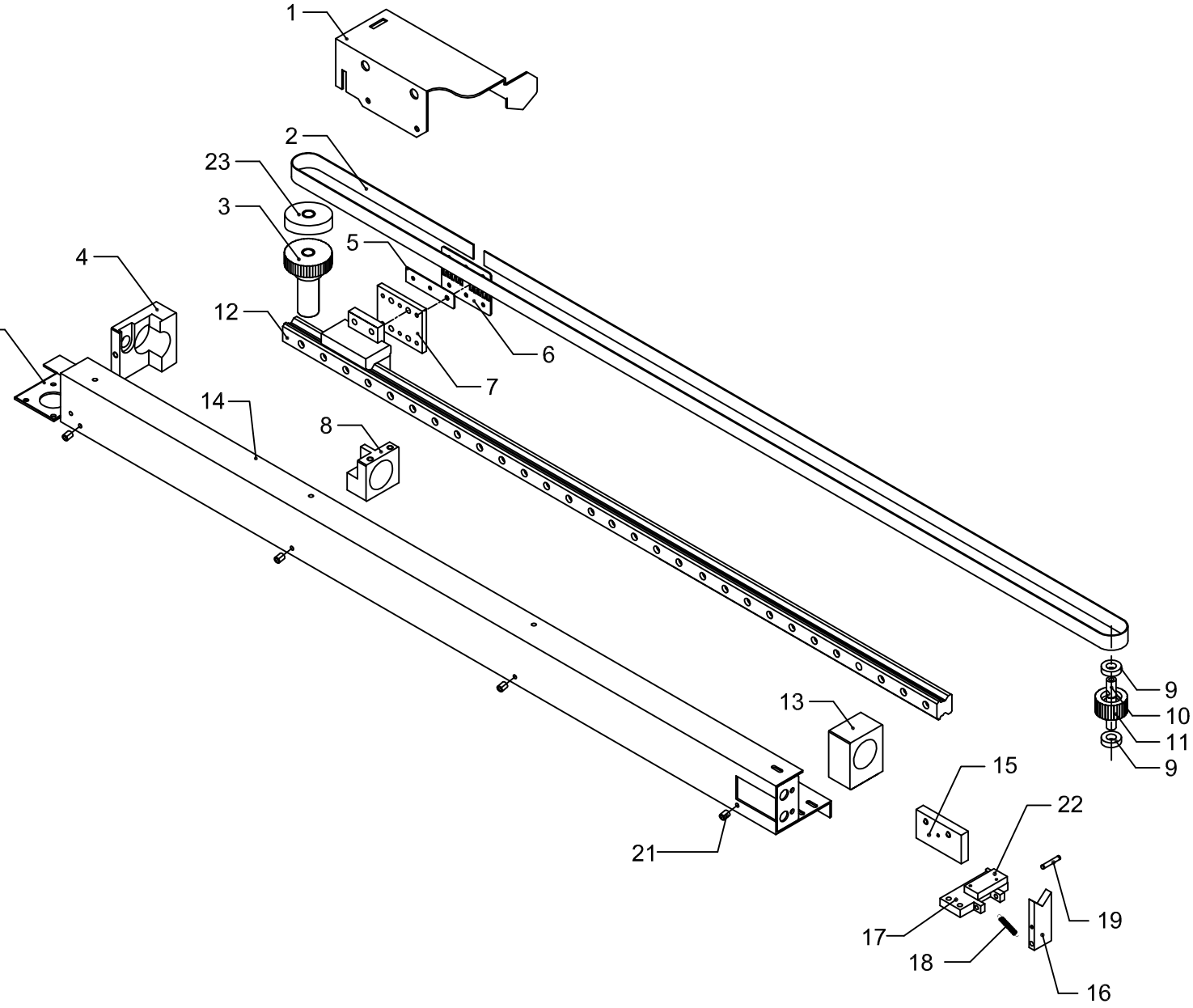
STAND

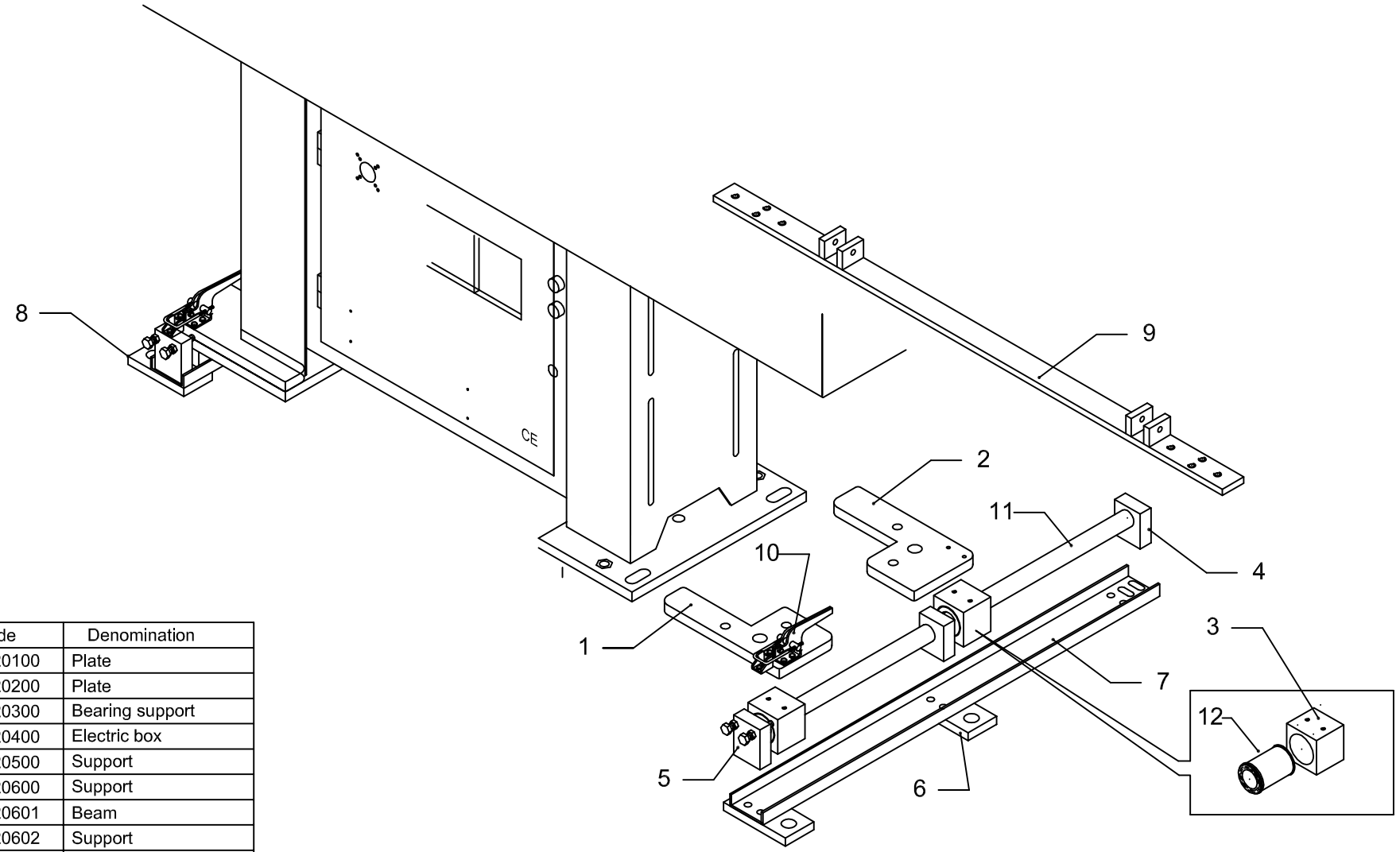
Tab. 061 1



N.	Code	Denomination
1	G81120100	Cover for 1.2M
1	G81150100	Cover for 1.5M
2	G81120200	Side plate
3	G81120300	Side cover
4	G81120400	Front cover for 1.2M
4	G81150400	Front cover for 1.5M
5	G81120500	Front plate 2
6	G81120900	Handle
7	G81121000	Anchor
8	G81121111	Hinge
9	G81120402	Front plate 1
10	AV51BA3500	Plate
11	G94150200	Cover



N.	Code	Denomination
1	G41120100	Solder
2	G43120200	Belt for 1.2M
2	G43150200	Belt for 1.5M
3	G42120200	Pulley 17Z
4	G41120500	Anchor
5	T16120700	Anchor
6	T16120600	Separated plate
7	T16121000	Shim
8	G41120700	Base
9	B6002ZZ	Bearing
10	T16130400	Arbor
11	T16130300	Pulley
12	G43120100	Linear rail for 1.2M
12	G43150100	Linear rail for 1.5M
13	G41120600	Anchor
14	G41120210	Solder for 1.2M
14	G41150210	Solder for 1.5M
15	G92120200	Support
16	G92120300	Plate
17	G92120400	Support
18	G92120600	Spring
19	G92120700	Arbor
20	G72120600	Switch sheet
21	G41120800	Spacer
22	J310403	Micro switch
23	G42120201	Stoper

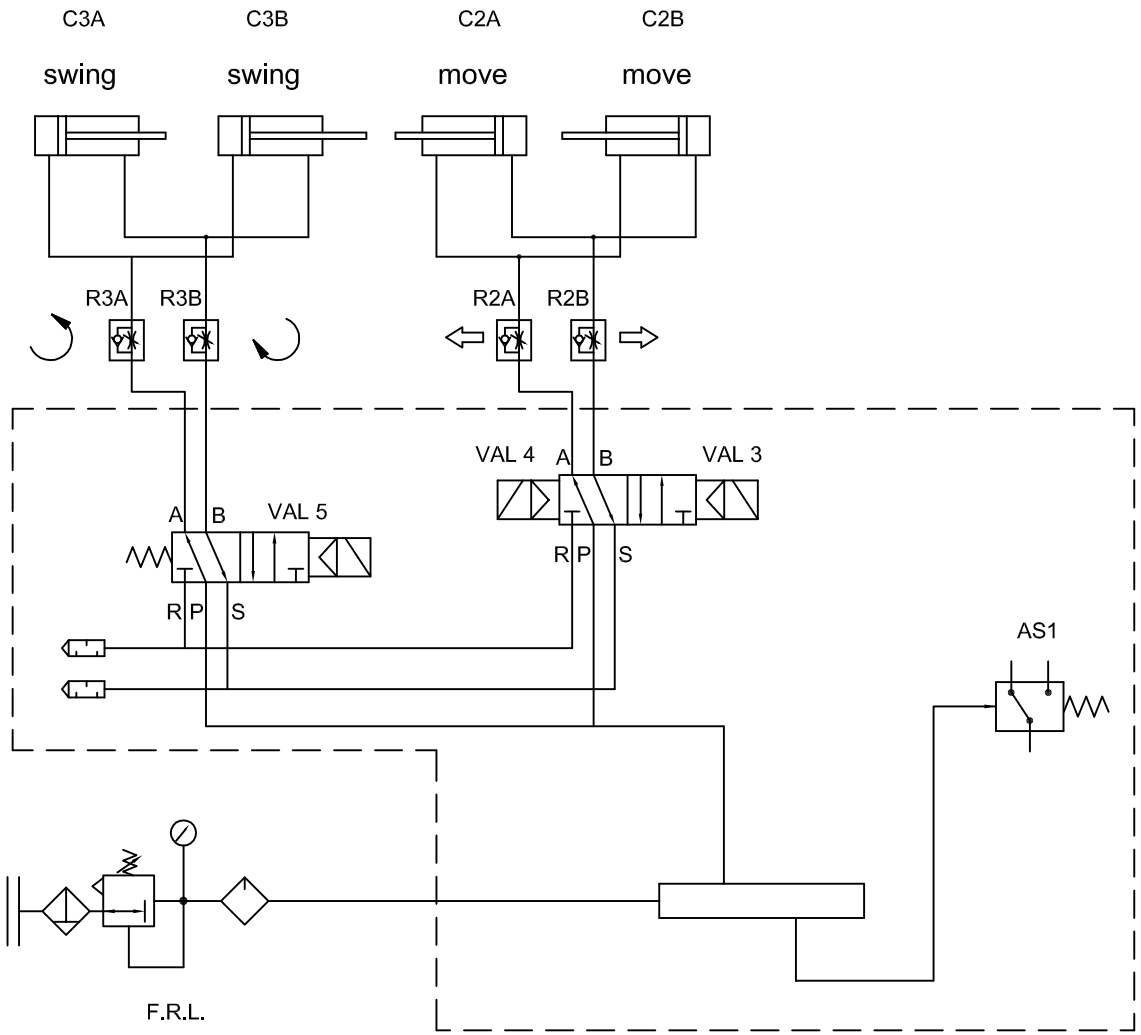


N.	Code	Denomination
1	G73120100	Plate
2	G73120200	Plate
3	G73120300	Bearing support
4	G73120400	Electric box
5	G73120500	Support
6	G73120600	Support
7	G73120601	Beam
8	G73120602	Support
9	G73120700	Plate
10	G73120800	Bolt
11	G73120900	Arbor
12	BLB30UU	Bearing

Vs-65E

SLIDING RAIL (OPTIONAL)

Tab. 091 1


C3A
C3B
C2A
C2B
swing
swing
move
move
R3A
R3B
R2A
R2B
VAL 4
A
B
VAL 3
A
B
VAL 5
R P S
R P S
AS1
F.R.L.

Drawing No	Item designation	Description and function	Technical data	Quantity	Supplier	Suppliers reference	Remarks
A12110100	F.R.L.	FILTER,REGULATOR, LUBRICATOR	1.0-10kgf/cm^2	1	AIRTAC	AFC-2000	
A12120300	AS1	PNEUMATICALLY-ACTUATED ELECTRICAL MICROSWITCH	1.5-8kgf/cm^2	1	FESTO	PE-1/8-1N	
A12120200	VAL 3	5/2 WAY VALVE	DC24V	1	AIRTAC	4V220-08	VLMH9465
	VAL 4						
A12120100	VAL 5	5/2 WAY VALVE	DC24V	1	AIRTAC	4V210-08	VLMH9465
A11110100	C2A	PISTON CYLINDER	1.0-9.9kgf/cm^2	1	AIRTAC	MAL-CA32*75	ISO 6432
	C2B			1			ISO 6432
	C3A			1			ISO 6432
	C3B			1			ISO 6432
A12130100	R2A	FLOW REGULATOR	1-10 bar	1	AIRTAC	JSC 6-01	ISO 9001
A12130200	R2B	FLOW REGULATOR	1-10 bar	1	AIRTAC	SPA-6	ISO 9001
	R3A		1-10 bar	1			ISO 9001
	R3B		1-10 bar	1			ISO 9001

EDGE TECHNOLOGIES

Rebel V-65 Servo

OPERATIONS MANUAL

Revision 8

Technical data subject to change without notice

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