



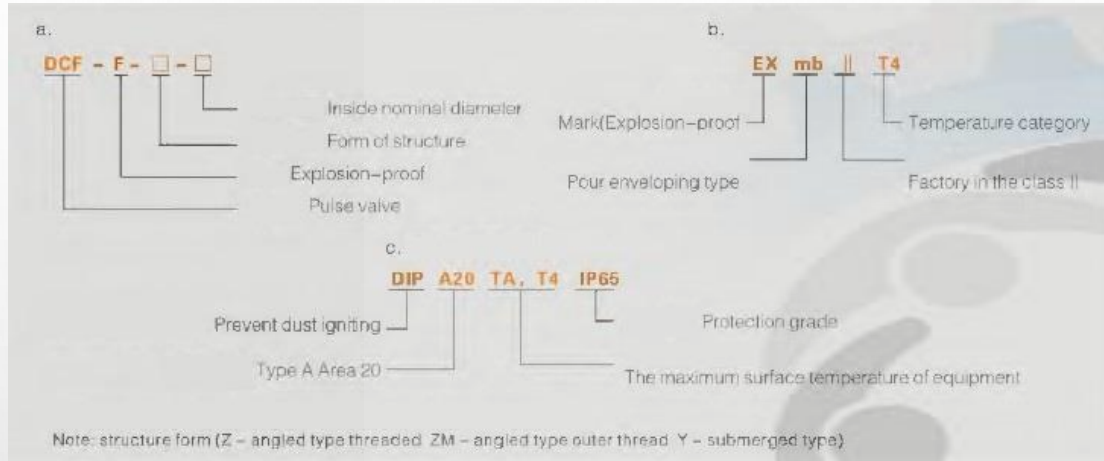
METALICAN  
FARS



Solenoid valve catalog model  
DCF\_F

## Model no. and main technical parameters

Explosion-proof valve model no. as well as the meaning of explosion-proof mark.



### Specific explanations of Explosion proof mark EXmb II T4:

#### EX: Explosion proof mark

mb: m-encapsulation / class b-protection class. (Please follow the fourth/Installation, Usage and Attendance of the specification while using, in order to insure explosion proof performance)

II: class II used by the factory, involving explosive gas usable range is allowed (GB3836.1-2000)

T4: Temperature class. the maximum surface temperature of the valve shell: 135°C (GB3836.1-2000)

#### e Specific explanations of DIP A20 TA, T4 IP65:

DIP: preventing dust igniting mark

A20: A type 20 area, the solenoid valve shell with IPX capability A type dust-tight protection can work normally in the area (20 area) which combustible dust emerged continuously and regularly.

TA, T4: the max 1mm surface temperature of the valve shell while running TA < 130° / T4: Temperature class

IP65: IP- Grade of protection; 6- when the solenoid valve is enclosed totally, within the valve body under the pressure of 20 mpa, the dust should not be intrusive, 5- prevent water jet from any direction

#### 2.2 Main technical parameters:

a. Rated voltage: AC220V/DC 24V

b. Rated power: 16W/30VA

c. Character of service: Pulsing system

d. Protection grade: IP65

### Instruction to the Structure

3.1 Explosion-proof valve is mainly consisted of valve body

and winding insulation, valve body is made of casting zinc aluminum material.

3.2 Explosion-proof valve and the outer shape structure as back view.

3.3 The winding insulation of Explosion-proof valve is a

independent unity of solenoid coil mould pressing pour

enveloped by high-performance engineering plastics. pour enveloping material with stability of chemistry, thermal engineering and mechanical.

3.4 Explosion-proof valve is pneumoelectric isolation structure

with reliable tightness of gas circuit.



### Explosion-proof main points

4.1 When designing the structure for the Explosion-proof valve. we commence on the key points such as outer shell strength.

the material of outer shell parts and pour enveloping flux, restriction on the temperature of outer shell to ensure the performance of explosion proof.

4.2 When Explosion-proof valve works properly, the surface temperature can not be more than 130C.

4.3 The outlet line of power supply with leak length no less than 1m.

4.4 When connecting lines of Explosion-proof valve in dangerous place, it should be switched in the connection box with same explosion-proof level by suitable duct-systems.

4.5 The apparent parts of Explosion-proof valve should has permanent mark "Exmb II T4, DIP A20 TA, T4".

4.6 In the circuit of Explosion-proof valve. it should be set up with protective electric elements for overloading and Short circuit. (Such as ceramic tube rapid fuse, but not glass tube fuse).

4.7 Explosion-proof valve with protection level IP65.



Explosion-proof electromagnetic pulse valve structure, shape and installation dimension

Angle type Explosion-proof Pulse valve (IDCF-F-Z type and DCF-F-2L-B type)

**Perating principle**

Explosion-proof pulse valve consists of explosion-proof solenoid pilot device. membrane and explosion-proof valve body.

The area of valve back cavity is greater than the front cavity, the membrane is kept at the closed position due to effect of pressure differential.

Pulse timer sending signal so that explosion-proof solenoid pilot pull in the moving bar after receipt of the signal, open up the unloading hole to release the pressure gas in the back cavity of membrane quickly, the pressure gas in the front cavity holds up the membrane to unfold the passage and the pulse valve starts blowing.

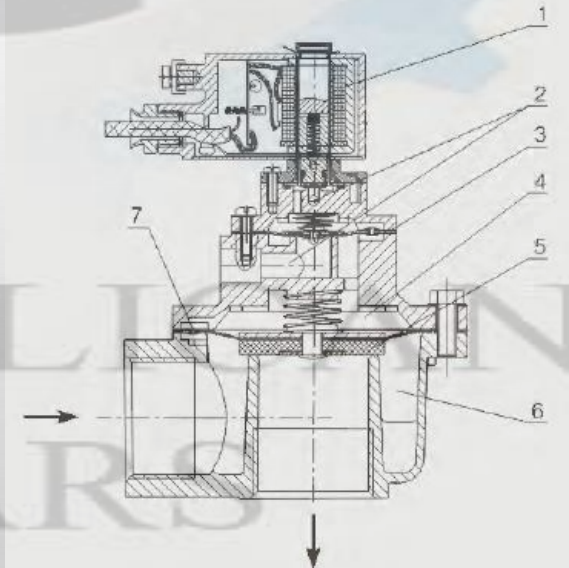
The pulse signal disappears and explosion-proof solenoid pilot reset immediately so as to close the unloading hole.

The pressure gas in the back cavity of the membrane and spring work together to close the passage and valve stops blowing.

The orifice in the membrane functions to damp the airflow when the moving bar holds up for unloading and transit the gas to the back cavity as soon as the unloading hole is shut to close the passage and stop blowing.

Model specification

type	Explosion – Proof Valve type	Gagelattice	Nominal Diameter (mm)
Right_Angle Type valve	DCF_F_2L_B	3/4"	20
	DCF_F_Z_20	3/4"	20
	DCF_F_Z_25	1"	25
	DCF_F_Z_40S	1 1/2"	40
	DCF_F_Z_50S	2"	50
	DCF_F_Z_62S	2 1/2"	62
Outerthread valve	DCF_F_Z_76S	3"	76
	DCF_F_ZM_20	3/4"	20
	DCF_F_ZM_25	1"	25
Submerged Type valve	DCF_F_ZM_40S	1 1/2"	40
	DCF_F_Y_25	1"	25
	DCF_F_Y_40S	1 1/2"	40
	DCF_F_Y_50S	2"	50
	DCF_F_Y_62S	2 1/2"	62
	DCF_F_Y_76S	3"	76
	DCF_F_Y_80	3"	80
	DCF_F_Y_90S	3 1/2"	90
	DCF_F_Y_102S	4"	102

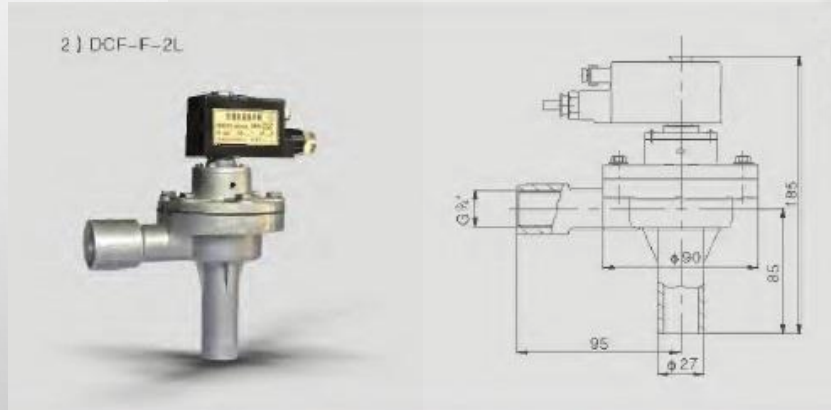
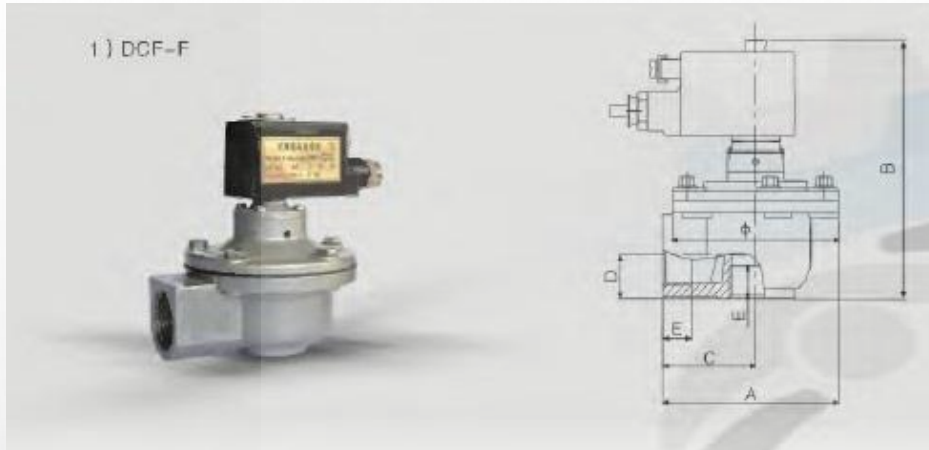


Structure chart

- 1 - explosion-proof coil
- 2 - Balancing hole
- 3 - small diaphragm
- 4 - Back cavity of diaphragm
- 5 - big diaphragm
- 6 - Front cavity of diaphragm
- 7 - Orifice



## Reference on installation dimension



Model	Φ	A	B	C	D	F
DCF_F_Z_20	80	88	128	48	20	22
DCF_F_Z_25	96	113	136	65	24	27
DCF_F_Z_40S	112	131	180	75	34	28
DCF_F_Z_50S	160	180	206	100	43	36
DCF_F_Z_62S	188	204	226	110	49	37
DCF_F_Z_76S	200	220	250	120	59	38

## External thread explosion-proof pulse valve (DCF-F-ZM type)

### Operating principle

Explosion-proof pulse valve consists of explosion-proof solenoid pilot device, membrane and explosion-proof valve body.

The area of valve back cavity is greater than the front cavity, the membrane is kept at the closed position due to effect of pressure differential.

Pulse timer sending signal so that explosion-proof solenoid pilot pull in the moving bar after receipt of the signal, open up the unloading hole to release the pressure gas in the back cavity of membrane quickly, the pressure gas in the front cavity holds up the membrane to unfold the passage and the pulse valve starts blowing.

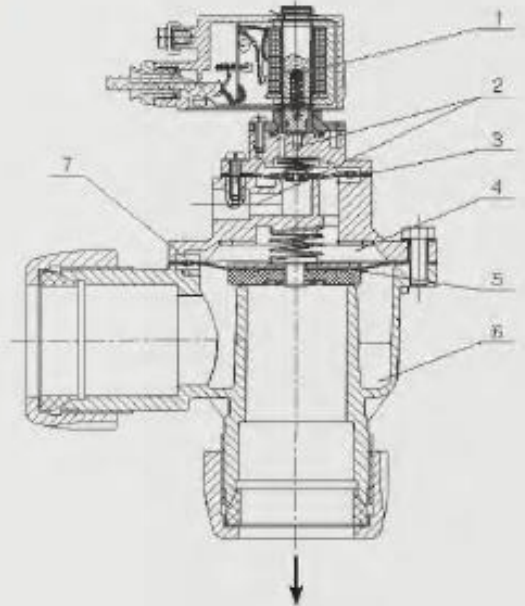
The pulse signal disappears and explosion-proof solenoid pilot reset immediately so as to close the unloading hole.

The pressure gas in the back cavity of the membrane and spring work together to close the passage and valve stops blowing.

The orifice in the membrane functions to damp the airflow when the moving bar holds up for unloading and transit the gas to the back cavity as soon as the unloading hole is shut to close the passage and stop blowing.

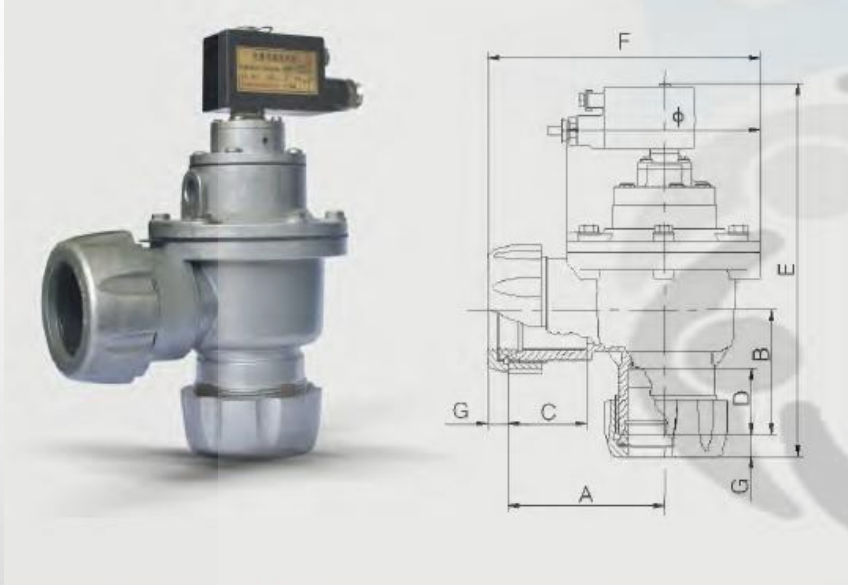
### Structure chart

- 1 - explosion-proof coil
- 2 - Balancing hole
- 3 - small diaphragm
- 4 - Back cavity of diaphragm
- 5 - big diaphragm
- 6 - Front cavity of diaphragm
- 7 - Orifice



Reference on installation dimension

1 ) DCF-F-ZM

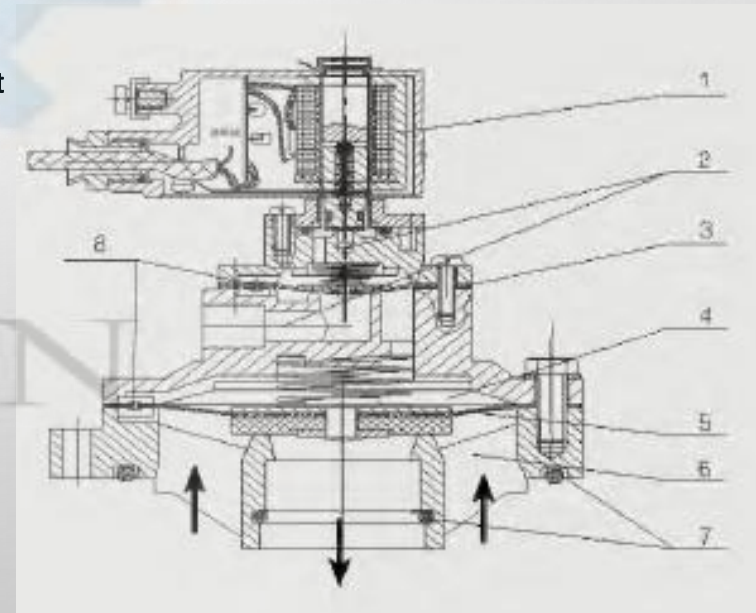


immersion type explosion-proof pulse valve DCF-F type )

**Operating principle**

Explosion-proof pulse valve consists of explosion-proof solenoid pilot device, membrane and explosion-proof valve body.  
 The area of valve back cavity is greater than the front cavity, the membrane is kept at the closed position due to effect of pressure differential.  
 Pulse timer sending signal so that explosion-proof solenoid pilot pull in the moving bar after receipt of the signal, open up the unloading hole to release the pressure gas in the back cavity of membrane quickly, the pressure gas in the front cavity holds up the membrane to unfold the passage and the pulse valve starts blowing.  
 The pulse signal disappears and explosion-proof solenoid pilot reset immediately so as to close the unloading hole.  
 The pressure gas in the back cavity of the membrane and spring work together to close the passage and valve stops blowing.  
 The orifice in the membrane functions to damp the airflow when the moving bar holds up for unloading and transit the gas to the back cavity as soon as the unloading hole is shut to close the passage and stop blowing.

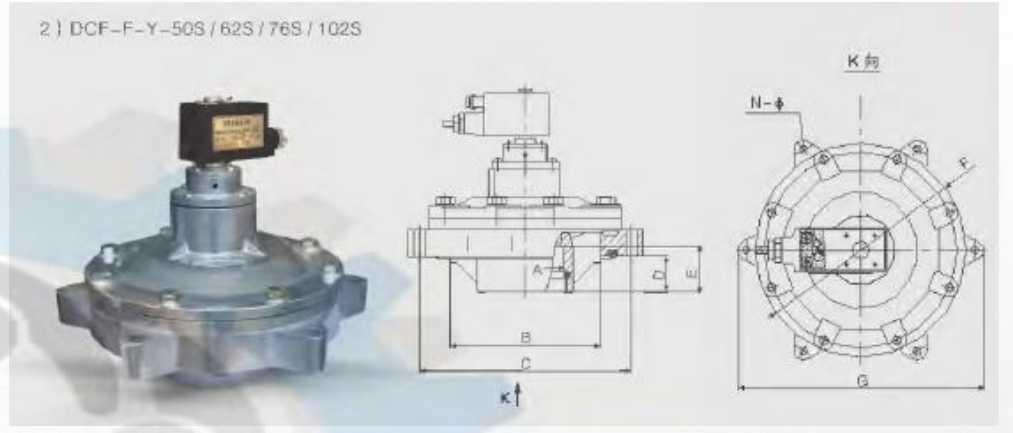
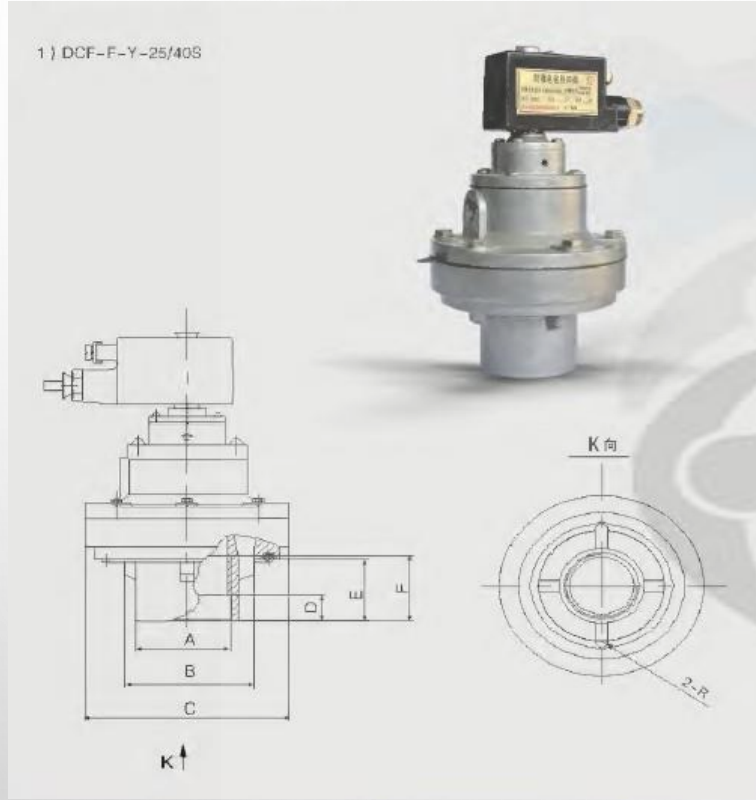
**Structure chart**



- 1 - explosion- proof coil
- 2 - Balancing hole
- 3 - small diaphragm
- 4 - Back cavity of diaphragm
- 5 - big diaphragm
- 6 - Front cavity of diaphragm
- 7 - Seal ing ring
- 8 - Orifice

Model	Connection Ventilation tube diameter	(mm)							
		A	B	C	D	E	F	G	Φ
DCF_F_ZM_20	Φ27	67	45	26	26	162	118	12.7	80
DCF_F_ZM_25	Φ34	78	70	32	38	192	139	13	96
DCF_F_ZM_40S	Φ48	103	78	51	42	236	170	13.3	112

Reference on installation dimension



Model	Point Gas Box and Nozzle connector installation reference size							
	A	B	C	D	E	F	G	N-Φ
DCF_F_Y_50S	Φ60.5	Φ122	Φ180	30	39	Φ160	202	6_Φ11
DCF_F_Y_62S	Φ75.5	Φ148	Φ208	35	44	Φ188	230	6_Φ11
DCF_F_Y_76S	Φ99.5	Φ160	Φ227	35	43	Φ200	249	6_Φ11
DCF_F_Y_90S	Φ104	Φ170	Φ227	35	40	Φ219	249	6_Φ11
DCF_F_Y_102S	Φ114	Φ177	Φ227	35	40	Φ219	249	6_Φ11

Model	Point gas box and nozzle connector installation reference size						
	A	B	C	D	E	F	R
DCF_F_Y_25	G1"	Φ59	Φ96	13	33	40	3
DCF_F_Y_40S	G1/2"	Φ73	Φ112	16	40	41	3.5

