METALICAN
FARS

Solenoid valve catalog model
DCF_ZM

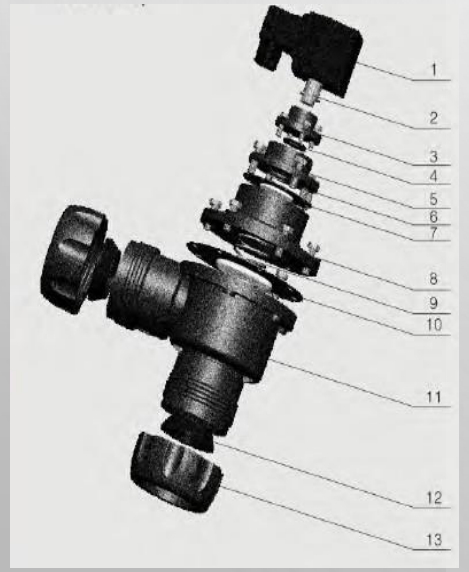
Manual of DCF-ZM Type Electromagnetic Pulse Valve

The three types of ZM electromagnetic pulse valve developed by Xiechang is of connection structure with external thread,
improved on the basis of Z type electromagnetic pulse right-angle valve.
The electromagnetic pulse valve features the favorable advantages of Z type electromagnetic pulse valve such as high
sensitivity, large air displacement and stable performance, etc .; at the same time, it can be matched with XC- XBD, XC- XBS
tank wall connector and XC-HJD (ZM) special movable connector, featuring convenient installation, maintenance and reliable
performance.

Electromagnetic pulse valve

Structural Characteristics

The air intake and outlet of the pulse valve use special nuts (al alloy or stainless steel) and special seal ring, which is used
for sealing of the smooth external wall of the valve air intake, outlet and the valve mouth, featuring simple structure, easy operation
and reliable sealing. The inside structure of the valve air intake is installed with locating steel ring to prevent loosening due to
inertial impact and at the meantime to ensure accurate installation. Even after long-time use, the nut made of stainless steel gives
convenient assembly and disassembly.



Model	Model	
	Serial Number	Name
DCF_ZM_20 DCF_ZM_25 DCF_ZM_40S	1	Electromagnetic coll
	2	Armature assembly
	3	Armature clamping plate
	4	Seal ring of clamping plate
	5	Armature valve seat
	6	Small spring
	7	
	8	S bonnet
	9	Big spring
	10	Big diaphragm assembly
	11	ZM valve seal
	12	ZM type valve seal insert
	13	ZM type clamp nut

Assembly

l.DCF- ZM- 20 & DCF- ZM- 25
Three types of assembly, numbering
respectively 5. 6 and 7.
2.Supply IS possible upon your rnformation of assembly
Name And the corresponding m:>del number
of electromagnetic pulse valve.

Model Specification

ZM Model	ZM Specification	Standard dimennsion of air intake and outlet of the valve	
		Inside nomiral diameter (mm)	Inside nominal diameter (inch)
DCF_ZM_20	3/4"	20	G3/4"
DCF_ZM_25	1"	25	G1"
DCF_ZM_40S	1 1/2"	40	G1 1/2"

The meaning of model

Technical standards

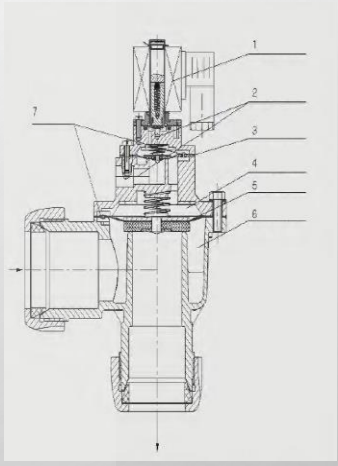
MPa bar Work pressure: 4.6
Work medrum: clean air
Voltage: DC24V, (AC220V/50HZ)
Current: 0.8A(0.05A)

Application environment:
Temperature: -10° C-55° C
The relative humidity of air not exceeding 85%
Maintenance life of diaphragm: **1** million times

Work principle

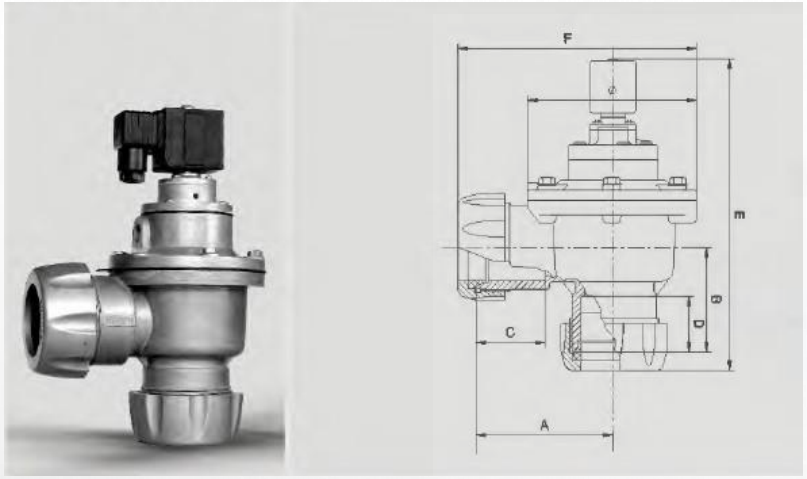
Electromagnetic pulse valve is composed of electromagnetic
pre-head, diaphragm and valve body. The back cavity of the
diaphragm is bigger than the front cavity. The diaphragm is kept
at the closed position due to the *effect* of big pressure.

Electric control cabinet inputs electronic signal so that the electromagnetic armature attracts the moving bar. Unclose the balancing hole to release the pressure gas in the back cavity of
the diaphragm quickly; the pressure gas in the font cavity holds up the diaphragm to open the passage and the pulse valve starts
blowing



1. Electromagnetic coil
2. Balancing hole
3 . Small diaphragm
4. Back cavity of draphragm
5. Big diaphragm
6. Front cavity of dtaphragm
7. Orifice

The signal disappears and the spring of the armature works Immediately to resume the moving bar so as to close the balancing
hole. The pressure gas in the back cavity of the diaphragm and the spring work together to close the passage and the valve stops
blowing.
The orifice in the diaphragm functions to damp the airflow when the moving bar of the armature holds up for balancing and
to transit the air to the back cavity as soon as the balancing hole is shut to close the passage and stop blowing



Drawing and dimension

Model		Outer diameter of gas commecting tube	Dimension (mm)						
			A	B	C	D	E	F	Φ
DCF_ZM_20	Φ 26.6	67	45	26	26	162	118	80	
DCF_ZM_25	Φ 33.5	78	70	32	38	192	139	96	
DCF_ZM_40S	Φ 48.0	103	78	51	42	236	170	112	

Electromagnetic Valve and Accessories List

Model Specification	Model and Specification of movable special connections	Model and specification of tank wall connectors	
DCF_ZM_20	XC- HJD (ZM) - 20	XC- XBD- 20	Single thread structure
DCF_ZM_25	XC-HJD (ZM) -25	XC- XBD- 25	
DCF_ZM_40S	XC-HJD (ZM) -40	XC-XBD-40	
DCF_ZM-20	XC- HJD (ZM) - 20	XC-XBS-20	Double thread structure
DCF_ZM_25	XC-HJD (ZM) -25	XC-XBS-25	
DCF_ZM_40S	XC-HJD (ZM) -40	XC- XBS- 40	

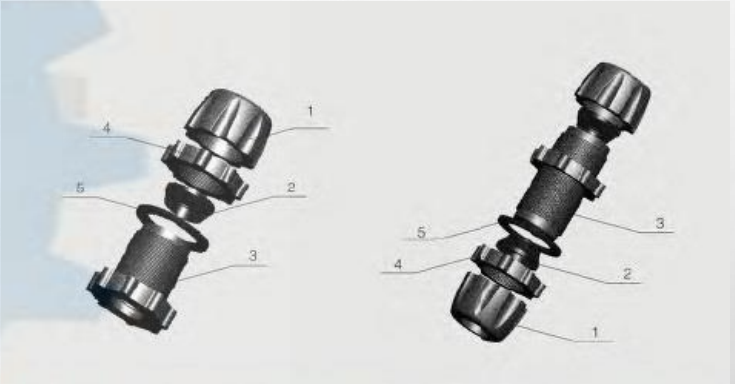
Tank wall connectors

The tank wall connector series of ash remover developed by Xiechang eliminates the necessity to connect the pressure pipe
to the tank wall by means of welding or bolt-connection. which enables easy operation, reliable sealing as well as convenient
installation and maintenance.

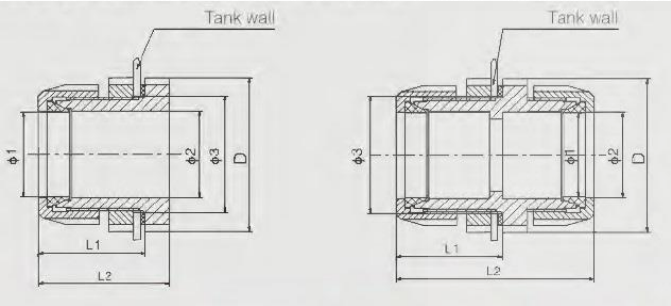
Structural Characteristics

There are two structural types of tank wall connectors. single end nut (XBD type) and double end nut (XBS). For XBD type,
the jet pipe can connect with the valve intake through tank wall connector and be sealed by single nut clamp seal ring. For XBS
type tank wall connector, the blowing pipe is inserted into the inside end of tank wall connector and the a1r pipe is connected to
the outside end of tank wall connector. Both ends are sealed with nut clamp seal ring. Tank wall connector is matched with
ZM type nght- angle electromagnetic pulse valve XC-HJD (ZM) type special movable connector. featuring reliable performance
and convenient installation and maintenance .

Assembly drawings



Serial Number	Assembly Name	Model	Assembly Model	
			XBD	XBS
1	Valve seal clamp nut	DCF-ZM-20	XC-XBD-20-2	XC - XBS-20-2
		DCF- ZM- 25	XC- XBD- 25- 2	XC - XBS- 25- 2
		DCF-ZM-40S	XC-XBD-40-2	XC-XBS-40-2
2	Valve seal insert	DCF- ZM- 20	XC- XBD- 20- 3	XC - XBS- 20- 3
		DCF-ZM-25	XC-XBD-25-3	XC-XBS-25-3
		DCF- ZM- 40S	XC-XBD-40-3	XC - XBS- 40- 3
3	Tank wall connector body	DCF-ZM-20	XC-XBD-20.1	XC-XBS-20.1
		DCF-ZM-25	XC-XBD-25.1	XC-XBS-25.1
		DCF- ZM-40S	XC-XBD-40.1	XC-XBS- 40.1
4	Tank wall clamp nut	DCF-ZM-20	XC-XBD-20.2	XC - XBS-20.2
		DCF-ZM-25	XC-XBD-25.2	XC-XBS-25.2
		DCF-ZM-40S	XC-XBD-40.2	XC-XBS-40.2
5	Tank wall gasket	DCF-ZM-20	XC-XBD-20.3	XC-XBS-20.3
		DCF-ZM-25	XC-XBD-25.3	XC-XBS-25.3
		DCF-ZM-40S	XC-XBD-40.3	XC-XBS-40.3



Reference on installation dimension

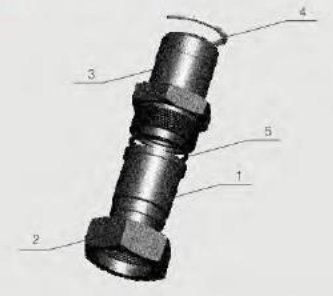
Specification	Outer diameter of connection air pipe	XBD type tank wall connector					WBS type tank wall connector					D
		L1	L2	Φ1	Φ2	Φ3	L1	L2	Φ1	Φ2	Φ3	
DN20	Φ26.6	60.5	74.5	26	28	43	60.5	110	26	28	43	65
DN25	Φ33.5	62.4	76.4	33	35	56	62.4	113.8	33	35	55	77
DN40	Φ48	62.2	76.2	47	50	67	62.2	111.4	47	67	67	89

Note: dimension 1n mm: *4*> 3 refers to tank wall hole.

Tank wall connector and accessory list

Name of tank wall connector	Model of tank wall connector	Model of ZM type electromanetic pulse valve	Model of special movable Connector
Stngle-thread tank wall connector	XC-XBD-20	DCF-ZM-20	XC-HJD (ZM) -20
	XC- XBD-25	DCF- ZM- 25	XC-HJD (ZM) - 25
	XC-XBD-40	OCF-ZM-408	XC-HJD (ZM) - 40
Double-thread tank wall connector	XC-XBS-20	DCF-ZM-20	XC-HJD (ZM) -20
	XC-XBS-25	OCF-ZM-25	XC-HJD (ZM) -25
	XC- XBS- 40	DCF- ZM- 408	XC - HJD (ZM) - 40

Assembly drawings

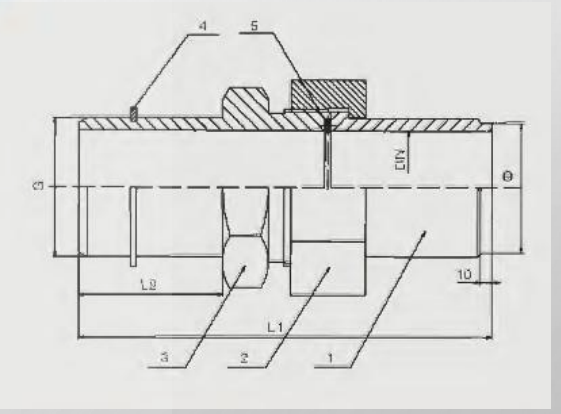


Special movable connector

In orde rto faciliate Installation and maintenance, special movable connector HJD (ZM) is used by Xiechang to connet electromagnetic pulse valve with air 4 distribution tank. A locating steel ring ts installed at the connection of the connector and the pulse valve to prevent loosening of electromagnetic pulse valve under the inertial impact during pulse Jetting process and to guarantee the accuracy of the installation posisiton of electromagnetic pulse valve so as to make it easy for installation and maintenance and ensure reliable performance.

Serial Number	Assembly name	Assembly Model	
		Modelofspecialmovableconnector	Assembly M odel
1	Intake connection pipe of movable connector	XC- HJD- (ZM) -40	XC-HJD- (Z) -40-1
		XC - HJD- (ZM) - 25	XC- HJD- (Z) - 25- 1
		XC- HJD- (ZM) -20	XC-HJD- (Z) -20-1
2	Clamp nut of movable connector	XC - HJD- (ZM) - 40	XC- HJD- (Z) - 40- 2
		XC - HJD- (ZM) -25	XC-HJD- (Z) -25-2
		XC-HJD- (ZM) -20	XC-HJD- (Z) -20-2
3	Outtakeconnection pipe of movable connector	XC-HJD- (ZM) -40	XC-HJD- (ZM) -40-3
		XC-HJD- (ZM) -25	XC-HJD- (ZM) -25-3
		XC - HJD- (ZM) - 20	XC- HJD- (ZM) - 20- 3
4	Locaring steel ring	XC-HJD- (ZM) -40	XC-ZM-G0-40
		XC- HJD- (ZM) - 25	XC- ZM- G0- 25
		XC - HJD- (ZM) -20	XC-ZM-G0-20
5	O_shaped seal ring	XC-HJD- (ZM) -40	GB/T3452.1-1992(40X3.55-G)
		XC-HJD- (ZM) -25	GB/T34521-1992(25X3.55-G)
		XC- HJD- (ZM) -20	GB/T3452.1 - 1992(20X3.55-G)

Installation dimension



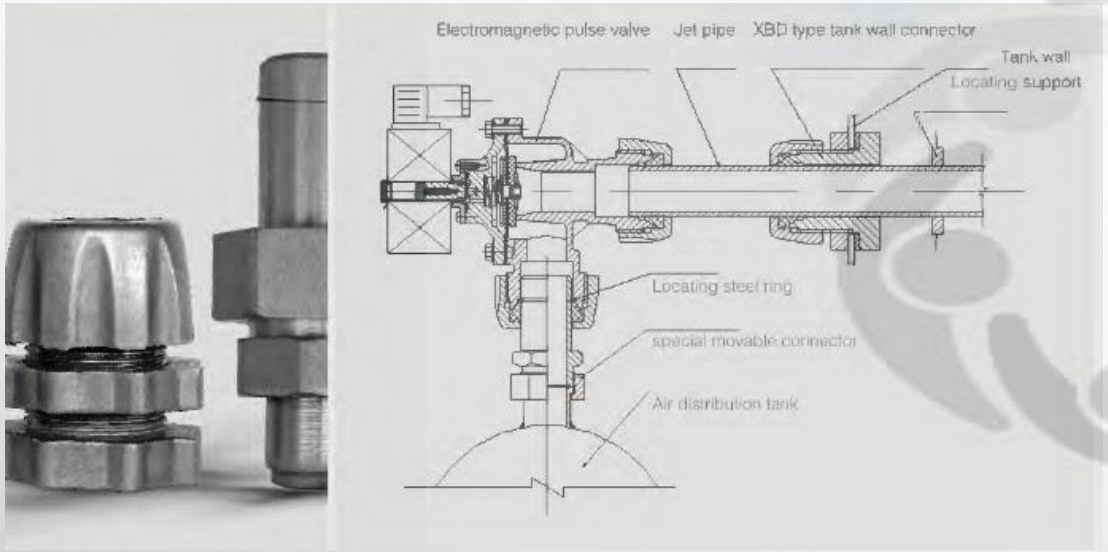
Model of special movable connector	Model of mateching electromagnetic valve	L1	L2	G	DIN	Φ
XC_HGD (ZM) 40	DCF_ZM 40S	143	50	G1 1/2"	40	45
XC_HJD (ZM) 25	DCF_ZM 25	143	50	G1"	25	30
XC_HJD (ZM) 20	DCF_ZM 20	143	50	G3/4"	20	25

Instruction on electromagnetic pulse valve, tank wall connector, jet pipe and air distribution tank

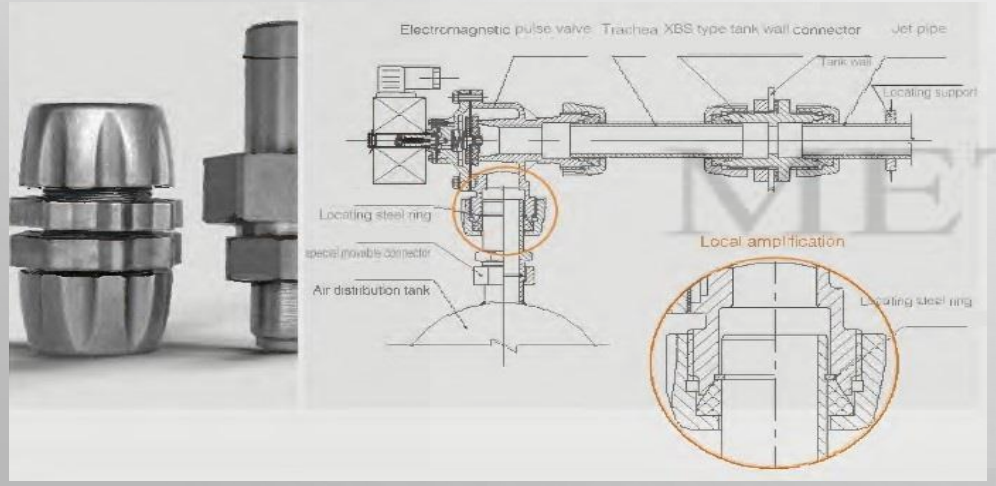
DCF-ZM type electromagnetic pulse valve developed by Xiechang has three installation modes, H-D, H-S and Z-S; Convenient and installation, maintenance and performance can be achieved by reasonble selection and combination

Drawing for installation

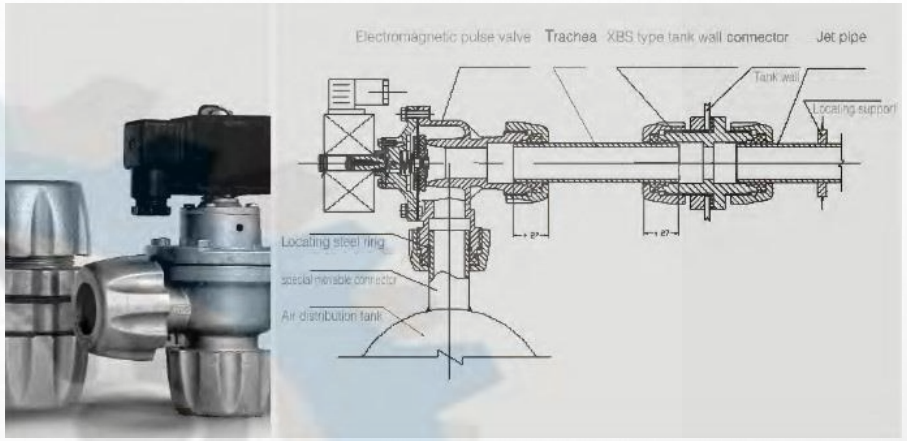
H-D Installation mode



H-s **Installation mode**

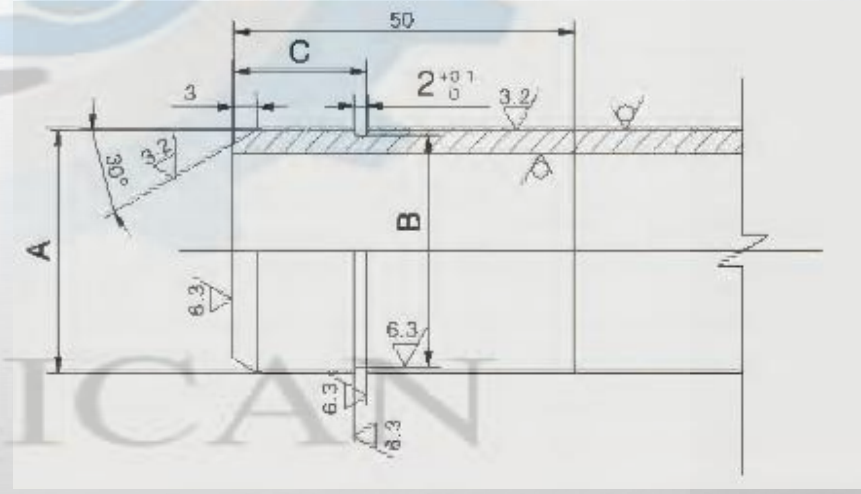


Z-S Installation mode



Dimension of air tank exhauster (connected to pulse valve)

For Z-S installation, electromagnetic pulse valve and air distribution tank connection pipe can be produced according to the drawing requirement.



Exhauster specification	A	B	C
DN40	Φ48	Φ46	20
DN25	Φ33.5	Φ31	20
Dn20	Φ26.6	Φ25	15