TZMQ SERIES
SLIDE GATE

OPERATION MANUAL

ZTMT
ZHONGTIAN AGRO

江苏中天农牧机械有限公司

JIANGSU ZHONGTIAN AGRO MACHINERY CO.,LTD

Important instruction:

1 This manual detailedly describes slide gate of each system structure, function and use and maintenance method. Before installation and use of the machine , customer should read the manual,and have a full understanding of the ministries and its structure and function ,then have operation and maintenance of the machine. Due to the continuous improvement of product structure, after a certain time period, the manual of narrative content and the actual situation of the products will have small changes.Users should pay attention to it.

2 Please propose your advice to us for melioration when finding quality problem or others.Thanks !

1 APPLICABLE SCOPE AND PERFORMANCE FEATURES

TZMQ Pneumatic Slide is a materials-stopping device and is applicable for the automatic discharging and stopping of bulk materials in the conveying process in the grain, food, feed, oil and chemical products processing industries. It is an indispensable equipment for production process to realize automatic control. This equipment has features of simple structure, fine appearance, convenient operation, sensitive motion, safe and reliable performance.

2 MAIN TECHNICAL SPECIFICATIONS

See Table 1 for main technical parameters.

Table 1 Main Technical Parameters

Model / Parameters	TZMQ 20×20	TZMQ 25×25	TZMQ 32×32	TZMQ 40×40	TZMQ 50×50	TZMQ 60×60
Cylinder Dia. (mm)	40	40	40	50	63	63
Working Pressure (Mpa)	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8	0.4-0.8

3 MAIN STRUCTURE AND WORKING PRINCIPLE

3.1 Main Structure

TZMQ Pneumatic Slide mainly consists of switching solenoid valve, magnetic switch, frame, sealing gasket, flapper, roll, taper hopper, seal plate, cylinder fixing plate and cylinder.

3.2 Working Principle

Cylinder drives flapper to reciprocate and realizes the opening and closing of slide. The flapper is supported by bracket roll instead of guiding by slide groove, and taper hopper is used, thus flapper will not be blocked by materials and there is no materials leakage, and materials will not be carried outwards when flapper is moving. The flapper can move freely with little resistance. The pneumatic circuit is as shown in Figure 2.

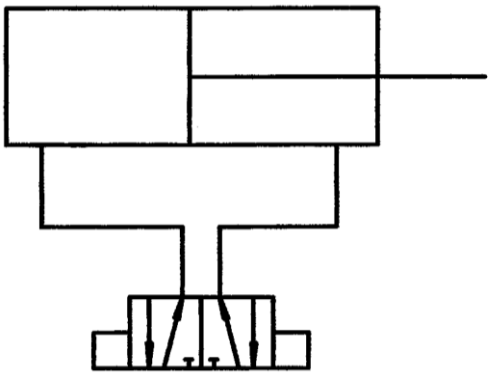

Figure 2 Diagram of Pneumatic Slide Circuit

4 INSTALLATIONS AND COMMISSIONING

4.1 Installation

4.1.1 During the installation of equipment, sealing measures should be taken for the connecting position of pneumatic slide with pipes. Materials leakage is not allowed. The slide is required to be installed level.

4.1.2 Air pipeline should not have air leakage.

4.1.3 See Figure 3 and Table 2 for installation sizes.

4.2 Commissioning

4.2.1 An unloaded test should be made on the feeding gate. The flapper should run flexibly and freely, and there should not be crawl and vibration.

4.2.2 Adjust the one-way throttle valve or muffling exhaust valve to control the moving speed of flapper at about 0.1m/s.

4.2.3 Adjust the position of magnetic switch so that magnetic switch closes when the slide is opened and closed to its very position. Adjust the position of magnetic switch so that the slide is closed to its very position when it is closed, and adjust the position of magnetic switch so that the slide stays at the set position when it is opened.

5 MAINTENANCE

5.1 Periodically check the sealing of air pipes and fastening of all connecting parts of the equipment itself. Seal should be replaced in time when the equipment has materials leakage.

5.2 The compressed air entering the cylinder must be treated by air source triple connector. One triple connector can be used for 5- 10 units pneumatic slide. Water in triple connector should be discharged periodically and it must be lubricated periodically.

5.3 If installing and operating outdoors, necessary antirust and rainproof measures should be taken.

5.4 The easily-worn parts include sealing gasket and cylinder seal.

6 CAUTIONS

6.1 During the operation of equipment, any parts of human body must not touch the rotating parts of equipment so as to avoid the human body injury accident.

6.2 To inspect or repair the equipment, equipment must be turned off.

Figure 3 Diagram of Pneumatic Slide

Table 2 Installation Sizes Parameters of Pneumatic Slide

Spec. / Model	L	a_1	a	a_2	b	b_1	b_2	H
TZMQ32×32	845	2×180	320	400	320	2×180	400	120
TZMQ25×25	705	2×145	250	330	250	2×145	330	120
TZMQ40×40	1015	2×220	400	480	400	2×220	480	120
TZMQ20×20	635	2×120	200	280	200	2×120	280	120
TZMQ50×50	1235	2×270	500	580	500	2×270	580	120
TZMQ60×60	1435	2×320	600	680	600	2×320	680	120

II. TZMD ELECTRIC SLIDE

1 APPLICABLE SCOPE AND PERFORMANCE FEATURES

TZMD Electric Slide is an automatic materials-stopping device and is widely used for automatic conveying of materials in feed mill, grain mill, oil plant and grain depot. This equipment has features of wide applicable scope, sensitive motion, convenient installation and commissioning, reliable quality; meanwhile, slide with special specification can be made according to special requirement of users.

2 MAIN TECHNICAL SPECIFICATIONS

See Table 1 for main technical parameters.

Table 1 Main Technical Parameters

Model / Specification	TZMD 20×20	TZMD 25×25	TZMD 32×32	TZMD 40×40	TZMD 50×50	TZMD 60×60
Capacity（t/h）	50	50	50	100	200	300
Power（kw）	0.55	0.55	0.55	0.75	0.75	0.75

3 MAIN STRUCTURE AND WORKING PRINCIPLE

3.1 Main Structure

TZMD Electric Slide mainly consists of long frame, flapper, gear, roll, taper hopper, motor and bearing with housing. The structure is as shown in Figure 1.

3.2 Working Principle

Motor drives screw rod to rotate clockwise and counter clockwise through gear reduction and realizes the reciprocation of flapper. The running of motor is controlled by limit switch. The flapper is supported by bracket roll instead of guiding by slide groove, and taper hopper is used, thus flapper will not be blocked by materials and there is no materials leakage, and materials will not be carried outwards when flapper is moving. The flapper can move freely with little resistance.

4 INSTALLATIONS AND COMMISSIONING

4.1 Installation

4.1.1 During the installation of equipment, connect the upper and lower flanges of the feeding inlet with external pipe and seal up to avoid dust leakage. Then connect the power cable of motor and control wire of limit switch.

4.1.2 See Figure 2 and Table 2 for installation sizes.

Figure 2 Diagram of Electric Slide

Table 2 Installation Sizes Parameters of Electric Slide

Spec. / Model	L	a_1	a	a_2	b	b_1	b_2	H
TZMD20×20	645	2×120	200	280	200	2×120	280	140
TZMD25×25	745	2×145	250	330	250	2×145	330	140
TZMD32×32	885	2×180	320	400	320	2×180	400	140
TZMD40×40	1041	2×220	400	480	400	2×220	480	140
TZMD50×50	1245	2×270	500	580	500	2×250	580	140
TZMD60×60	1445	2×320	600	680	600	2×320	680	140

4.2 Commissioning

4.2.1 An unloaded test should be made after installation. The slide should run flexibly and stably.

4.2.2 Adjust the limit switch to make the slide open and close normally.

5 MAINTENANCE

5.1 Prior to operation, start the motor by touch, and operate the limit switch to see if the contact is normal and the effective stroke is correct, and then formally start the equipment.

5.2 Make sure that the electric protection of motor is reliable.

5.3 Periodically clean the gear so as to prevent dust agglomerating on the gear and thus prevent the normal running of slide from being influenced.

5.4 Seal should be replaced in time so as to prevent materials from leaking out of the slide.

6 CAUTIONS

6.1 During the operation of equipment, any parts of human body must not touch the rotating parts of equipment so as to avoid the human body injury accident.

6.2 To inspect or repair the equipment, equipment must be turned off.

江苏中天农牧机械有限公司

JIANGSU ZHONGTIAN AGRO MACHINERY CO.,LTD

ADD: No.7 ZhongDaLi Road,New industrial Park,
DaiBu Town,LiYang,JiangSu,China.
P C： 213300
Tel： 13814760009
Fax:： 0086-519-87256670
Http://www.jsztmtcom
E-mail:info@jsztmt.com