

POWER FEED

INSTRUCTIONS



Before use this power feed must read the manual carefully

Functional Overview

This series Power Feed is a multifunctional tool accessory, which has a wide range of applications. In order to be safe, be sure to read the instruction manual before installing, using and maintaining the power feed.

The manual include six type power feed can fix on our mill/drill table, so when you choose our power, you only need look for what type feed you need.

See below table you can choose:

S/N	Suitable machine	Table width	remarks
S/N 10300	X2, SX2	92 mm	
S/N 10301	X2L, SX2L, SX2LF	100 mm	
S/N 10302	X2.3, SX2.3	130 mm	
S/N 10303	X2.7, SX2.7	140 mm	
S/N 10304	X3, X3L, SX3, SX3L	160 mm	
S/N 10306	X2.7L, SX2.7L	160 mm	

The power feed complete set of three components: A),controller component, B), clutch component, C),limiting component.

A, Controller component

Specifications:

Motor output power----- 35 W;

Motor speed -----0-1800 rpm;

Gear-ratio----- 1:7.5;

Power adapter input voltage -----100-240V AC;

Power adapter output voltage -----24 V DC;

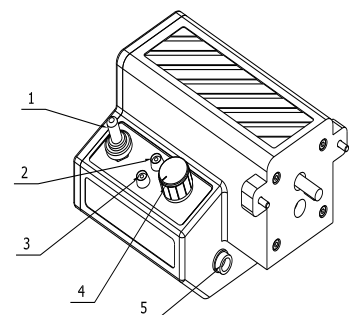
Power feed travel rate----- 0-360 mm/min;



Note: General speaking our controllers are the same, only use on the S/N10300 have a small different, because the micro switch connector have different connection modes. Why make it happen because the limit switch fixed behind the worktable of the X2/SX2.

Controller operation notice, see the figure on right:

1. Direction switch,
2. Power light (green),
3. Fault light (yellow),
4. Speed control switch with knob,
5. Limit switch wire connector.

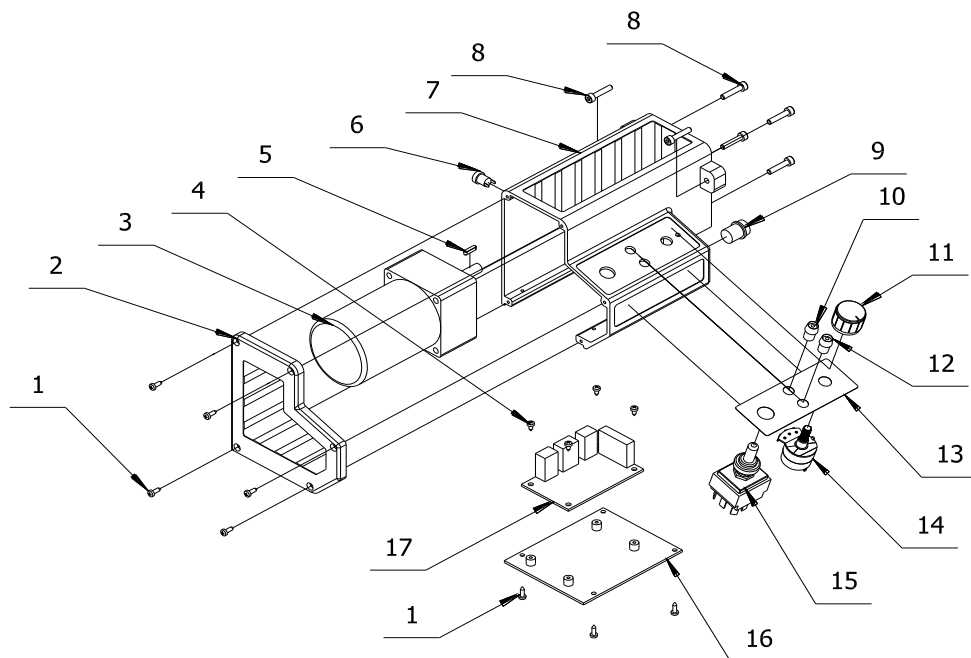


The automatic feeding device is installed in the X-axis to the worktable after, power-on, the connect is back of the controller then the power light will lighten(#2), Choose the direction switch(#1) to left of right, then turn

clockwise the speed control switch knob(#4), first you will hear the ticking because the potentiometer with switch. The Max. Speed is 360mm/min.

If you encounter some abnormal situation for example, the amount of cutting lead to overload, the fault light(#3) will lighten and the power feed will stop running, then you need restart the power or do some checking.

Controller parts drawing see below:



Controller parts list:

No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	GB845 T2.9x9.5	Self tapping screw	9	10	HL-1	Green light emitting tube	1
2	ZD30A0102	Side cover	1	11	Φ23	Knob of potentiometer	1
3	GPG-06SC 2GN-7.5K	DC geared motor	1	12	H-7	Yellow light emitting tube	1
4	GB845 T2.9x6.5	Self tapping screw	4	13	ZD30A0104	Label	1
5	GB1096 3x12	Flat key	1	14	WH24-2 4.7K F	Potentiometer	1
6	DC-005	Socket	1	15	HY29K	Direction switch	1
7	ZD30A0101	Housing	1	16	ZD30A0103	Bottom cover	1
8	GB70 M4x20	Socket head cap screw	6	17	XMT-2403	PC board	1
9	GX12-3P	Three pin connector seat	1				

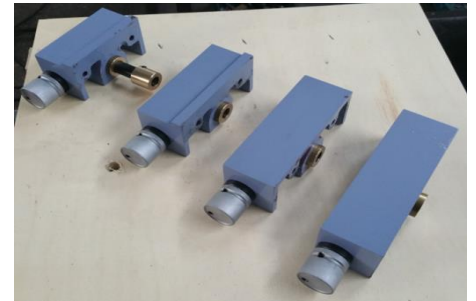
B, Clutch component

Most offered by the market power feed without the clutch component, they connect the X-axis leadscrew and the spindle of the power feed by direct.

It will produce a very bad question, if your mill table already fixed a power feed, many times you do not need use the auto-feeding, you only need move the work table by manual. When you turn the X-axis hand wheel to make the worktable move to left or right, you will feel it have great sense of block because as the same time the motor of the power feed is pivoted, so it is not good condition.

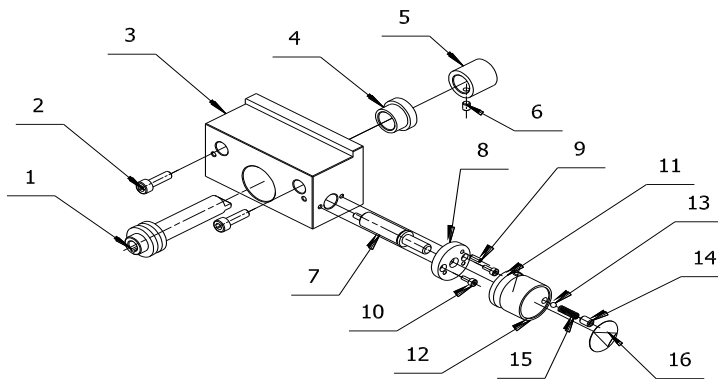
In later of we use the clutch component, if you only need use manual to move the work table you can loosen the clutch then you can very relaxed and very supple turn the X-axis handle wheel. the another important advantage is that if you use the auto moving, when you want to stop you need turn back the control knob back to 0 position. This need time to do, sometimes you need immediately cease our clutch can satisfy your needs.

Clutch component showing--

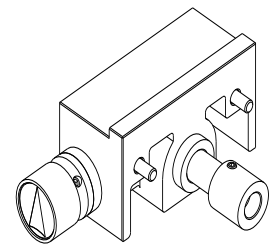


1, clutch component of the S/N10300 power feed (use on X2/SX2 mill)

Parts drawing



component drawing

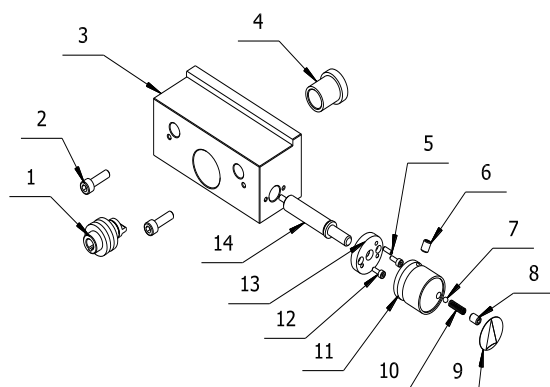


Parts list

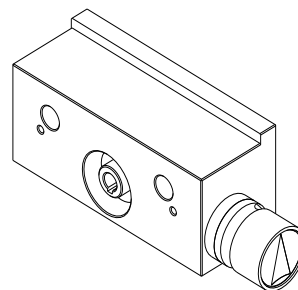
No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30A0202	Clutch	1	9	GB879 3x8	Spring round pin	1
2	GB70 M6x20	Socket head cap screw	2	10	GB70 M3x8	Socket head cap screw	2
3	ZD30A0201	Support seat	1	11	GB78 M6x8	Set screw	1
4	ZD30A0205	Shaft sleeve	1	12	ZD30A0206	handle	1
5	ZD30A0207	Connect sleeve	1	13	GB308 4	Steel ball	1
6	GB77 M5x6	Set screw	1	14	GB77 M6x8	Set screw	1
7	ZD30A0203	Eccentric shaft	1	15	GB2089 0.7x4x25	Spring	1
8	ZD30A0204	Flange	1	16	C4B0719	Shift gears label	1

2, clutch component of the S/N10301 power feed (use on X2L/SX2L/SX2LF mill.

Parts drawing



component drawing

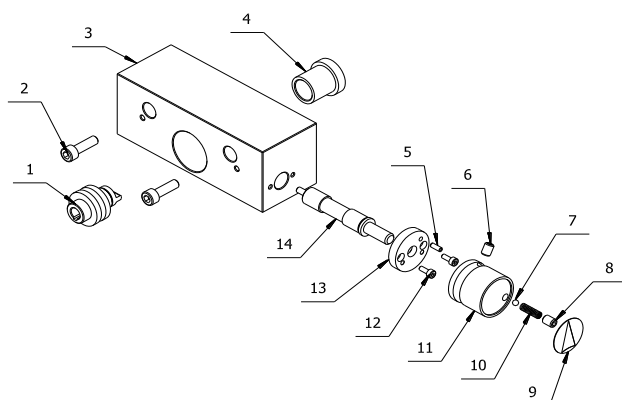


Parts list

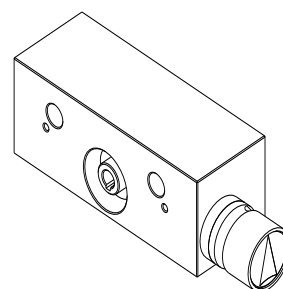
No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30B0202	Clutch assembly	1	8	GB77 M6x8	Set screw	1
2	GB70 M6x20	Socket head cap screw	2	9	C4B0719	Shift gears label	1
3	ZD30B0201	Support seat	1	10	GB2089 0.7x4x25	Spring	1
4	ZD30B0204	Shaft sleeve	1	11	ZD30A0206	Handle	1
5	GB879 3x8	Spring round pin	1	12	GB70 M3x8	Socket head cap screw	2
6	GB78 M6x8	Set screw	1	13	ZD30A0204	Flange	1
7	GB308 4	Steel ball	1	14	ZD30B0203	Eccentric shaft	1

3, clutch component of the S/N10302 power feed (use on X2.3/SX2.3 mill)

Parts drawing



component drawing

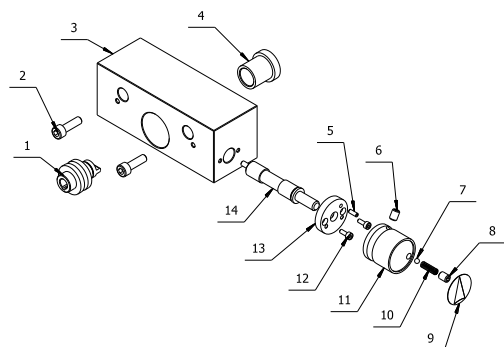


Parts list

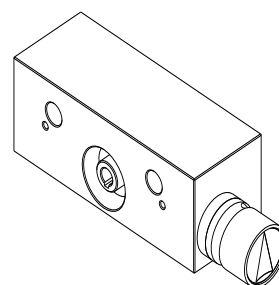
No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30B0202	Clutch assembly	1	8	GB77 M6x8	Set screw	1
2	GB70 M6x20	Socket head cap screw	2	9	C4B0719	Shift gears label	1
3	ZD30C0201	Support seat	1	10	GB2089 0.7x4x25	Spring	1
4	ZD30B0204	Shaft sleeve	1	11	ZD30A0206	Handle	1
5	GB879 3x8	Spring round pin	1	12	GB70 M3x8	Socket head cap screw	2
6	GB78 M6x8	Set screw	1	13	ZD30A0204	Flange	1
7	GB308 4	Steel ball	1	14	ZD30C0202	Eccentric shaft	1

4, clutch component of the S/N10303 power feed (use on X2.7/SX2.7 mill)

Parts drawing



component drawing

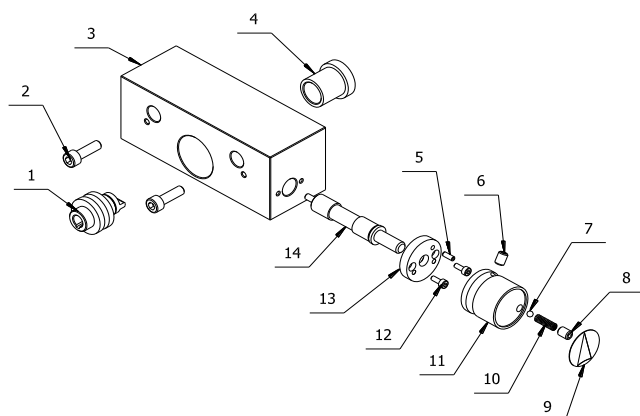


Parts list

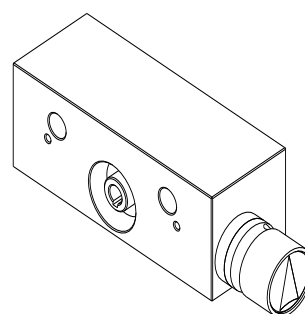
No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30B0202	Clutch assembly	1	8	GB77 M6x8	Set screw	1
2	GB70 M6x20	Socket head cap screw	2	9	C4B0719	Shift gears label	1
3	ZD30D0201	Support seat	1	10	GB2089 0.7x4x25	Spring	1
4	ZD30B0204	Shaft sleeve	1	11	ZD30A0206	Handle	1
5	GB879 3x8	Spring round pin	1	12	GB70 M3x8	Socket head cap screw	2
6	GB78 M6x8	Set screw	1	13	ZD30A0204	Flange	1
7	GB308 4	Steel ball	1	14	ZD30D0202	Eccentric shaft	1

5, clutch component of the S/N10304 power feed (use on X3/X3L/SX3/SX3L mill)

Parts drawing



component drawing

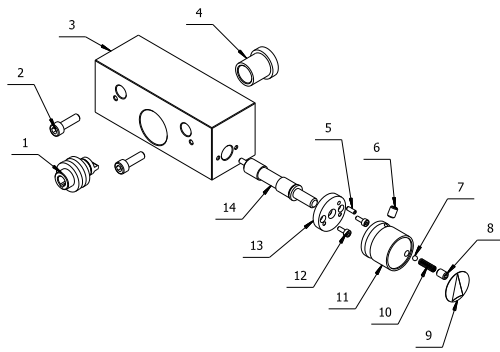


Parts list

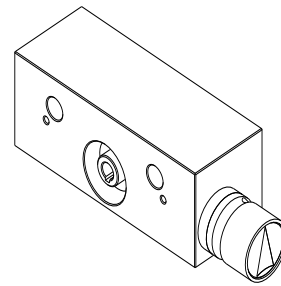
No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30B0202	Clutch assembly	1	8	GB77 M6x8	Set screw	1
2	GB70 M6x20	Socket head cap screw	2	9	C4B0719	Shift gears label	1
3	ZD30E0201	Support seat	1	10	GB2089 0.7x4x25	Spring	1
4	ZD30B0204	Shaft sleeve	1	11	ZD30A0206	Handle	1
5	GB879 3x8	Spring round pin	1	12	GB70 M3x8	Socket head cap screw	2
6	GB78 M6x8	Set screw	1	13	ZD30A0204	Flange	1
7	GB308 4	Steel ball	1	14	ZD30E0202	Eccentric shaft	1

6, clutch component of the S/N10306 power feed (use on X2.7L/SX2.7L)

Parts drawing



component drawing



Parts list

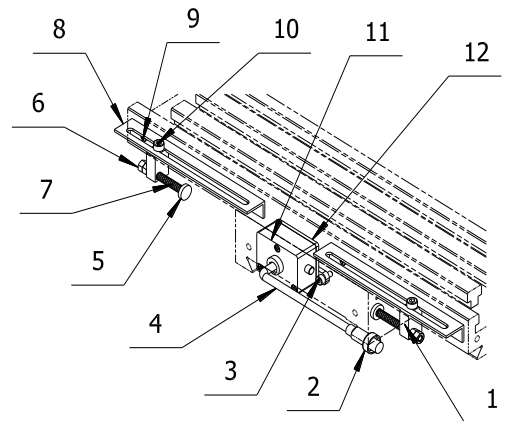
No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30B0202	Clutch assembly	1	8	GB77 M6x8	Set screw	1
2	GB70 M6x20	Socket head cap screw	2	9	C4B0719	Shift gears label	1
3		Support seat	1	10	GB2089 0.7x4x25	Spring	1
4	ZD30B0204	Shaft sleeve	1	11	ZD30A0206	Handle	1
5	GB879 3x8	Spring round pin	1	12	GB70 M3x8	Socket head cap screw	2
6	GB78 M6x8	Set screw	1	13	ZD30A0204	Flange	1
7	GB308 4	Steel ball	1	14		Eccentric shaft	1

C, limiting component

Limiting component include micro switch, left and right limit block assembly etc.,the main structures is as follows:

1, limiting component of the S/N10300 power feed (use on X2/SX2 mill)

Important note: because without the T-slot on the front side of the X2/SX2 worktable, so need make some screw holes to fix additional slot support, then can mount the limit switch and the left and right limit block. These hole on back of the worktable and saddle.

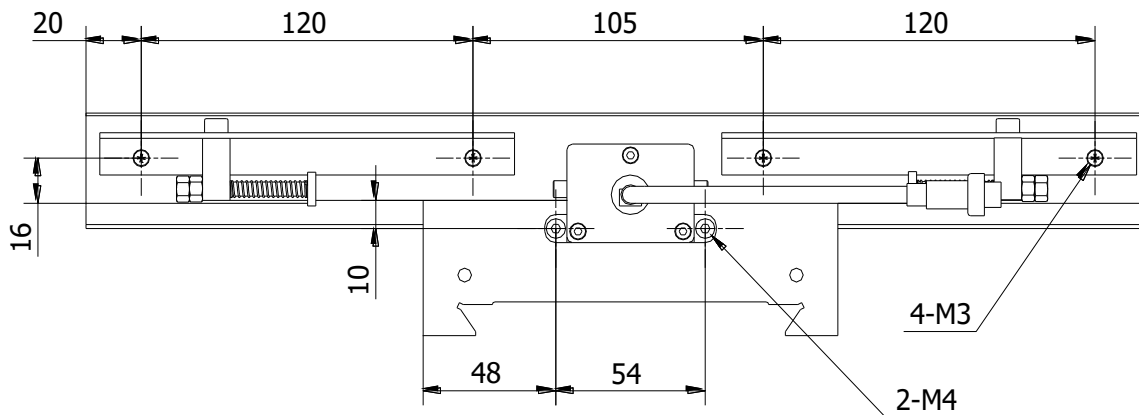


Installation diagram see right

Parts list

No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	ZD30A0302	T block	2	7	GB2089 0.5x5.2x34	Spring	2
2	M12-3	Three pin connector head	1	8	ZD30A0301	Support	2
3	GB70 M4x10	Socket head cap screw	2	9	GB819 M3x8	Sunk screw	4
4	H03VV-F	Cable conductor	1	10	GB70 M5x8	Socket head cap screw	2
5	ZD30A0303	Pin shaft	2	11	ZD30A0304	Switch box	1
6	GB6170 M5	Hex nut	4	12	ZD30A0305	Switch box base	1

1.1 installation hole position size chart



Installation instructions:

- (1) Remove three socket head cap screw M10 to take the column off,
- (2) In accordance with the above drawing size, 2 M3 screw holes are machined on the backside of the working table, respectively, and 4 M4 screw holes are machined on the back of the saddle.
- (3) The 11# switch box assembly is fixed on the machine with 2 3#M4x10 internal six angle screws. The 11# component in the switch box assembly includes three core 2# and 4# cable connector head black, has been installed into a component factory.
- (4) The 8# bracket is fixed on the operating table with 2 9# screws, while the mobile station is not interfered with the 11# switch box assembly, and no interference to install another 8# bracket is fixed on the operating table with 2 9# screws.
- (5) First 7# spring into the 5# pin, and then into the 1#T type of Kong Zhong, with 2 6# nut fixed, and finally to the 8# bracket in the long slot, with 10# screw fixation. About 1 sets of the left and right sides, note that the level of the 5# pin axis are aligned with the two contact points of the 11# switch box assembly.
- (6) Finally, the upright post with the main axle box of the overall installed back to the machine, and with 3 M10 screws fastening.

Post installation icon as right picture



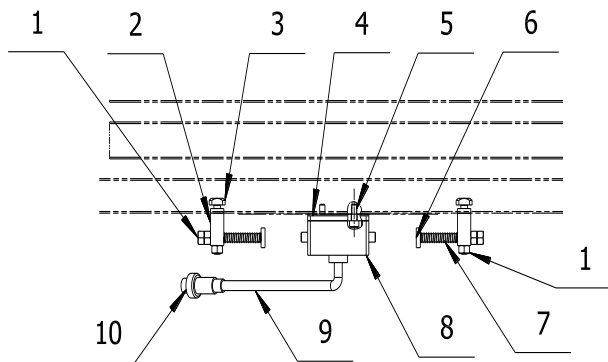
Suggest, tools for use as below:

- (1), twist drill: $\Phi 2.5\text{mm}$ 、 $\Phi 3.3\text{mm}$; (2) tap: M3, M4; (3) phillips screwdriver: 2#;
- (4) inner hexagon spanner: 3mm, 4mm; (5) solid wrench: 8mm; (6) handle tapping machine: M2-5.

2, limiting component general purpose as below type.

- (1) S/N10301 power feed use on X2L, SX2L;
- (2) S/N10302 power feed use on X2.3, SX2.3;
- (3) S/N10303 power feed use on X2.7, SX2.7;
- (4) S/N10306 power feed use on X2.7L, SX2.7L;

Installation diagram as below:



Parts list:

No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	GB6170 M5	Hex nut M5	6	6	ZD30A0303	Shaft pin	2
2	ZD30B0301	T block	2	7	GB2089 0.5x5.2x34	Spring	2
3	GB37 M5x30	T bolt	2	8	ZD30A0304	Switch box	1
4	ZD30B0302	Switch box base	1	9	H03VV-F	Cable conductor	1
5	GB70 M4 x10	Socket head cap screw	2	10	M12-3	Three pin connector head	1

Installation instructions:

- (1) on these type mill you can found we already have two screw on the front of the saddle;
- (2) Use 2-5# M4*10 socket head cap screw fix the switch box assembly on the saddle;
- (3) Put two limit block assembly in the T slot front of the worktable, please note one in left and one in right.



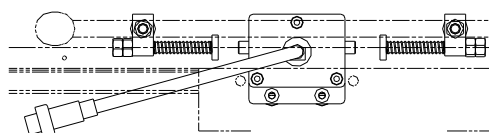
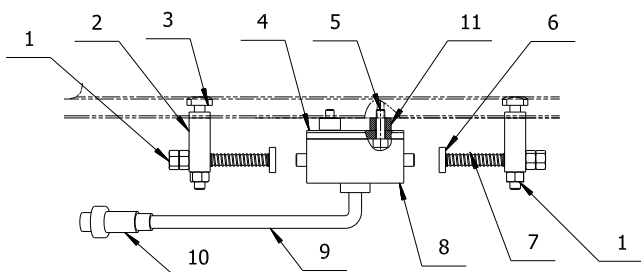
Suggest, tools for use as below:

- (1) inner hexagon spanner: 3mm;
- (2) solid wrench: 8mm

3, limiting component general purpose as below type.

- (1) S/N10304 power feed use on X3, SX3, X3L, SX3L;

Installation diagram as below:



Parts list

No.	Specification	Description	Q'ty	No.	Specification	Description	Q'ty
1	GB6170 M5	Hex nut M5	6	7	GB2089 0.5x5.2x34	Spring	2
2	ZD30E0301	T block	2	8	ZD30A0304	Switch box	1
3	GB37 M5x40	T bolt	2	9	H03VV-F	Cable conductor	1
4	ZD30B0302	Switch box base	1	10	M12-3	Three pin connector head	1
5	GB70 M4 x14	Socket head cap screw	2	11	ZD30E0302	Thickening washer	2
6	ZD30A0303	Pin shaft	2				

Installation instructions:

- (1) on these type mill you can found we already have two screw on the front of the saddle, first put two 11# thickening washer back the switch base, then use two 5# M5*14 socket head cap screw fix the switch box assembly (#4 and #8) on the saddle
- (2) Put two limit block assembly in the T slot front of the worktable, please note one in left and one in right.

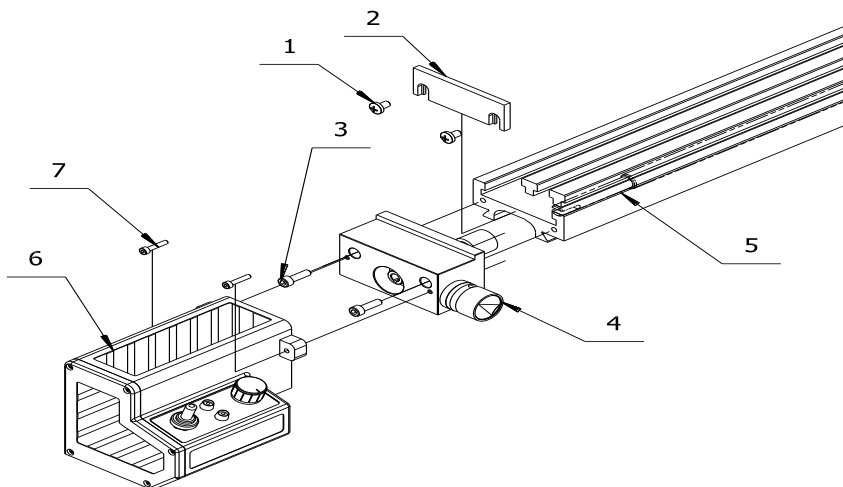


Suggest, tools for use as below:

- (1) inner hexagon spanner: 3mm; (2) solid wrench: 8mm

Power feed and clutch final assembly

1. S/N10300 power feed final assembly:
1.1 final assembly diagrammatic sketch



1.2 Parts list

No.	Specification	Description	Q'ty
1	GB818 M6x10	Cross recess head screw	2
2	X21101	Left cover	1
3	GB70 M6x20	Socket head cap screw	2
4	ZD30A0200	Clutch assembly	1
5		Work table width 92mm	1
6	ZD30A0100	Power feed assembly	4
7	GB70 M4x20	Socket head cap screw	2

1.3 installation steps

(1) remove #1 2-M6*10 screw and #2 left cover, when you assembly the power feed on the worktable, these two parts will no useful;



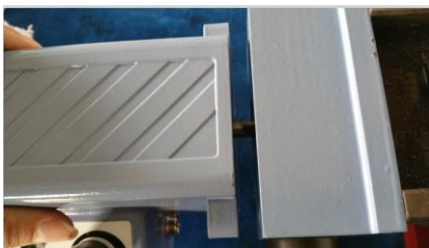
(2) Turn the #4 handle clockwise to the set position;
(3) Put the copper sleeve of the head of the clutch assembly, must put the cross platform inside the slot of the leadscrew head;



(4) Use two #3 M6*20 screw belt tightening the clutch assembly, as the same time turn the X-axis handwheel, moving the clutch assembly to feel the turn handwheel is smooth then locking the two #3 screw;



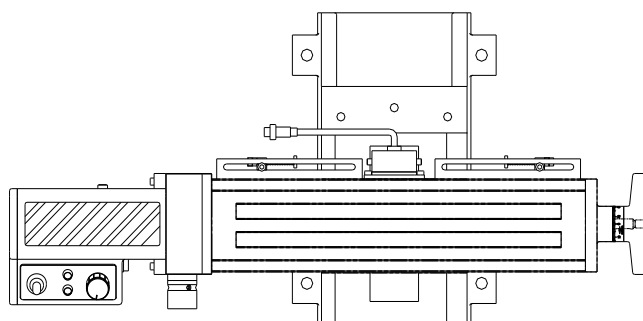
(5) Put the 6# power feed assembly into the 4# clutch assembly, must aligning the flat key on the shaft inside the key groove of the 4# clutch assembly; then use two 7# M4*20 Socket head cap screw tighten the power feed assembly on the clutch assembly;



(6) Connect the three pin connector head to the power feed assembly.



final assembly graphic as below drawing show of the S/N10300 power feed:



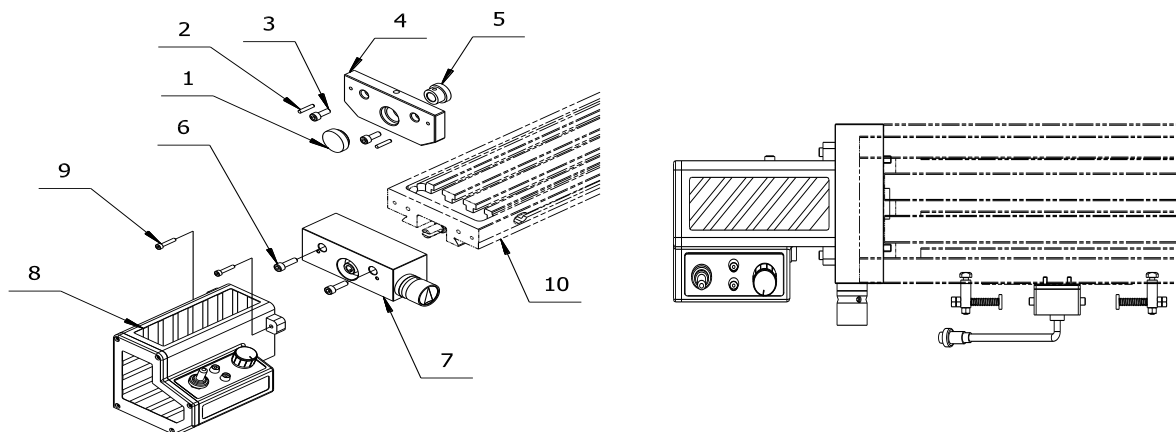
Suggest use these tools:

(1) inner hexagon spanner: 3mm, 5mm; (2) screwdriver: 2#

2. Another power feed final assembly of the S/N10301, S/N10302, S/N10303, S/N10304, S/N10306. Their installation steps are basically the same as the S/N10300.

- (1): remove their left cover and mounting screw or set pin of the worktable;
- (2): put the clutch assembly on the left side of the worktable, when adjust to the correct position then tighten the fix screw;
- (3): put the power feed assembly into the clutch assembly;
- (4) Connect the three pin connector head to the power feed assembly.

The picture showing as below:



----- the end -----