

■ Features

1. Direct acting.
2. Quick response.
3. Timer for setting on/off time as optional accessory.
4. Ex-proof coil is available, please refer to page 5-9, 5-10.
5. Coil nut is available, please refer to page 5-1, 5-3.

■ How to order

Brass direct acting	Diaphragm	Port size	Pressure	Thread	Voltage	Led	Ex-Proof coil
	Blank :NBR V:VITON E:EPDM H:HNBR	01 :1/8" 02 :1/4" 03 :3/8"	Blank:Standard 1:High pressure 2:Medium pressure <i>*High pressure & Medium pressure are only available for PU220AR-01 & PU220AR-02</i>	Blank:G N:NPT R:Rc	S1 :110VAC S2 :220VAC S6 :24VAC S7 :12VDC S9 :24VDC	Blank :W/O LED L :W/I LED	Blank :DIN E1:Ex-proof 22mm width E2:Ex-proof 30mm width E3:Ex-proof CSAstandard E4:Ex-proof 36mm width <i>PU220AR-03 is only available for E4 ex-proof coil.</i>

■ How to order Repair kit

ZGPU220AR – 01		N	ZGPU220AR-01		ZGPU220AR-03	
Repair kit	Port size	Diaphragm	Description	Qty.	Description	Qty.
	01:1/8", 1/4" 03:3/8"	N:NBR V:VITON E:EPDM H:HNBR	Plunger	1	Plunger	1
			O-ring	1	Orifice adaptor	1
					Diaphragm	1
					O-ring	1

■ Specifications

Model	PU220AR-01	PU220AR-011	PU220AR-012	PU220AR-02	PU220AR-021	PU220AR-022	PU220AR-03
Port size	1/8"			1/4"			3/8"
Fluid	Compressed air (light oil, water)						
Orifice	Ø1.5mm	Ø0.8mm	Ø1.2mm	Ø2.3mm	Ø1.2mm	Ø1.5mm	Ø8.0mm
Effective area	1.8mm²			3.3mm²			20.64mm²
Acting	Direct acting						Assisted lift
Construction	Gasket						Diaphragm
Operating pressure range AC	0~8.5kgf/cm²	0~20kgf/cm²	0~16kgf/cm²	0~8.5kgf/cm²	0~20kgf/cm²	0~16kgf/cm²	0~8.5kgf/cm²
Operating pressure range DC	0~7kgf/cm²	0~13kgf/cm²	0~10kgf/cm²	0~7kgf/cm²	0~13kgf/cm²	0~10kgf/cm²	0~7kgf/cm²
Proof pressure	10 kgf/cm²						
Body material	Brass						
Fluid temperature	-10°C ~ 90°C						
Ambient temperature	-10°C ~ 60°C						
Installation	Any direction (Horizontal is recommended)						
Duty cycle	100% ED						
Coil type	DIN						
Protection class	IP65 (DIN 40 050)						
Insulation class	F						
Voltage tolerance	±10%						
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional						
Power consumption	AC: 6.0VA, DC: 4.8W						AC110V:17.6VA, AC220V:18.1VA, DC:15W (DC:18.5W option)
Net weight	175g			255g			510g

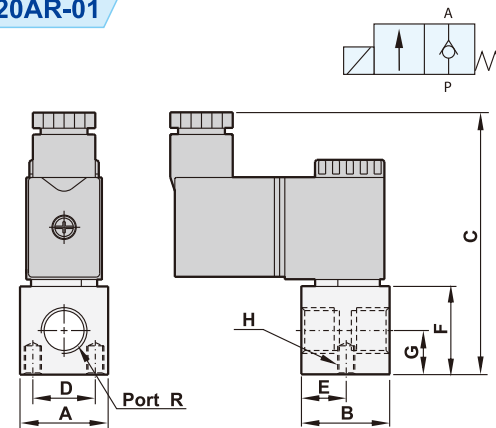


■ Seal material selection guide

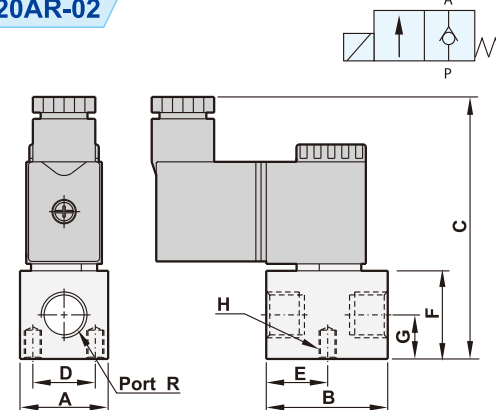
Seal	Temperature range	Suitable fluid	Unsuitable fluid
NBR	-15°C ~ 80°C	Air, Water, Neutral gases, Mineral oil	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel
HNBR	-40°C ~ 150°C	Air, Water, Gear oil, Engine oil	Pharmaceutical liquid, Gasoline and Hi-test gasoline, Light oil
VITON	-10°C ~ 180°C	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel	Hot water, Steam, Brake oil (ATE Blue)
EPDM	-5°C ~ 130°C	Hot water, Detergent liquid	Mineral oil, Gasoline

■ Dimensions

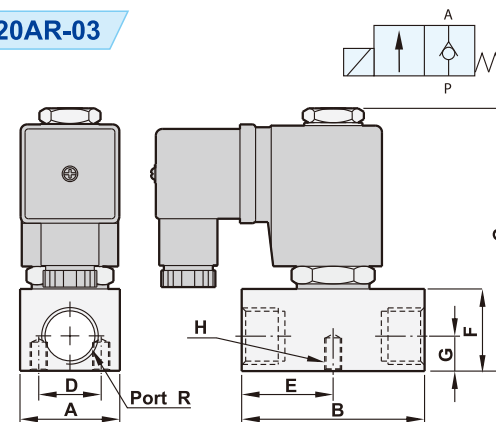
PU220AR-01



PU220AR-02

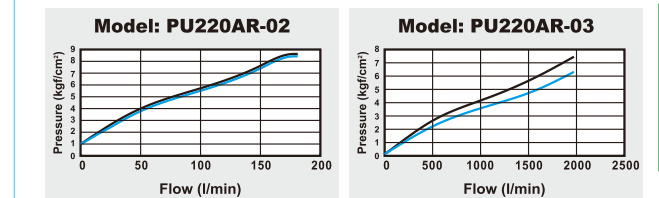


PU220AR-03

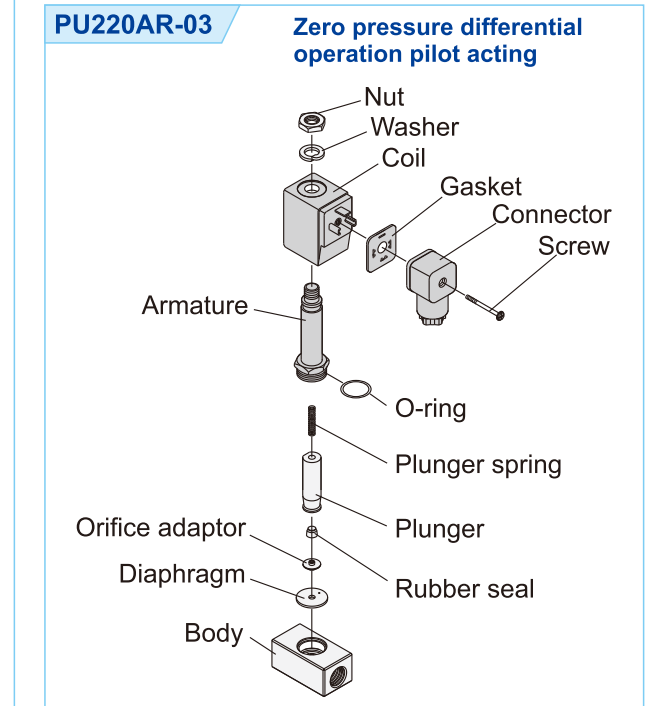


Model	PU220AR-01	PU220AR-02	PU220AR-03
R	1/8"	1/4"	3/8"
A	22	25.4	30
B	22	35	55
C	72	75	79
D	15	18	18
E	11	17.5	27.5
F	22	25.4	25
G	7.5	12.7	11
H	M4xP0.7xL6.5	M5xP0.8xL7.0	M5xP0.8xL7.0

■ Flow chart



■ Explosion



■ Features

1. Quick response.
2. Stainless steel stem provides exceptional durability.
3. Flange type is available for JIS 10K, ANSI 150LB and PN16.
4. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
5. Timer for setting on/off time as optional accessory.
6. CE conformity.
7. Coil nut is available, please refer to page 5-3.



■ How to order

PU220A	N	V	F	—	O3	N — S1	L	E
Brass Assisted Lift	Acting style	Diaphragm	Flange type	Port size	Thread	Voltage	Led	Ex-Proof coil
	Blank: Normally closed N: Normally open	Blank: NBR V: VITON E: EPDM H: HNBR	Blank: W/O Flange F: 10K F3: 150LB F4: PN16 only far A series	03: 3/8" 04: 1/2" 06: 3/4" 08: 1"	Blank: G N: NPT R: Rc	S1: 110VAC S2: 220VAC S6: 24VAC S7: 12VDC S9: 24VDC	Blank: W/O LED L: W/I LED	Blank: Standard E: Ex-proof coil

■ How to order Repair kit

ZGPU220A	—	03	N
Repair kit		Port size	Diaphragm
ZGPU220A (Normally closed)		03 :3/8", 1/2"	N :NBR
ZGPU220AN (Normally open)		06 :3/4"	V :VITON
		08 :1"	E :EPDM
			H :HNBR

Description	Qty.
Diaphragm set	1
Spring	1
Packing	1

■ Specifications

Model	PU220A-03	PU220A-04	PU220A-06	PU220A-08
Port size	3/8"	1/2"	3/4"	1"
Fluid	Compressed air (light oil, water)			
Orifice	Ø13mm	Ø13mm	Ø20mm	Ø25mm
Effective area	76mm²	76mm²	162mm²	220mm²
Acting	Assisted Lift			
Construction	Diaphragm			
Operating pressure range AC	0 ~ 7 kgf/cm²			
Operating pressure range DC	0 ~ 6 kgf/cm²		0 ~ 5 kgf/cm²	
Proof pressure	10 kgf/cm²			
Body material / Flange material	Forged Brass / Steel SS41			
Fluid temperature	-10℃ ~ 90℃			
Ambient temperature	-10℃ ~ 60℃			
Installation	Horizontal			
Duty cycle	100% ED			
Coil type	DIN			
Protection class	IP65 (DIN 40 050)			
Insulation class	F			
Voltage tolerance	±10%			
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional			
Power consumption	AC110V: 17.6VA, AC220V: 18.1VA,DC:15W (DC: 18.5W option)			
Net weight	740g	740g	945g	1485g

Seal material selection guide

Seal	Temperature range	Suitable fluid	Unsuitable fluid
NBR	-15°C ~ 80°C	Air, Water, Neutral gases, Mineral oil	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel
HNBR	-40°C ~ 150°C	Air, Water, Gear oil, Engine oil	Pharmaceutical liquid, Gasoline and Hi-test gasoline, Light oil
VITON	-10°C ~ 180°C	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel	Hot water, Steam, Brake oil (ATE Blue)
EPDM	-5°C ~ 130°C	Hot water, Detergent liquid	Mineral oil, Gasoline

■ Dimensions

PU220A Standard type

(mm)

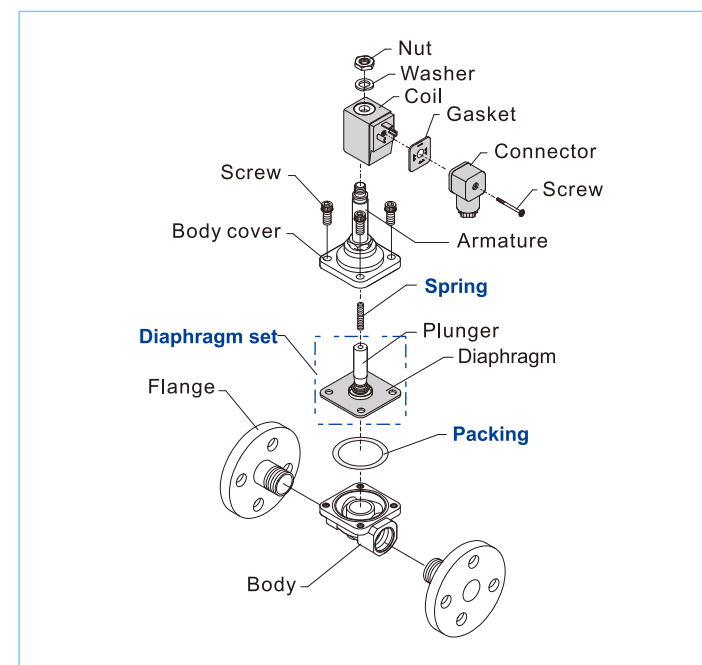
Model	PU220A-03	PU220A-04	PU220A-06	PU220A-08
R	3/8"	1/2"	3/4"	1"
A	66.5	66.5	71	96
B	101	101	107	120.5
C	48	48	58	70.7

PU220A Standard type (10K)

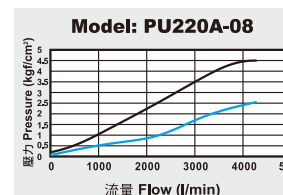
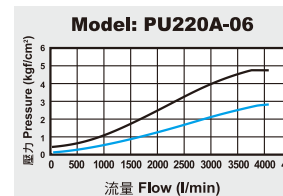
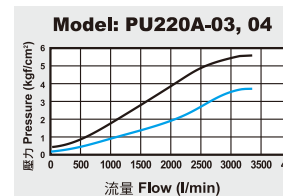
(mm)

Model	PU220AF-03	PU220AF-04	PU220AF-06	PU220AF-08
R	3/8"	1/2"	3/4"	1"
A	110	110	120	150
B	45	47.5	50	62.5
C	130.5	133	138.5	158.5
D	90	95	100	125

■ Explosion



■ Flow chart



Features

- 1. Quick response.
- 2. Stainless steel stem provides exceptional durability.
- 3. Flange type is available for JIS 10K, ANSI 150LB and PN16.
- 4. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
- 5. Timer for setting on/off time as optional accessory.
- 6. CE and EX-proof certified.
- 7. Coil nut is available, please refer to page 5-3.



How to order

SPU220A	N	E	F	—	03	N	—	S1	L	E
Stainless steel Assisted Lift	Acting style	Diaphragm	Flange type	Port size	Thread	Voltage	Led	Ex-Proof coil		
	Blank :Normally closed N :Normally open	Blank :VITON E :EPDM B :NBR H :HNBR	Blank :W/O Flange F :10K F3 :150LB F4 :PN16 only far A series	03 :3/8" 04 :1/2" 06 :3/4" 08 :1"	Blank :G N :NPT R :Rc	S1 :110VAC S2 :220VAC S6 :24VAC S7 :12VDC S9 :24VDC	Blank :W/O LED L :W/I LED	Blank :Standard E :Ex-proof coil		

How to order Repair kit

ZGPU220A	—	03	N
Repair kit	Port size	Diaphragm	
ZGPU220A (Normally closed) ZGPU220AN (Normally open)	03 :3/8", 1/2" 06 :3/4" 08 :1"	N :NBR V :VITON E :EPDM H :HNBR	

Description	Qty.
Diaphragm set	1
Spring	1
Packing	1

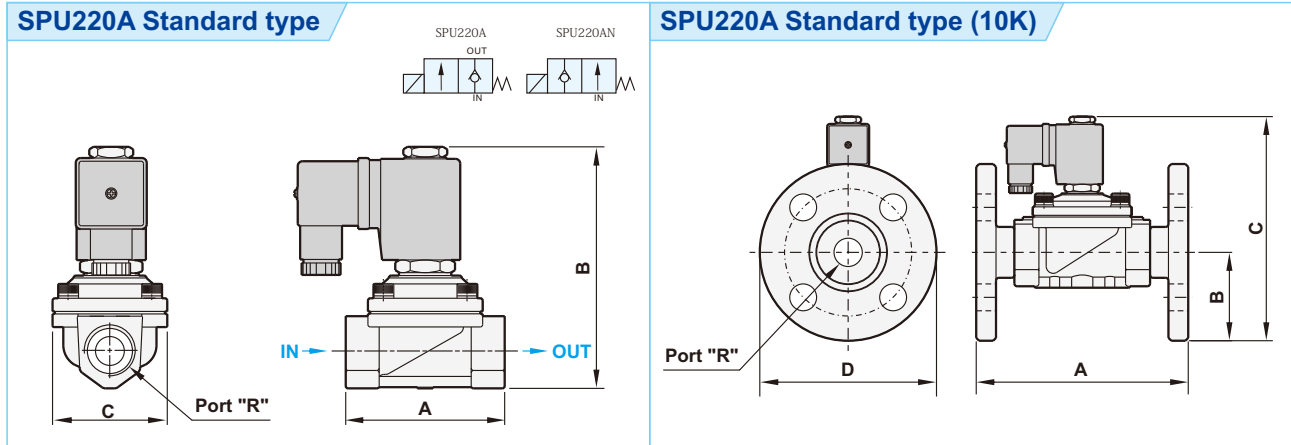
Specifications

Model	SPU220A-03	SPU220A-04	SPU220A-06	SPU220A-08
Port size	3/8"	1/2"	3/4"	1"
Fluid	Compressed air (light oil, water)			
Orifice	Ø13mm		Ø20mm	Ø25mm
Effective area	76mm²		162mm²	220mm²
Acting	Assisted Lift			
Construction	Diaphragm			
Operating pressure range AC	0 ~ 7 kgf/cm²			
Operating pressure range DC	0 ~ 6 kgf/cm²		0 ~ 5 kgf/cm²	
Proof pressure	10 kgf/cm²			
Body material / Flange material	Stainless steel SUS316 / SUS316,SUS304			
Fluid temperature	-10°C ~ 90°C			
Ambient temp0erature	-10°C ~ 60°C			
Installation	Horizontal			
Duty cycle	100% ED			
Coil type	DIN			
Protection class	IP65 (DIN 40 050)			
Insulation class	F			
Voltage tolerance	±10%			
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional			
Power consumption	AC110V: 17.6VA, AC220V: 18.1VA,DC:15W (DC: 18.5W option)			
Net weight	725g	715g	920g	1250g

Seal material selection guide

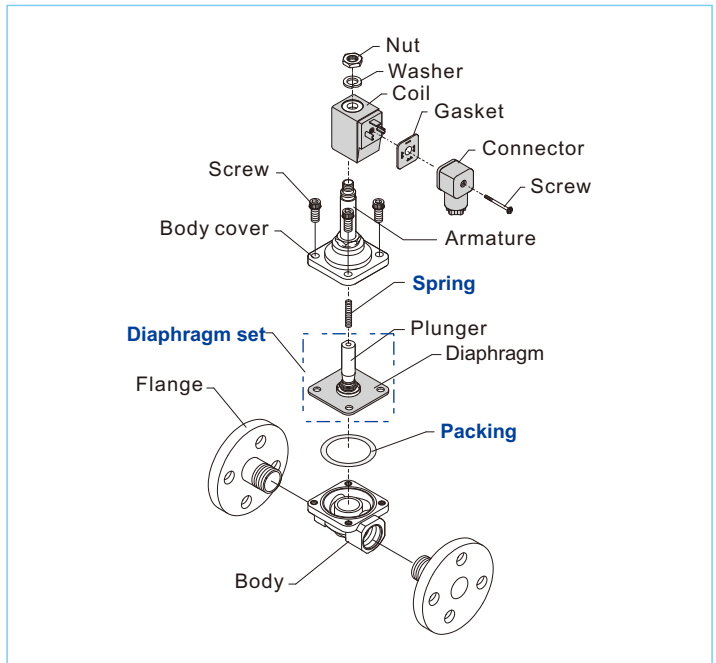
Seal	Temperature range	Suitable fluid	Unsuitable fluid
NBR	-15°C ~ 80°C	Air, Water, Neutral gases, Mineral oil	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel
HNBR	-40°C ~ 150°C	Air, Water, Gear oil, Engine oil	Pharmaceutical liquid, Gasoline and Hi-test gasoline, Light oil
VITON	-10°C ~ 180°C	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel	Hot water, Steam, Brake oil (ATE Blue)
EPDM	-5°C ~ 130°C	Hot water, Detergent liquid	Mineral oil, Gasoline

Dimensions

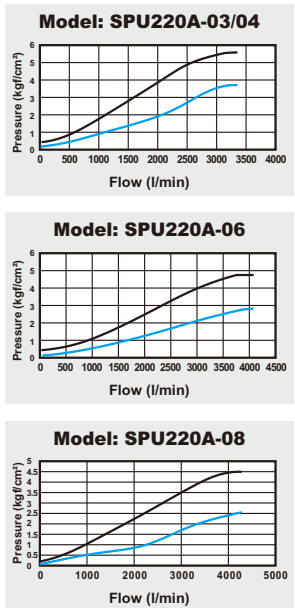


(mm)				(mm)					
Model	SPU220A-03/04		SPU220A-06	SPU220A-08	Model	SPU220AF-03/04		SPU220AF-06	SPU220AF-08
R	3/8"	1/2"	3/4"	1"	R	3/8"	1/2"	3/4"	1"
A	66.5		71	100	A	110		120	150
B	101		107	120	B	47.5		50	62.5
C	48		58	75	C	133		138.5	158.5
Explosion					D	95		100	125

Explosion



Flow chart



Features

- 1. Direct acting and quick response.
- 2. Suitable for acid & alkali chemical fluid.
- 3. Fluid must be liquid.
- 4. Horizontal installation.
- 5. Anti-backflow
- 6. Can be used with PU320.



How to order

PEC22	03	N
Teflon Direct acting Pneumatic control	Port size	Thread
	03 :3/8"	Blank :G
	04 :1/2"	N:NPT
	06 :3/4"	R:Rc
	08 :1"	

How to order Repair kit

ZGPEC22 — 03

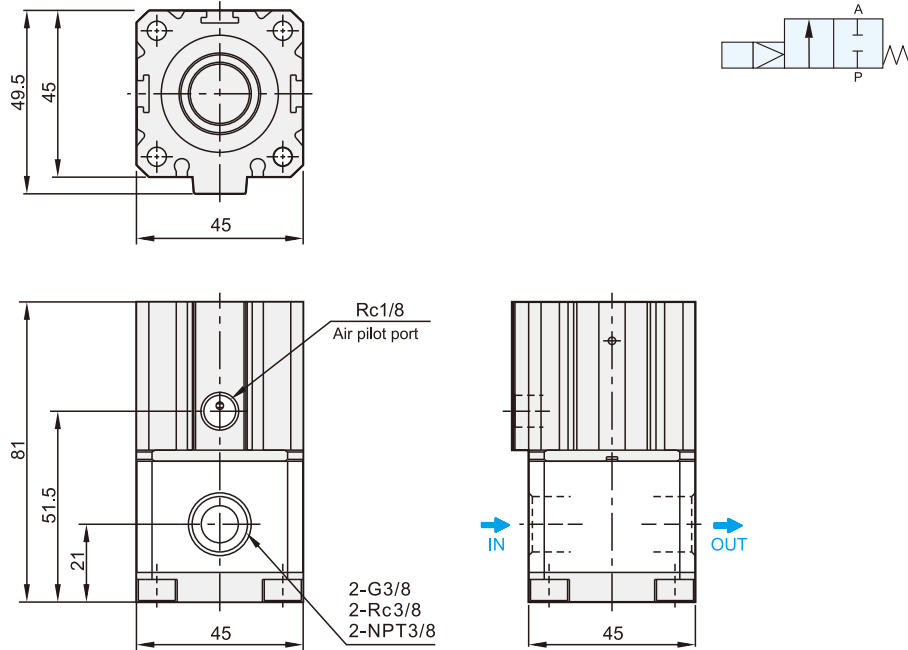
Repair kit	Port size	Description	Qty.
	03 :3/8", 1/2"	Gasket	1
	06 :3/4", 1"	Diaphragm	1

Specifications

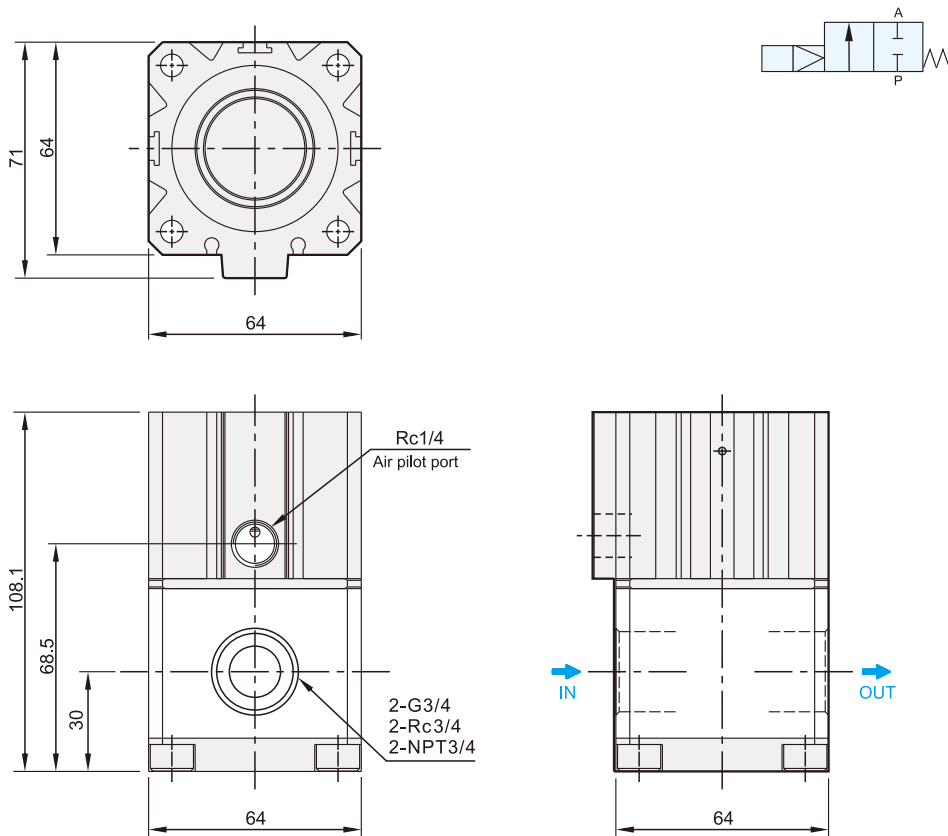
Model	PEC22-03	PEC22-04	PEC22-06	PEC22-08
Port size	3/8"	1/2"	3/4"	1"
Fluid	Pure water, Acid & Alkali chemical liquid			
Orifice	Ø8mm		Ø12mm	
Acting	Direct acting			
Acting style	Normally closed			
Diaphragm	NBR coated with PTFE in bottom			
Fluid pressure range	-98pa ~ 5.0 kgf/cm²			
Cylinder operating pressure range	1.5 ~ 9.0 kgf/cm²			
Valve body material	Teflon			
Cylinder port size	1/8		1/4	
Max. secondary pressure	3.0 kgf/cm²			
Ambient temperature	-10°C ~ 60°C			
Installation	Horizontal			
Cylinder body material	Aluminum alloy			
Net weight	491g		1320g	

Dimensions

PEC220-03,04



PEC220-06,08



Features

- 1. Direct acting and quick response.
- 2. Suitable for acid and alkaline chemical fluid.
- 3. Fluid should be liquid. Solid media is forbidden.
- 4. Horizontal installation is required.
- 5. Coil nut is available, please refer to page 5-3, 5-4.
- 6. Ex-proof coil is available, please refer to page 5-9.

How to order

PE220	H	N	—	03	N	—	S1	L	E
Teflon Direct acting Solenoid control	Pressure	Acting style		Port size	Thread		Solenoid	Led	Ex-Proof coil
	Blank :0.1~1kgf/cm ² H :0~3kgf/cm ²	Blank :Normally closed N :Normally open		03 :3/8" 04 :1/2"	Blank :G N :NPT R :Rc		S1 :110VAC S2 :220VAC S6 :24VAC S7 :12VDC S9 :24VDC	Blank :W/O LED L :W/I LED	Blank :Standard E :Ex-proof coil

*PE220H series is only suitable with 24VDC, 110VAC, 220VAC coil, 18.5W.

How to order Repair kit

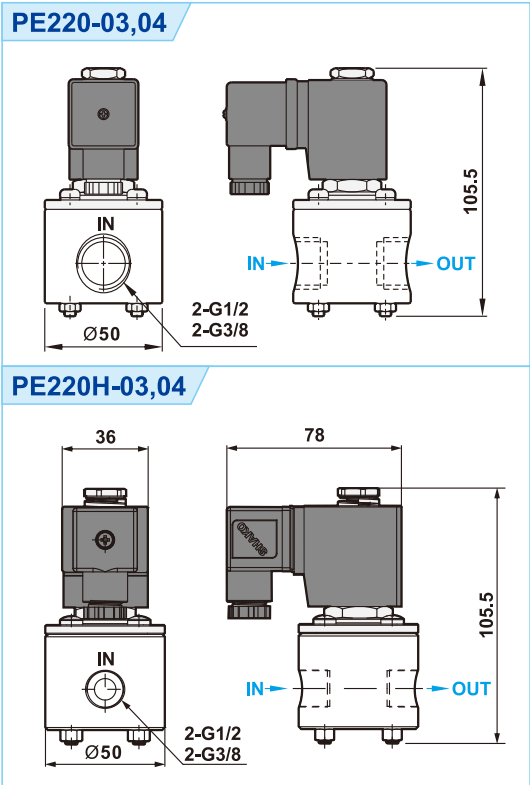
ZGPE220 — 03		Description	Qty.
Repair kit	Port size	Plunger	1
ZGPE220	03 :3/8", 1/2"	Spring	1
ZGPE220H		Gasket	1
		Diaphragm	1

Specifications

Model	PE220-03	PE220-04
Port size	3/8"	1/2"
Fluid	Pure water, Chemical acid & alkali liquid	
Orifice	Ø5mm	
Acting	Direct acting	
Diaphragm	NBR PTFE	
Operating pressure range	0.1 ~ 1 kgf/cm ² ; H: 0 ~ 3 kgf/cm ²	
Proof pressure	1.5 kgf/cm ² ; H: 4.5 kgf/cm ²	
Body material	Teflon	
Fluid temperature	-10°C ~ 90°C	
Ambient temperature	-10°C ~ 60°C	
Installation	Horizontal	
Duty cycle	100% ED	
Coil type	DIN	
Protection class	IP65 (DIN 40 050)	
Insulation class	F	
Voltage tolerance	±10%	
Standard voltage	220VAC, 110VAC, 24VDC The other voltage is optional	
Power consumption	AC110V:17.6VA, AC220V:18.1VA, 24VDC:15W	
Net weight	440g	



Dimensions



Features

- 1. Direct acting.
- 2. Quick response.
- 3. Timer for setting on/off time as optional accessory.
- 4. Good performance on resistance of counter flow.
- 5. Coil nut is available, please refer to page 5-3, 5-4.

How to order

SPUY220	E	—	04	N	—	S1	L
Angle type Direct Acting	Diaphragm		Port size	Thread		Voltage	Led
	Blank :VITON E :EPDM H :HNBR		04 :1/2"	Blank :G N :NPT R :Rc		S1 :110VAC S2 :220VAC S9 :24VDC	Blank :W/O LED L :W/I LED

*Please contact our sales for normally open type.

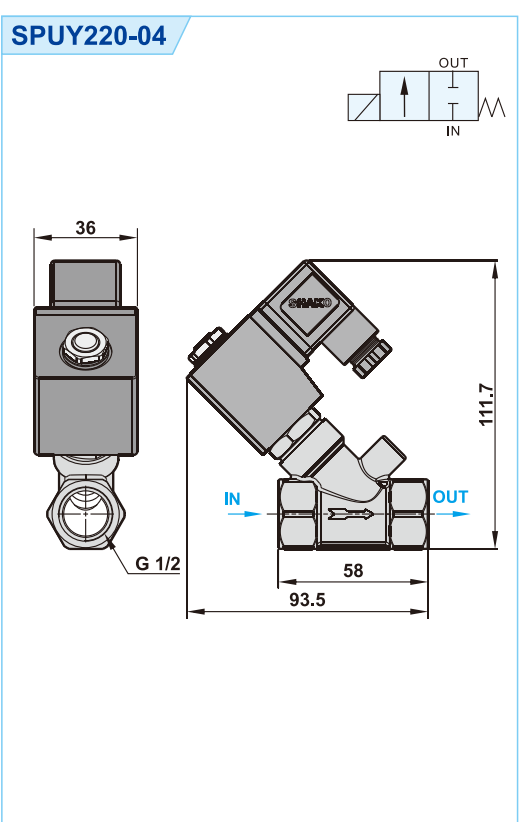
How to order Repair kit

ZGSPUY — 04 V		Description	Qty.
Repair kit	Port size	T type plunger	1
	04 :1/2"	O-ring	1
		V :VITON E :EPDM H :HNBR	

Specifications

Model	SPUY220-04
Port size	1/2"
Fluid	Standard:Compressed air Option:Hot water,Ammonia,Vacuum
Orifice	Ø9.5mm
Effective area	27.6mm ²
Acting	Direct acting
Seal	Standard:VITON, Option:EPDM
Operating pressure range	0 ~ 8 kgf/cm ²
Proof pressure	15 kgf/cm ²
Body material	SUS316
Fluid temperature	-10°C ~ 90°C
Ambient temperature	-10°C ~ 60°C
Installation	Any direction
Duty cycle	100% ED
Coil type	DIN
Protection class	IP65 (DIN 40 050)
Insulation class	F
Voltage tolerance	±10%
Standard voltage	220VAC, 110VAC, 24VDC
Power consumption	AC110V:25VA, AC220V:27VA, 24VDC:18.5W
Net weight	425g

Dimensions



Features

1. Pilot acting for low starting pressure.
2. Large flow rate and high working pressure.
3. Quick response.
4. Stainless steel stem provides exceptional durability.
5. Flange type is available for JIS 10K, ANSI 150LB and PN16.
6. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
7. Timer for setting on/off time as optional accessory.
8. CE conformity.
9. Coil nut is available, please refer to page 5-3.



How to order

Pilot Acting	Acting style	Diaphragm	Flange type	Port size	Thread	Voltage	Led	Ex-Proof coil
	Blank : Normally closed N : Normally open	Blank : NBR V : VITON E : EPDM H : HNBR	Blank : W/O Flange F : 10K F3 : 150LB F4 : PN16	03 : 3/8" 04 : 1/2" 06 : 3/4" 08 : 1" 12 : 1 1/4" 14 : 1 1/2" 20 : 2"	Blank : G N : NPT R : Rc	S1 : 110VAC S2 : 220VAC S6 : 24VAC S7 : 12VDC S9 : 24VDC	Blank : W/O LED L : W/I LED	Blank : Standard E : Ex-proof coil

How to order Repair kit

Repair kit	Port size	Diaphragm
ZGPU225A (Normally closed)	03 : 3/8", 1/2"	N : NBR
ZGPU225AN (Normally open)	06 : 3/4", 1" 12 : 1-1/4", 1-1/2" 20 : 2"	V : VITON E : EPDM H : HNBR

Description	Qty.
Plunger	1
Spring	2
Diaphragm	1

Specifications

Model	PU225A-03	PU225A-04	PU225A-06	PU225A-08	PU225A-12	PU225A-14	PU225A-20
Port size	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Fluid	Compressed air (light oil, water)						
Orifice	Ø13mm		Ø25mm		Ø38mm		Ø50mm
Effective area	88mm ²		230mm ²		404mm ²	552mm ²	883mm ²
Acting	Pilot acting						
Construction	Diaphragm						
Operating pressure range	0.5 ~ 10kgf/cm ² (0.5 ~ 10.0Bar)						
Proof pressure	15 kgf/cm ² (15.0Bar)						
Body / Flange material	Forged Brass / Steel SS41						
Fluid temperature	-10°C ~ 90°C						
Ambient temperature	-10°C ~ 60°C						
Installation	Horizontal						
Duty cycle	100% ED						
Coil type	DIN						
Protection class	IP65 (DIN 40 050)						
Insulation class	F						
Voltage tolerance	±10%						
Standard voltage	220VAC, 110VAC, 24VDC The other voltage is optional						
Power consumption	Normally closed AC110V : 17.6VA, AC220V : 18.1VA, DC : 15W ; Normally open AC : 17.8VA, DC : 15W						
Net weight	775g		1550g		2820g		4665g

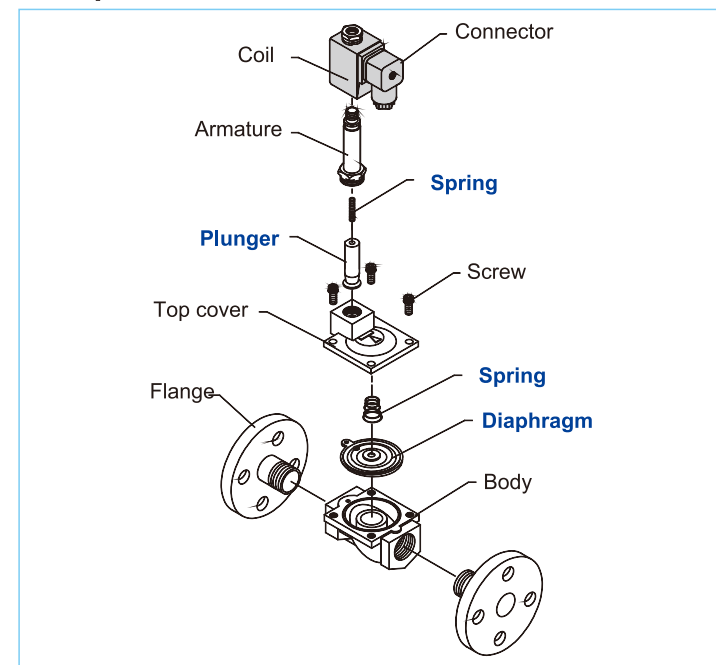
Seal material selection guide

Seal	Temperature range	Suitable fluid	Unsuitable fluid
NBR	-15°C ~ 80°C	Air, Water, Neutral gases, Mineral oil	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel
HNBR	-40°C ~ 150°C	Air, Water, Gear oil, Engine oil	Pharmaceutical liquid, Gasoline and Hi-test gasoline, Light oil
VITON	-10°C ~ 180°C	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel	Hot water, Steam, Brake oil (ATE Blue)
EPDM	-5°C ~ 130°C	Hot water, Detergent liquid	Mineral oil, Gasoline

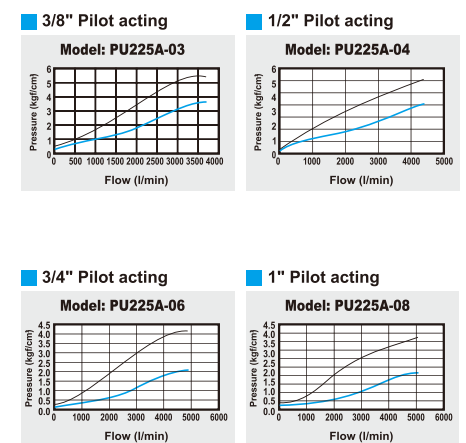
Dimensions

PU225A Standard type					PU225A Standard type (10K)				
Model	R	A	B	C (mm)	Model	R	A	B	C (mm)
PU225A-03	3/8"	66.5	106.5	48.5	PU225AF-03	3/8"	110	45	136
PU225A-04	1/2"	66.5	106.5	48	PU225AF-04	1/2"	110	47.5	138.5
PU225A-06	3/4"	96	126	70.7	PU225AF-06	3/4"	145	50	153
PU225A-08	1"	96	126	70.7	PU225AF-08	1"	150	62.5	165.5
PU225A-12	1 1/4"	131.5	145.5	96	PU225AF-12	1 1/4"	180	67.5	173
PU225A-14	1 1/2"	131.5	145.5	96	PU225AF-14	1 1/2"	180	70	182.5
PU225A-20	2"	160	160	112	PU225AF-20	2"	210	77.5	210

Explosion



Flow chart



■ Features

1. Pilot acting for low starting pressure.
2. Large flow rate and high working pressure.
3. Quick response.
4. Stainless steel body and stem provide exceptional durability.
5. Flange type is available for JIS 10K, ANSI 150LB and PN16.
6. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
7. Timer for setting on/off time as optional accessory.
8. CE and EX-proof certified.
9. Coil nut is available, please refer to page 5-3.



■ How to order

SPU225A	N	E	F	—	03	N	—	S1	L	E
Stainless steel	Acting style	Diaphragm	Flange type	Port size	Thread	Voltage	Led	Ex-Proof coil		
Pilot acting	Blank :Normally closed N :Normally open	Blank :VITON B :NBR E :EPDM H :HNBR	Blank :W/O Flange F :10K F3 :150LB F4 :PN16	03 :3/8" 04 :1/2" 06 :3/4" 08 :1" 12 :1 1/4" 14 :1 1/2" 20 :2"	Blank :G N :NPT R :Rc	S1 :110VAC S2 :220VAC S6 :24VAC S7 :12VDC S9 :24VDC	Blank :W/O LED L :W/I LED	Blank :Standard E :Ex-proof coil		

■ How to order Repair kit

ZGPU225A	—	03	N
Repair kit	Port size	Diaphragm	
ZGPU225A (Normally closed)	03 :3/8", 1/2"	N :NBR	
ZGPU225AN (Normally open)	06 :3/4", 1"	V :VITON	
	12 :1-1/4", 1-1/2"	E :EPDM	
	20 :2"	H :HNBR	

Description	Qty.
Plunger	1
Spring	2
Diaphragm	1

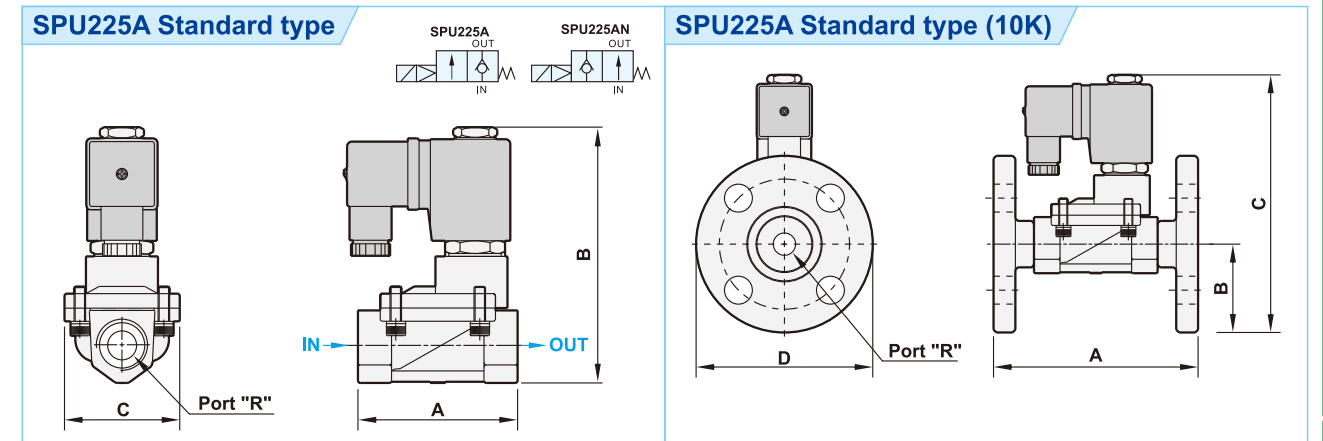
■ Specifications

Model	SPU225A-03	SPU225A-04	SPU225A-06	SPU225A-08	SPU225A-12	SPU225A-14	SPU225A-20
Port size	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Fluid	Compressed air (light oil, water)						
Series orifice	Ø13mm		Ø25mm		Ø38mm		Ø50mm
Effective area	88mm ²		230mm ²		404mm ²	552mm ²	883mm ²
Acting	Pilot acting						
Diaphragm	VITON (Standard), NBR, EPDM (Option)						
Operating pressure range	0.5 ~ 10 kgf/cm ²						
Proof pressure	15 kgf/cm ²						
Body /Flange material	Stainless steel SUS316 / SUS304,SUS316						
Fluid temperature	-10°C ~ 90°C						
Ambient temperature	-10°C ~ 60°C						
Installation	Horizontal						
Duty cycle	100% ED						
Coil type	DIN						
Protection class	IP65 (DIN 40 050)						
Insulation class	F						
Voltage tolerance	±10%						
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional						
Power consumption	Normally closed AC110V: 17.6VA; AC220V: 18.1VA; DC: 15W/Normally open AC: 17.8VA; DC: 15W						
Net weight	775g		1550g		2820g		4665g

■ Seal material selection guide

Seal	Temperature range	Suitable fluid	Unsuitable fluid
NBR	-15°C ~ 80°C	Air, Water, Neutral gases, Mineral oil	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel
HNBR	-40°C ~ 150°C	Air, Water, Gear oil, Engine oil	Pharmaceutical liquid, Gasoline and Hi-test gasoline, Light oil
VITON	-10°C ~ 180°C	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel	Hot water, Steam, Brake oil (ATE Blue)
EPDM	-5°C ~ 130°C	Hot water, Detergent liquid	Mineral oil, Gasoline

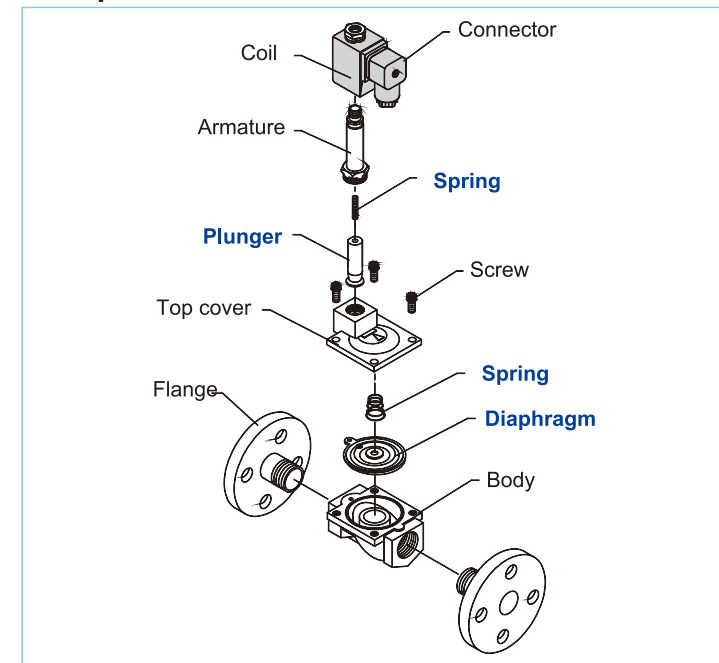
■ Dimensions



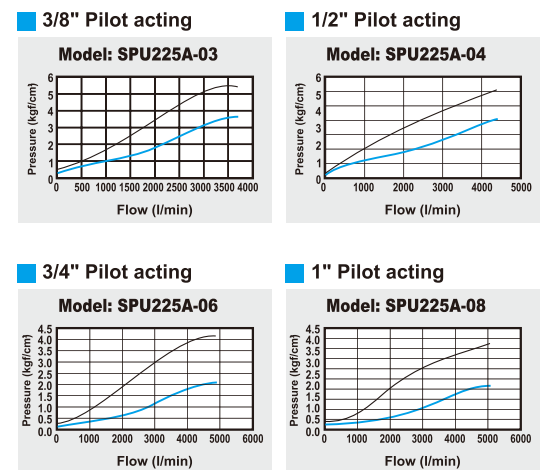
Model	R	A	B	C	D
SPU225A-03	3/8"	66.5	106.5	48	
SPU225A-04	1/2"	66.5	106.5	48	
SPU225A-06	3/4"	100	126.5	75	
SPU225A-08	1"	100	126.5	75	
SPU225A-12	1 1/4"	131.5	145.5	96	
SPU225A-14	1 1/2"	131.5	145.5	96	
SPU225A-20	2"	160	160.5	112	

Model	R	A	B	C	D
SPU225AF-03	3/8"	110	45	137	90
SPU225AF-04	1/2"	110	47.5	139.5	95
SPU225AF-06	3/4"	149	50	152.5	100
SPU225AF-08	1"	150	62.5	164	125
SPU225AF-12	1 1/4"	180	67.5	173	135
SPU225AF-14	1 1/2"	180	70	182.5	140
SPU225AF-20	2"	210	77.5	210	155

■ Explosion



■ Flow chart



Features

- 1. Closing time delay 7 to 10 seconds to prevent water hammer.
- 2. Pilot acting for low starting pressure.
- 3. Large flow rate and high working pressure.
- 4. Stainless steel stem provides exceptional durability.
- 5. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
- 6. Timer for setting on/off time as optional accessory.
- 7. Coil nut is available, please refer to page 5-3.



How to order

PU225W	N	V	F	—	06	N	—	S1	L	E
Brass Pilot acting Water-hammer proof	Acting style	Diaphragm	Flange type	Port size	Thread	Voltage	Led	Ex-Proof coil		
	Blank: Normally closed N: Normally open	Blank: NBR V: VITON E: EPDM H: HNBR	Blank: W/O Flange F: 10K F3: 150LB F4: PN16	06: 3/4" 08: 1"	Blank: G N: NPT R: Rc	S1: 110VAC S2: 220VAC S6: 24VAC S7: 12VDC S9: 24VDC	Blank: W/O LED L: W/I LED	Blank: Standard E: EX-proof coil		

How to order Repair kit

ZGPU225W	—	06	N
Repair kit	Port size	Diaphragm	
ZGPU225W (Normally closed) ZGPU225WN (Normally open)	06 :3/4", 1"	N: NBR V: VITON E: EPDM H: HNBR	

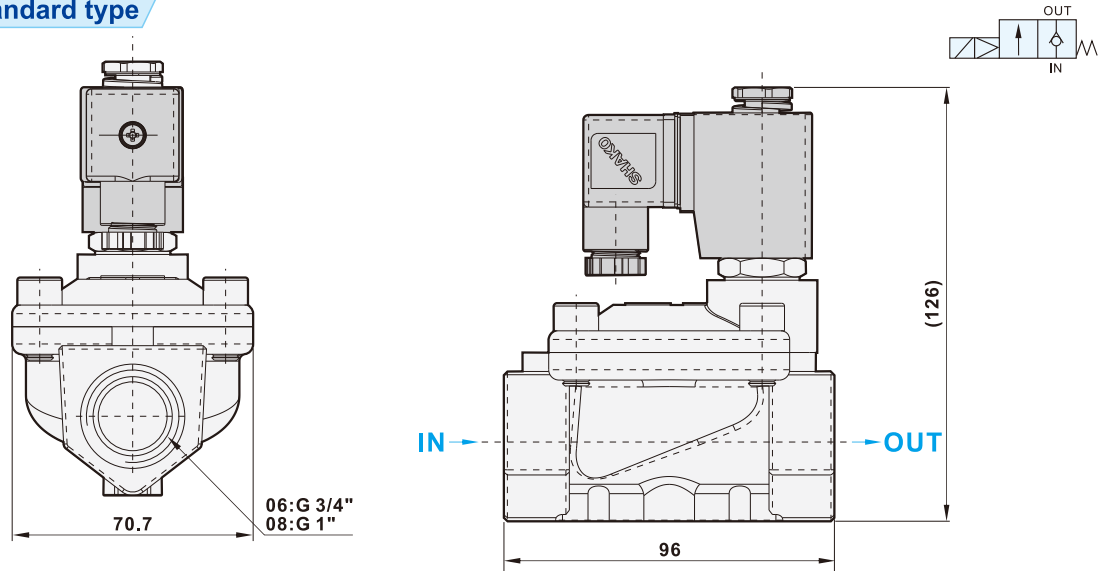
Description	Qty.
Spring	1
O-ring	1
Diaphragm	1
Plunger	1

Specifications

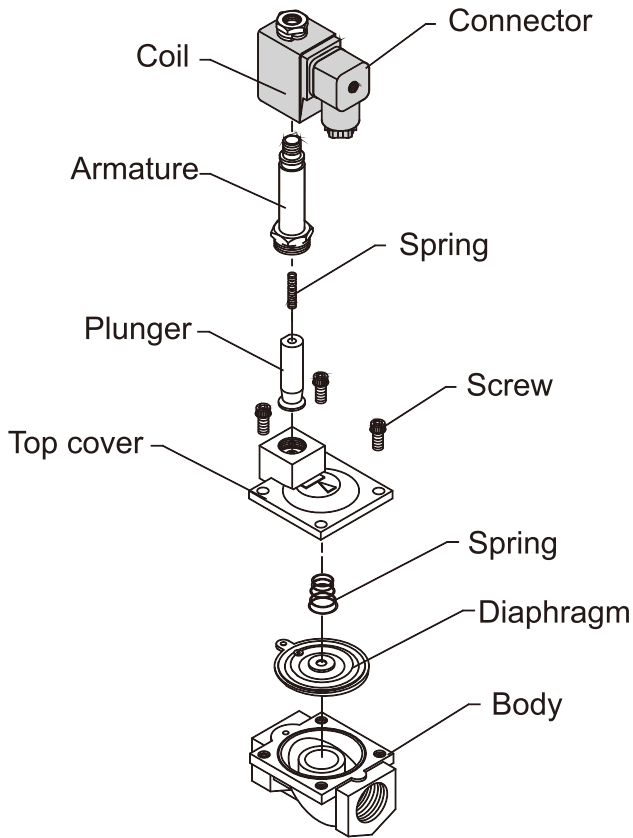
Model	PU225W-06	PU225W-08
Port size	3/4"	1"
Fluid	Water	
Orifice	Ø25mm	
Effective area	230mm²	
Acting	Pilot acting	
Construction	Diaphragm	
Operating pressure range	0.5 ~ 10 kgf/cm² (0.5~10.0Bar)	
Proof pressure	15 kgf/cm²	
Body / Flange material	Forged Brass / Steel SS41	
Fluid temperature	-10°C ~ 90°C	
Ambient temperature	-10°C ~ 60°C	
Installation	Horizontal	
Duty cycle	100% ED	
Coil type	DIN	
Protection class	IP65	
Insulation class	F	
Voltage tolerance	±10%	
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional	
Power consumption	Normally closed AC110V : 17.6VA, AC220V : 18.1VA, DC : 15W	
Net weight	1550g	

Dimensions

PU225W Standard type

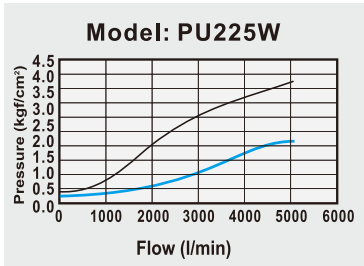


Explosion



Flow chart

1" Pilot acting



■ Features

1. Pilot acting for low starting preessure.
2. Large flow rate and high working pressure.
3. Quick response.
4. Stainless steel stem provides exceptional durability.
5. Ex-proof coil T4 as optional accessory. please refer to page 5-9.
6. Timer for setting on/off time as optional accessory.
7. Coil nut is available, please refer to page 5-3.

■ How to order

PU225H	N	V	F	—	03	N — S1	L	E
Brass 25 bar high pressure Pilot acting	Acting style	Diaphragm	Flange type	Port size	Thread	Voltage	Led	Ex-Proof coil
	Blank :Normally closed N:Normally open	Blank:NBR V:VITON E:EPDM H:HNBR	Blank:W/O Flange F:10K F3:150LB F4:PN16	03:3/8" 04:1/2" 06:3/4" 08:1"	Blank:G N:NPT R:Rc	S1:110VAC S2:220VAC S6:24VAC S7:12VDC S9:24VDC	Blank :W/O LED L :W/I LED	Blank :Standard E:EX-proof coil

* Please contact our sales for more details.

■ How to order Repair kit

ZGPU225H	—	03	N
Repair kit	Port size	Diaphragm	
ZGPU225H (Normally closed)	03 : 3/8", 1/2"	N : NBR	
ZGPU225HN (Normally open)	06 : 3/4", 1"	V : VITON E : EPDM H : HNBR	

■ Specifications

Model	PU225H-03	PU225H-04	PU225H-06	PU225H-08
Port size	3/8"	1/2"	3/4"	1"
Fluid	Compressed air, water			
Orifice	Ø8mm		Ø13mm	
CV value	2		4.5	
Effective area	35mm²		88mm²	
Acting	Pilot acting			
Construction	Diaphragm			
Operating pressure range	0.5 ~ 25 kgf/cm² (0.5 ~ 25Bar)			
Proof pressure	30 kgf/cm² (30Bar)			
Body / Flange material	Forged Brass / Steel SS41			
Piston ring	SUS 304			
Fluid temperature	-10°C ~ 90°C			
Ambient temperature	-10°C ~ 60°C			
Installation	Horizontal			
Duty cycle	100% ED			
Coil type	DIN			
Protection class	IP65 (DIN 40 050)			
Insulation class	F			
Voltage tolerance	±10%			
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional			
Power consumption	For normal close AC110V:17.6VA, AC220C:18.1VA, DC: 15W;For normal close AC:17.8VA, DC:15.W			
Net weight	775g	755g	1550g	1500g

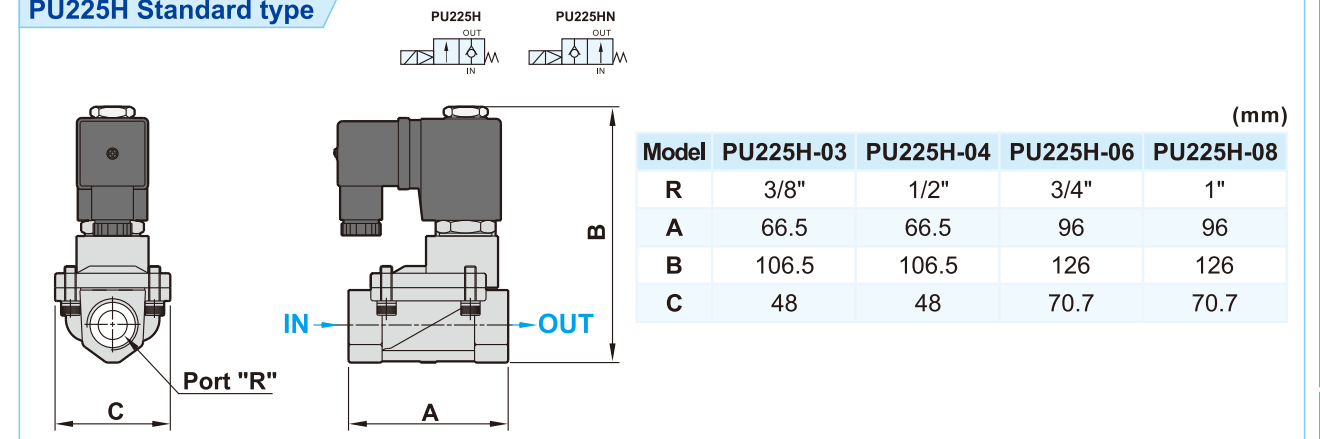


■ Seal material selection guide

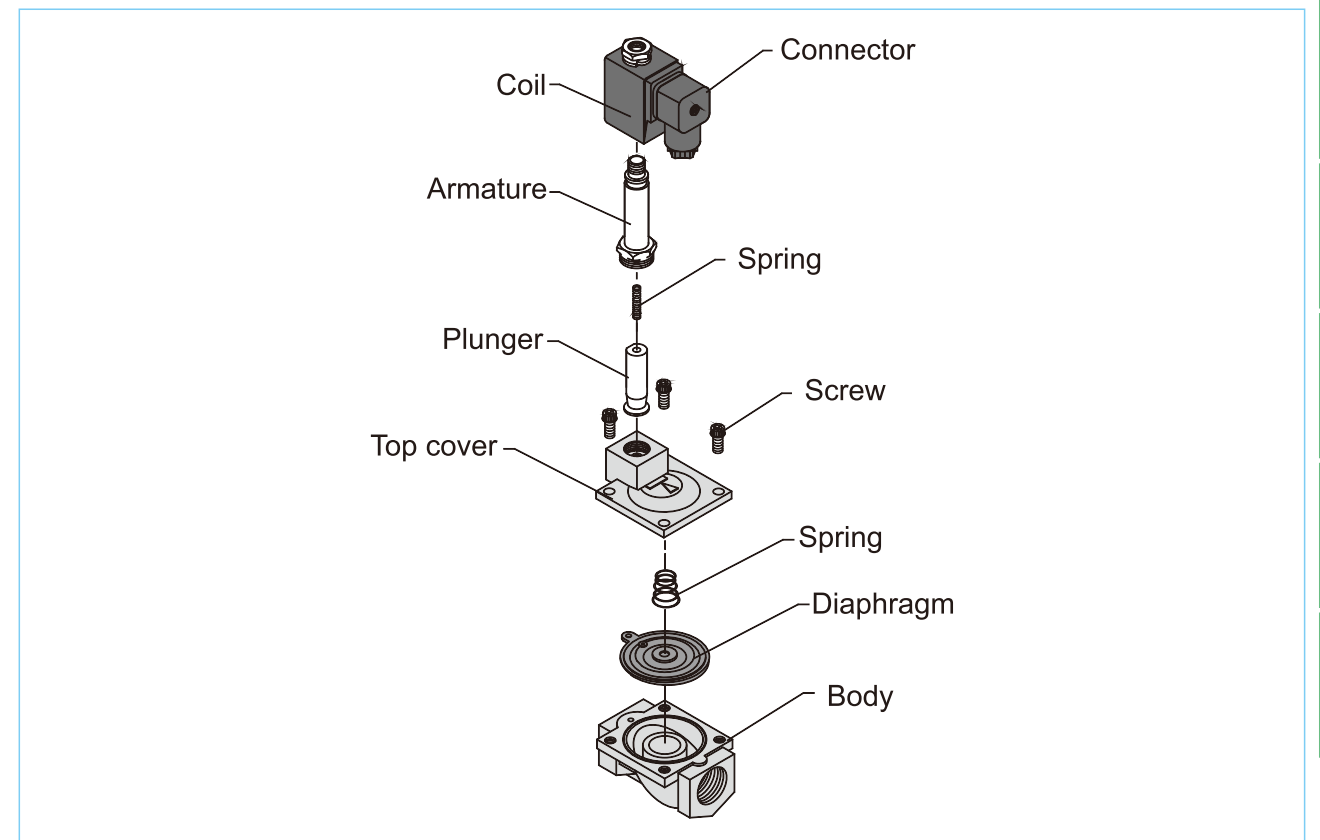
Seal	Temperature range	Suitable fluid	Unsuitable fluid
NBR	-15°C ~ 80°C	Air, Water, Neutral gases, Mineral oil	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel
HNBR	-40°C ~ 150°C	Air, Water, Gear oil, Engine oil	Pharmaceutical liquid, Gasoline and Hi-test gasoline, Light oil
VITON	-10°C ~ 180°C	Fuel oil, Gasoline and Hi-test gasoline, Diesel fuel	Hot water, Steam, Brake oil (ATE Blue)
EPDM	-5°C ~ 130°C	Hot water, Detergent liquid	Mineral oil, Gasoline

■ Dimensions

PU225H Standard type



■ Explosion



225Series

2/2 Way Solenoid Valve

High Pressure Series, Pilot Acting

Features

- 1. Specially for high pressure 0.5~50bar.
- 2. Large flow rate.
- 3. Quick response.
- 4. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
- 5. Timer for setting on/off time as optional accessory.
- 6. Coil nut is available, please refer to page 5-3.



How to order

PU225X	—	03	N	—	S1	L	E
Brass 50 bar high pressure pilot acting		Port size	Thread		Voltage	Led	Ex-Proof coil
		03 : 3/8"	Blank : G		S1 : 110VAC	Blank : W/O LED	Blank : Standard
		04 : 1/2"	N : NPT		S2 : 220VAC	L : W/I LED	E : EX-proof coil
		06 : 3/4"	R : Rc		S6 : 24VAC		
		08 : 1"			S7 : 12VDC		
					S9 : 24VDC		

* For the flange type, please contact our sales.

How to order Repair kit

ZGPU225X — 03

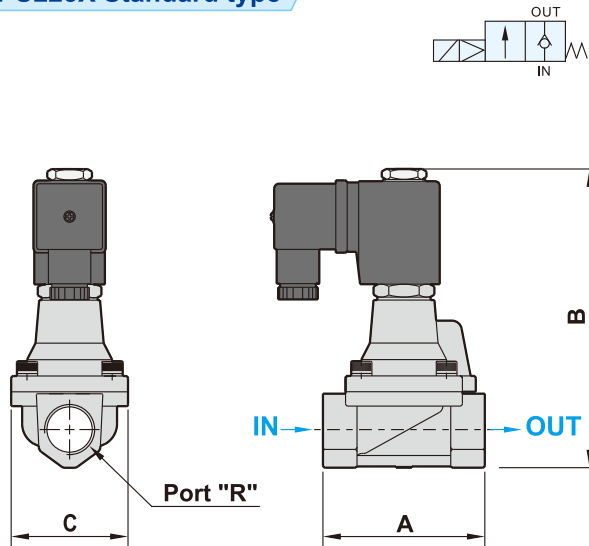
Repair kit	Port size	Description	Qty.
	03 : 3/8", 1/2"	Piston	1
	06 : 3/4", 1"	Armature set	1

Specifications

Model	PU225X-03	PU225X-04	PU225X-06	PU225X-08
Port size	3/8"	1/2"	3/4"	1"
Fluid	Compressed air			
Orifice	Ø13mm		Ø25mm	
CV value	4.5		12	
Effective area	88mm²		230mm²	
Acting	Pilot acting			
Construction	Piston			
Operating pressure range	0.5 ~ 50 kgf/cm² (0.5~50Bar)			
Proof pressure	76.5 kgf/cm² (75Bar)			
Body material	Forged Brass			
Piston ring	SUS 304			
Fluid temperature	-10°C ~ 90°C			
Ambient temperature	-10°C ~ 60°C			
Installation	Horizontal			
Duty cycle	100% ED			
Coil type	DIN			
Protection class	IP65 (DIN 40 050)			
Insulation class	F			
Voltage tolerance	±10%			
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional			
Power consumption	AC110V:17.6VA, AC220C:18.1VA, DC: 15W			
Net weight	860g	840g	1800g	1750g

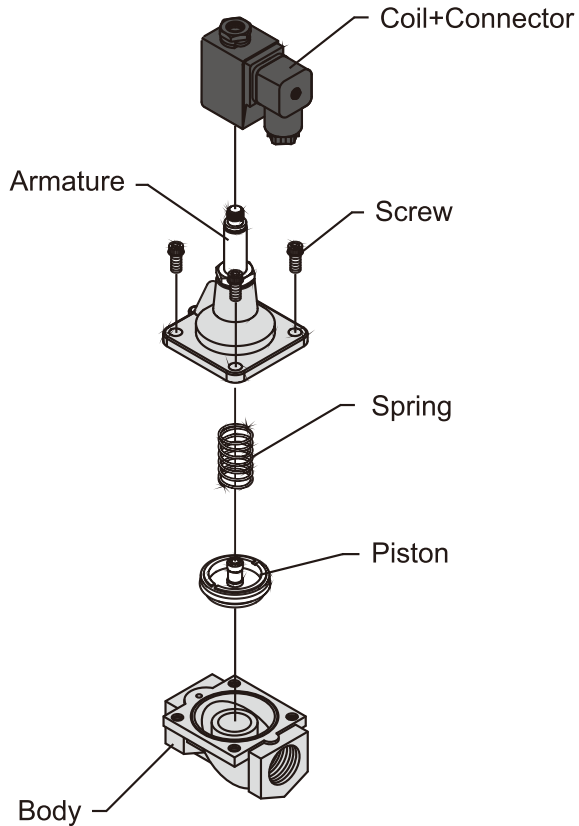
Dimensions

PU225X Standard type



	(mm)			
Model	PU225X-03	PU225X-04	PU225X-06	PU225X-08
R	3/8"	1/2"	3/4"	1"
A	66.5	66.5	96	96
B	125	125	151.5	151.5
C	48.5	48.5	70	70

Explosion



■ Features

1. Pilot acting for low starting pressure.
2. Large flow rate.
3. Quick response.
4. Specially for steam use.
5. Flange type is available for JIS 10K, ANSI 150LB and PN16.
6. Ex-proof coil T4 as optional accessory, please refer to page 5-9.
7. Timer for setting on/off time as optional accessory.
8. Coil nut is available, please refer to page 5-3.

■ How to order

PU225S	F	—	03	N	—	S1	L	E
Brass	Flange type		Port size	Thread		Voltage	Led	Ex-Proof coil
Pilot acting	Blank: W/O Flange		03: 3/8" 12: 1 1/4"	Blank: G		S1: 110VAC	Blank: W/O LED	Blank: Standard
Steam	F: 10K		04: 1/2" 14: 1 1/2"	N: NPT		S2: 220VAC	L: W/I LED	E: EX-proof coil
	F3: 150LB		06: 3/4" 20: 2"	R: Rc		S6: 24VAC		
	F4: PN16		08: 1"			S7: 12VDC		
						S9: 24VDC		

■ How to order Repair kit

ZGPU225S — 03

Repair kit	Port size
	03: 3/8", 1/2"
	06: 3/4", 1"
	12: 1-1/4", 1-1/2"
	20: 2"

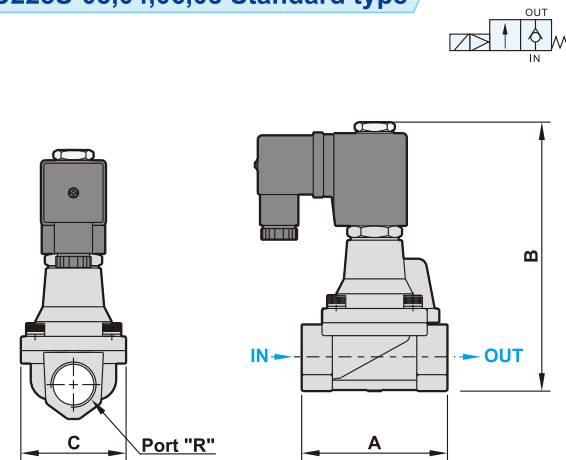
Description	Qty.
O-ring(A)	1
O-ring(B)	1
Body O-ring	1
Piston	1
Plunger	1

■ Specifications

Model	PU225S-03	PU225S-04	PU225S-06	PU225S-08	PU225S-12	PU225S-14	PU225S-20
Port size	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Fluid	Compressed air, Hot water, Steam						
Orifice	Ø13mm		Ø25mm		Ø40mm		Ø50mm
Effective area	88mm²		230mm²		552mm²	600mm²	984mm²
Acting	Pilot acting						
Construction	Piston						
Operating pressure range	0.5 ~ 10 kgf/cm²						
Proof pressure	15 kgf/cm²				30 kgf/cm²		
Body material	Forged brass / Steel						
Piston ring	SUS 304				Copper		
Fluid temperature	F:-5°C ~ 150°C (H:-5°C ~ 180°C)				F:-5°C ~ 150°C (H:-5°C ~ 185°C)		
Ambient temperature	-10°C ~ 60°C				-20°C ~ 60°C		
Installation	Horizontal						
Duty cycle	100% ED						
Coil type	DIN						
Protection class	IP65 (DIN 40 050)						
Insulation class	F (Option: H class coil)						
Voltage tolerance	±10%						
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage is optional						
Power consumption	AC110V: 17.6VA, AC220V:18.1VA, DC: 15W						
Net weight	860g	840g	1800g	1750g	3490g	3450g	4660g

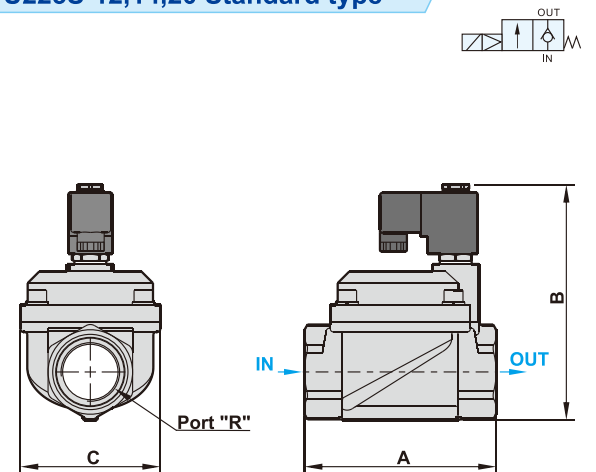
■ Dimensions

PU225S-03,04,06,08 Standard type



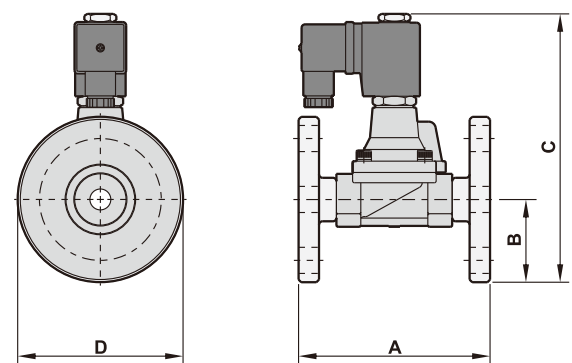
Model	R	A	B	C
PU225S-03	3/8"	66.5	125	48.5
PU225S-04	1/2"	66.5	125	48.5
PU225S-06	3/4"	96	151.5	70
PU225S-08	1"	96	151.5	70

PU225S-12,14,20 Standard type



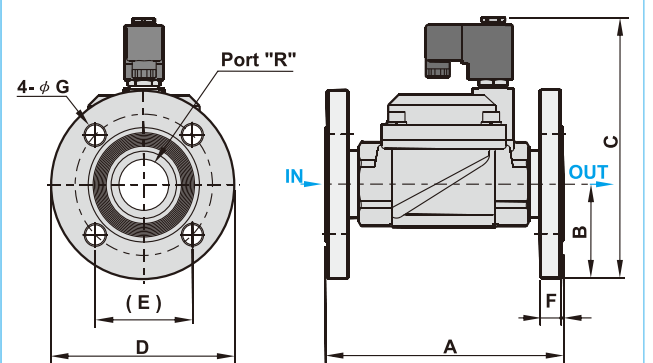
Model	R	A	B	C
PU225S-12	1 1/4"	131.5	161.5	96
PU225S-14	1 1/2"	131.5	161.5	96
PU225S-20	2"	160	174.3	112

PU225S-03,04,06,08 Flange type (10K)



Model	R	A	B	C	D
PU225S-03	3/8"	110	45	151.7	90
PU225S-04	1/2"	110	47.5	154.2	95
PU225S-06	3/4"	148	50	183	100
PU225S-08	1"	150.6	62.5	191	125

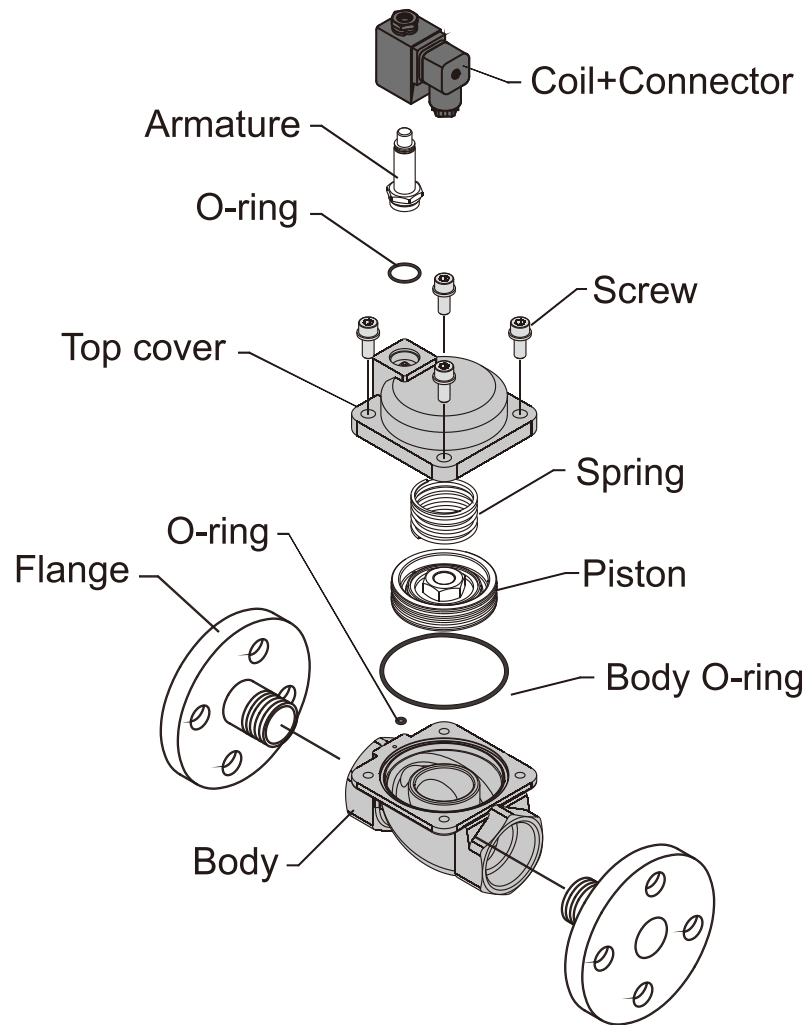
PU225S-12,14,20 Flange type (10K)



Model	R	A	B	C	D	E	F	G
PU225S-12	1 1/4"	182.5	70	205	140	74.5	16	15
PU225S-14	1 1/2"	182.5	70	205	140	74.5	16	15
PU225S-20	2"	212	77.5	212.3	155	85	16	19

Explosion

PU225S

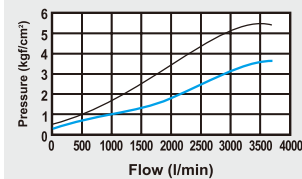


Memo...

Flow chart

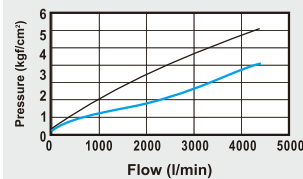
3/8" Pilot acting

Model: PU225S-03



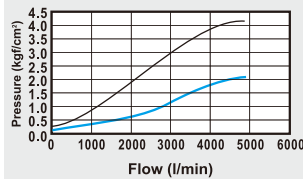
1/2" Pilot acting

Model: PU225S-04



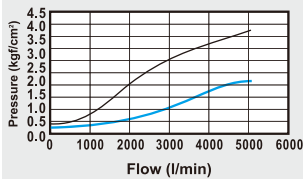
3/4" Pilot acting

Model: PU225S-06



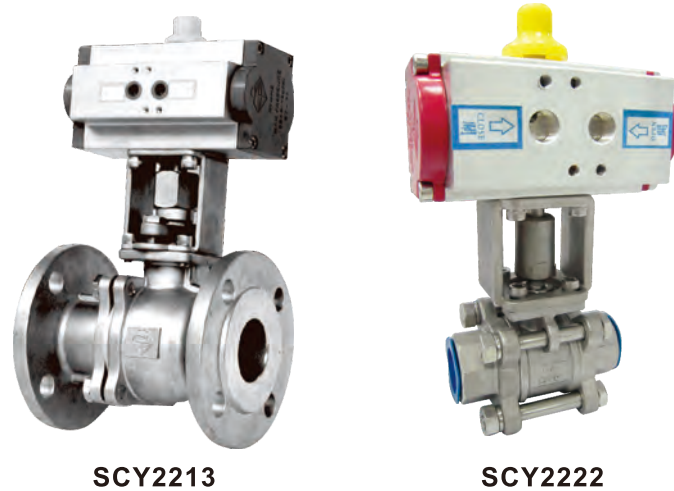
1" Pilot acting

Model: PU225S-08



■ Features

1. The actuator attached CY520-02-S Namur valve for large flow rate and quick acting.
2. Various material for the body of valve (FC, S.S.304, S.S.316).
3. The valve can be installed in vertically or horizontally.
4. Durability and easy maintenance.
5. The valve can be attached with limit switch.
6. Hand wheel design for hand control.



■ How to order

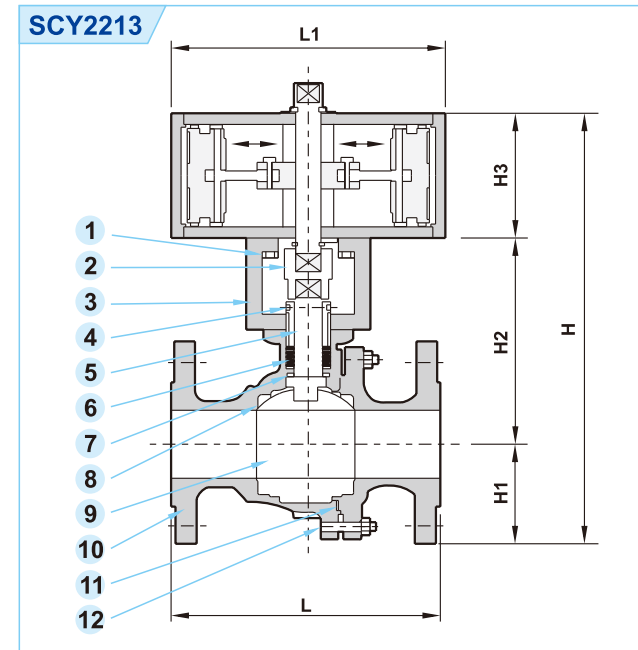
SCY2213	F	CA	—	04
Stainless steel SUS304 Double acting(Flange type)	Flange type F : 10K F3 : 150LB	Actuator Blank : W/O actuator CA : Aluminum alloy actuator FC : Cast iron actuator		Port size 04 : 1/2" 24 : 2 1/2" 06 : 3/4" 30 : 3" 08 : 1" 40 : 4" 12 : 1 1/4" 50 : 5" 14 : 1 1/2" 60 : 6" 20 : 2"

SCY2222	CA	—	02
Stainless steel SUS316 Double acting(Thread type)	Actuator Blank : W/O actuator CA : Aluminum alloy actuator FC : Cast iron actuator		Port size 02 : 1/4" 12 : 1 1/4" 03 : 3/8" 14 : 1 1/2" 04 : 1/2" 20 : 2" 06 : 3/4" 24 : 2 1/2" 08 : 1" 30 : 3"

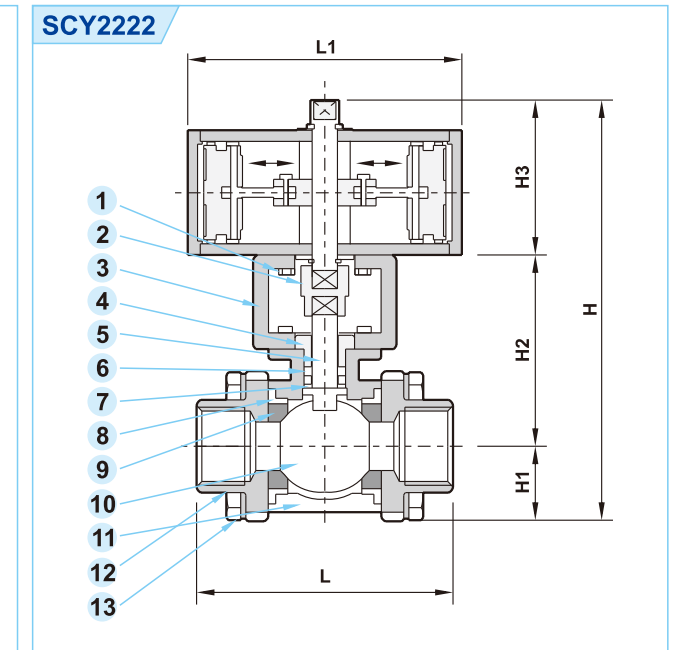
■ Specifications

Model	SCY2213	SCY2222
Port size	Flange type : 1/2" - 6" (04~60)	Thread type : 1/4" - 3" (02~30)
Fluid	Compressed air, Water, steam, oil	
Acting	Double acting	
Construction	Piston	
Operating pressure range	Operating pressure: 4~6kg/cm ² , Working pressure: 1000PSI	
Body material	Thread type : FC SUS316 \ Flange type : FC SUS304	
Fluid temperature	-10°C ~ 120°C	
Ambient temperature	-10°C ~ 50°C	

■ Dimensions / Construction



Size		L	L1	H	H1	H2	H3
mm	inch						
15	1/2"	108	109	224	48	97	79
20	3/4"	117	109	228	50	99	79
25	1"	127	131	257	62	105	90
32	1 1/4"	140	165	276	62	105	109
38	1 1/2"	165	165	324	68	147	109
50	2"	178	165	336	77	150	109
65	2 1/2"	190	200	387	86	178	128
80	3"	203	200	396	92	181	128
100	4"	230	249	452	105	204	143
125	5"	300	292	512	132	207	173
150	6"	340	328	588	139	247	202



Size		L	L1	H	H1	H2	H3
mm	inch						
11.6	1/4"	65	109	175	20	76	79
12.7	3/8"	65	109	175	20	76	79
15	1/2"	74	109	185	24	82	79
20	3/4"	83	109	191	27	85	79
25	1"	94	131	208	30	88	90
32	1 1/4"	105	165	238	35	94	109
40	1 1/2"	120	165	268	40	119	109
50	2"	136	165	283	47	127	109
65	2 1/2"	167.5	200	337	59	155	128
80	3"	189	200	358	67	168	128

No.	Description	Material	Quantity
1	Bolt	SUS304	4
2	Adaptor	SCS13	1
3	Yoke	SCS13	1
4	Gland	BC-6	1
5	Stem	SUS304	1
6	Packing	TEFLON	4
7	Packing	TEFLON	1
8	Seat ring	TEFLON	2
9	Ball	SCS13	1
10	Body	SCS13	1
11	Gasket	TEFLON	1
12	Bolt	SUS304	4

No.	Description	Material	Quantity
1	Bolt	SUS304	4
2	Adaptor	SCS13	1
3	Yoke	SCS13	1
4	Gland	SUS304	1
5	Stem	SUS304	1
6	Gland packing	PTFE	4
7	Packing	Teflon	1
8	Packing	PTFE	1
9	Seat ring	PTFE	1
10	Ball	ASTM A351 GR.CF8M	1
11	Body	ASTM A351 GR.CF8M	1
12	End cap	ASTM A351 GR.CF8M	2
13	Bolt	SUS304	4

Features

- 1. Pulse type membrane valve.
- 2. Specially designed for fine dust collection with mass flow and long life.
- 3. Quick acting.
- 4. Safe and durable.
- 5. Aluminum body. Piping adaptor is available to offer.

Cautions

Humidity of fluid should stay in low status to avoid solidification damage when temperature is low.



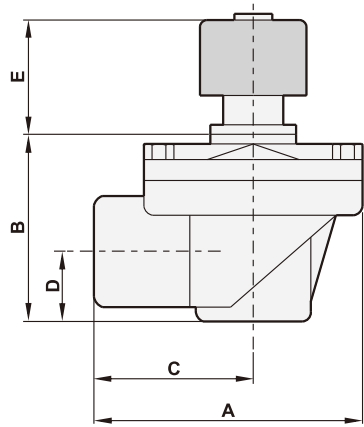
How to order

DC220	–	06	–	S1	D
Aluminum alloy Dust collector valve		Port size		Voltage	Coil type
		06 : 3/4"		S1 : 110VAC	Blank : Lead wire
		08 : 1"		S2 : 220VAC	D : DIN
		14 : 1 1/2"		S9 : 24VDC	
		20 : 2"			
		24 : 2 1/2"			
		30 : 3"			

Specifications

Model	DC220					
Port size	3/4"	1"	1 1/2"	2"	2 1/2"	3"
CV value	11.2	18.5	43	60	120	130
Orifice	Ø21mm	Ø34mm	Ø42mm	Ø66mm	Ø66mm	Ø82mm
Body material	Aluminum alloy					
Operating pressure range	0.5 ~ 7.5 kgf/cm²					
Ambient temperature	-10°C ~ 85°C					
Electrical pulse length	60 m/s					
Peak pressure	3.5 kgf/cm²					
Total pulse length	80 m/s					
Open time	2.3 m/s					
Close time	20 m/s					
Volume per pulse	60 Ndm³					
Duty cycle	100%					
Coil type	DIN or lead wire					
Protection class	IP65 (DIN 40 050)					
Insulation class	F					
Voltage tolerance	±10%					
Standard voltage	220VAC, 110VAC, 24VDC, the other voltage are optional					

Dimensions



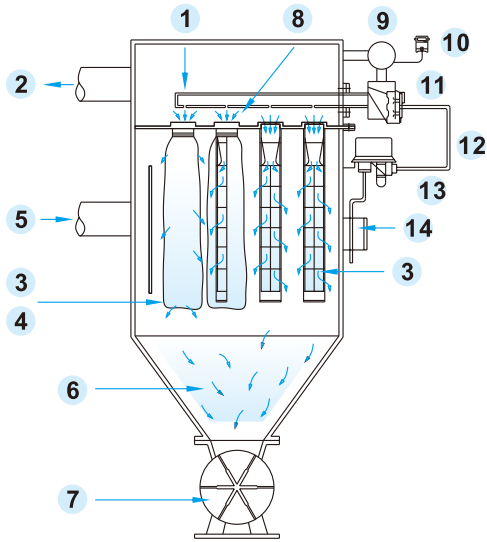
Operating theory

- 1. The diaphragm is lifted to open the valve when coil is energized.
- 2. The diaphragm is dropped to close the valve when coil is not energized.
- 3. Diaphragm is changeable, open the valve to change broken diaphragm into new one.

Unit: mm

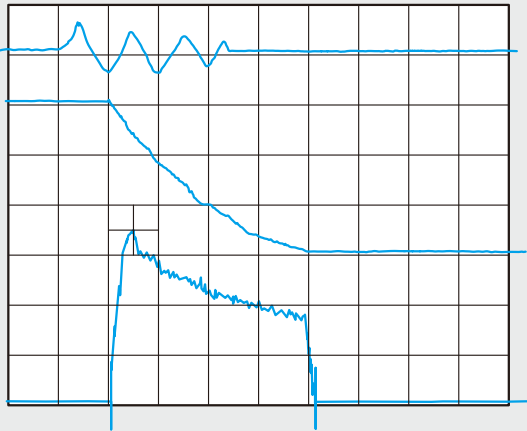
Model	Port size	A	B	C	D	E
DC220-06	3/4"	78	65	43	22	65
DC220-08	1"	92	80	52	37	65
DC220-14	1 1/2"	130	90	73	32	65
DC220-20	2"	186	145	103	46	73
DC220-24	2 1/2"	186	145	103	46	73
DC220-30	3"	228	170	125	55	73

Material list



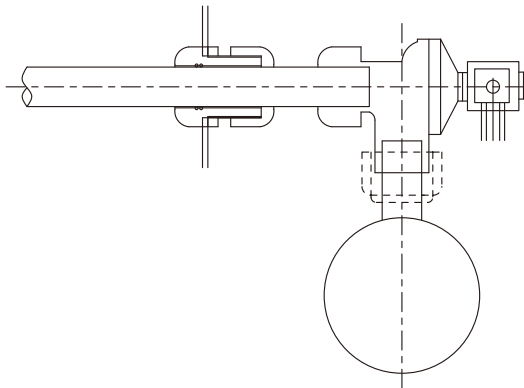
- 1. Compressed air jet
- 2. Clean air exhaust
- 3. Filter housing
- 4. Filter bag
- 5. Dirty air intake
- 6. Dust collector hopper
- 7. Rotary material discharge valve
- 8. Win's tube
- 9. Air supply
- 10. Pressure switch
- 11. Diaphragm valve
- 12. (Auxiliary)air control pipe
- 13. Magnetic valve
- 14. Solid state sequential controller

Diaphragm valve data chart



Mounting

There are four directions selection for wire plug magnetic valve, the connection outlet shall face downward.



Features

1. Solenoid valve controller.
2. Selectable timing range.
3. 24-240VAC/DC 50/60Hz.
4. DIN 43650 ISO-4400/6952.
5. IP65 NEMA 4.
6. Resettable.

Applications

1. Auto drain valve: Automatic discharge of condensate.
2. Sampling(gas or liquid), Air dryers.
3. Effluent sampling.
4. Sprinkler systems.
5. Pneumatic vibration systems(eg. Powder silos).
6. Automatic lubrication systems.

Suitable models

Z10100 suitable for:

PU220AR-03, PU220A, SPU220A, PU220D, PU225A, SPU225A, PU225H, PU225X, PU225S, SPU220, PU225W, PE220 series.

Z10101 suitable for:

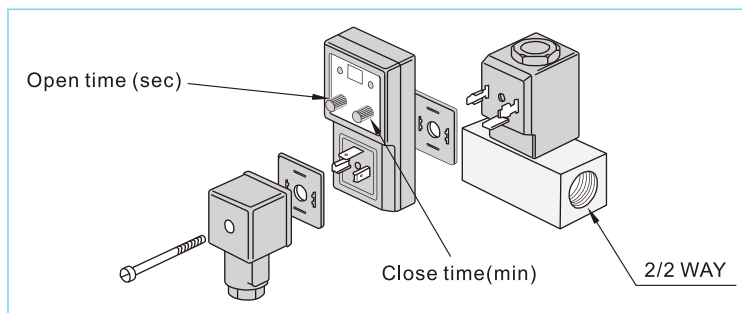
PU220AR-01, PU220AR-02 series.

Specifications

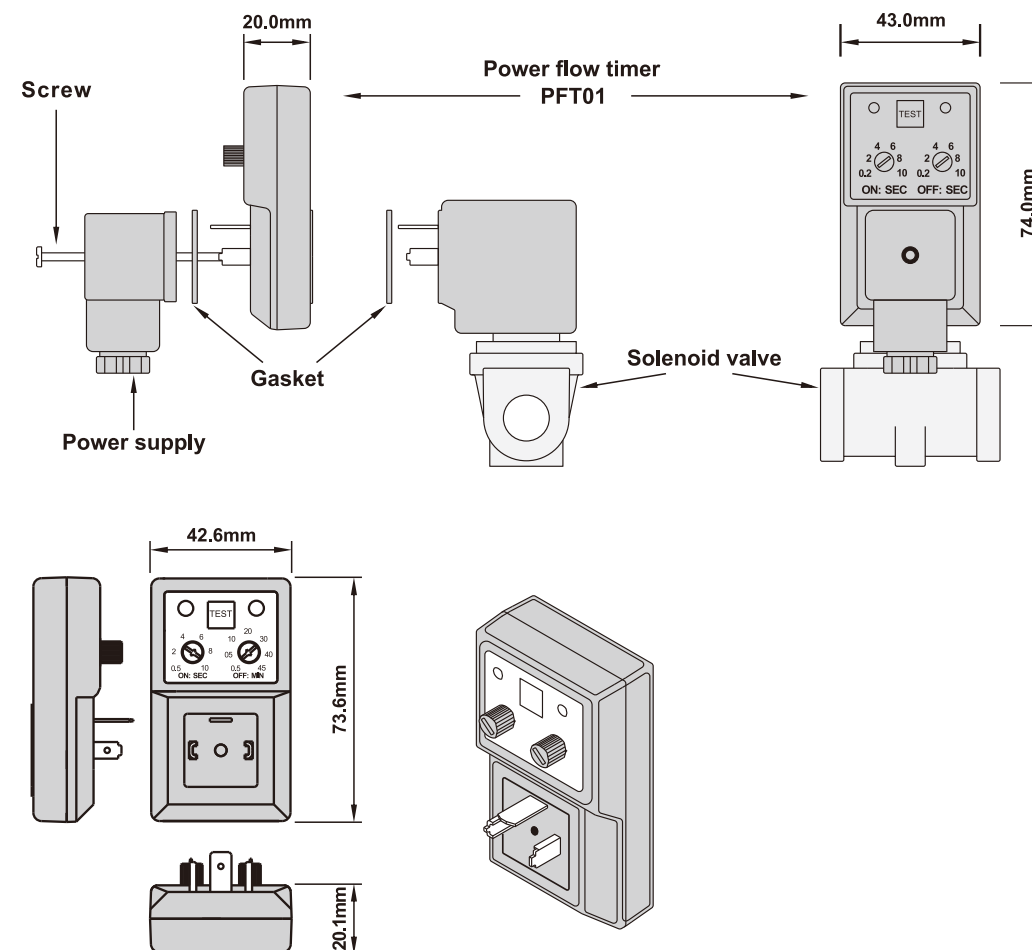
Model	Z10100	Z10101
Applicable coil width	30mm, 36mm	22mm
Supply voltage	24~240VAC/DC 50/60Hz	
Open time range	0.5 to 10 sec.	
Close time range	0.5 to 60 min.	
Current consumption	4 mA. Max	
Operating temperature	-10°C to 50°C	
Environment protection	IP65, NEMA IV	
Switch capacity	1Amp	
Inrush current	10 Amps for 10 mSec.	
Switch holding voltage	400V	
Duty cycle	100%	
Switch life	3E8 operations	
Repeat accuracy	±1%	
Timing temp. coefficient	±0.005°C	
Scale accuracy	±10%	
Reset/Test	Manual touch switch	
Connection	Din 43650 ISO-4400/6952	
Indicator	LED's to indicate phases	
Design standard	VDE 0100C	



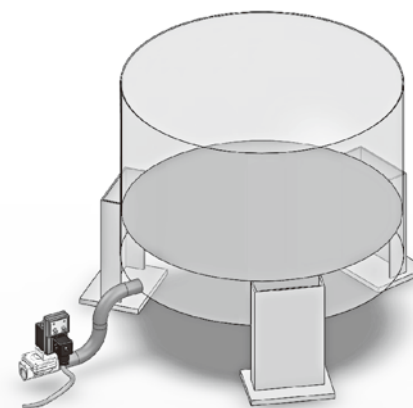
Installation



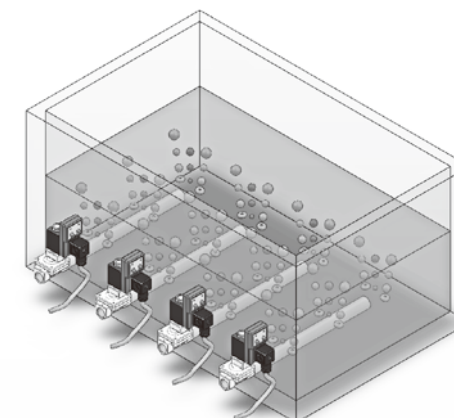
Dimensions



Application



Inflow & outflow controller for fluid in tank.



Timing controller for aeration system.