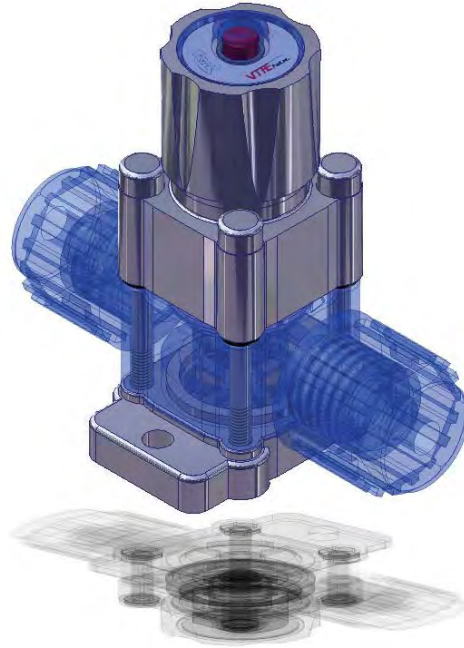
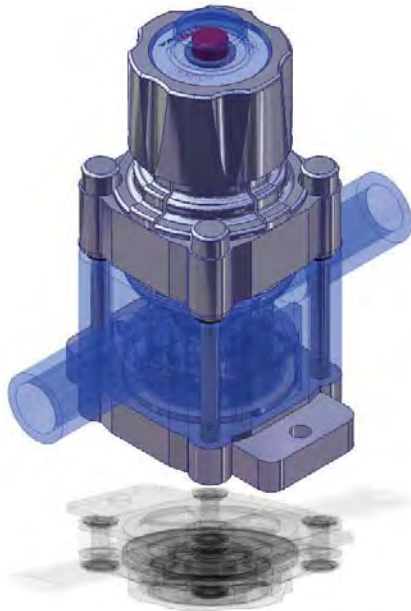


High-Purity PureLine Valve System

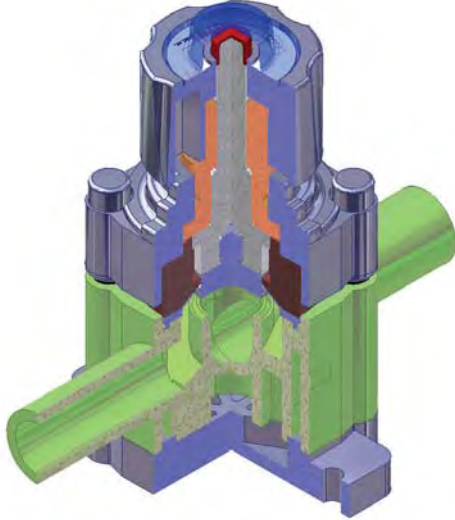
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PFA Manual 2-Way Valve



제품 소개 (Product Overview)



- 고순도 반도체 및 LCD의 공급약품을 이송 연결시키는 라인의 제어변으로 사용된다.
- 접액면은 순수 PFA와 순수 PTFE로 이루어져 금속오염과 용출이온으로부터 최고의 내화학성을 갖는다.
- PTFE Diaphragm은 최적의 설계로 제작, 가공 되었으며 얇은막의 두께로도 높은 내압에도 이상이 없는 구조이다.
- Union type의 Seal부분은 이중씼(Double seal)구조의 파팅연결이 밸브의 접속부 기밀을 보증하며 눈관리의 적색 표시 체크링이 너트의 풀림을 사전에 확인할 수 있다.

PureLine PFA manual valves are verified for use in high purity semiconductor and TFT-LCD Application. Inside PTFE Diaphragm seat and PFA body of valve is designed for most chemical resistance from metallic contamination and ionic etc.

The diaphragm seat of modified PTFE is ideally suited for use in high pressure even though the thickness of seat is thin. The union type fitting seal is structure of double seal system. This is assured to leakage of fitting connection and capable to check of loose nuts by red arrow marking before accident.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²
Max' operation pressure
최고 사용 온도 : 90 deg C
Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²
Leakge test pressure
정방향의 압력 : 7 kg/cm²
Flow direction pressure
역방향의 압력 : 5 kg/cm²
Back direction pressure

3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
F1/4"	0.24	Tube Flaring
F3/8"	0.6	Tube Flaring
F1/2"	1.2	Tube Flaring
F3/4"	4	Tube Flaring
F1"	6.7	Tube Flaring
P15A	4	Pipe Welding
P20A	6.7	Pipe Welding
P25A	14.5	Pipe Welding

특허 및 의장 등록 (Intellectual)

- 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)
- 매뉴얼밸브의 몸체와 다이어프램구조설계(실용신안 : 제 0395463 호)
The structure of joint seal system for fitting and connection (Patent No : 0478754)
The structure and design of solid valve body and its design (Utility model register No : 0395463)

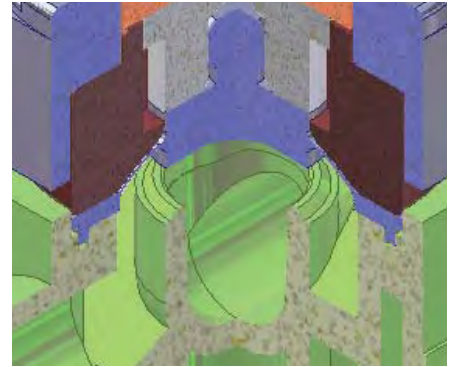
특징 (Features)



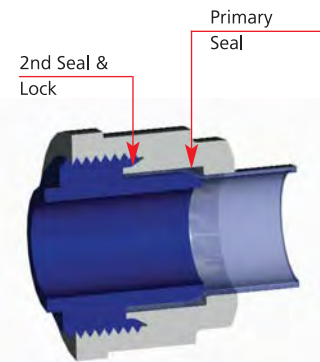
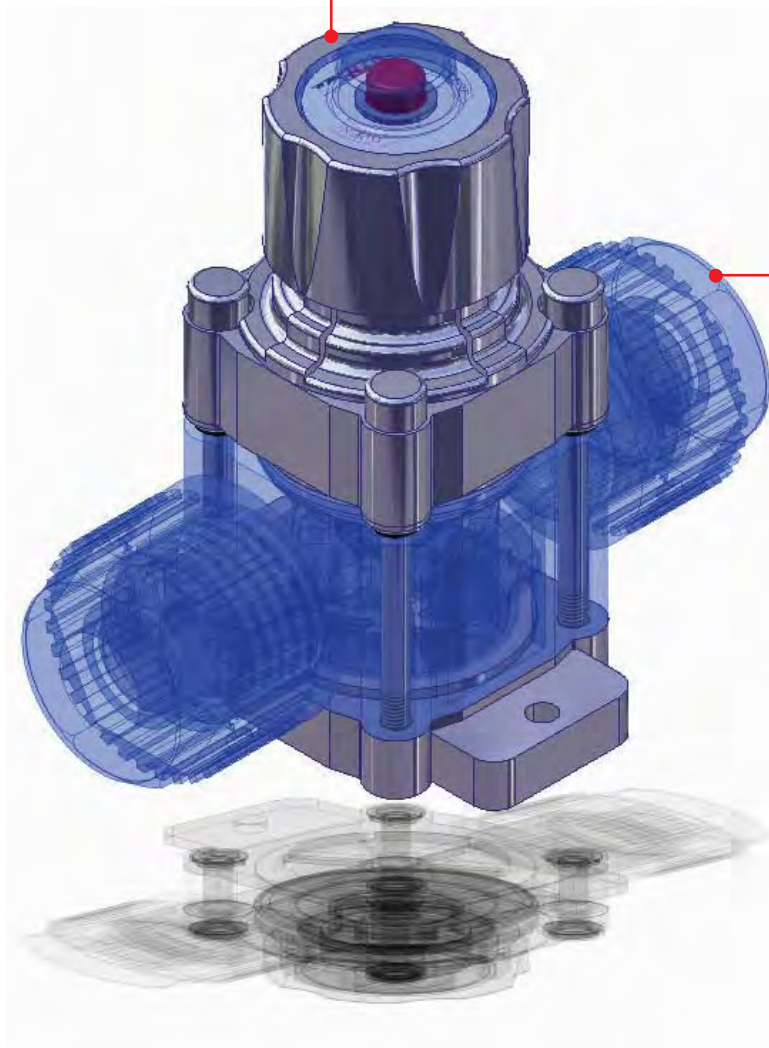
On/Off시 Spindle의 상.하 작동으로
식별 용이
Easy visual indicate at ON/OFF
by spindle operation.



Modified PTFE로 성형 및 N.C 가공으로 균일
한 품질, 안정성 유지
Assured quality and safety by modified
PTFE molding, machining NC.



다이하프럼 시트셀과 몸체 설계에 의한 누수방지
Unique seat seal design and structure of
body.

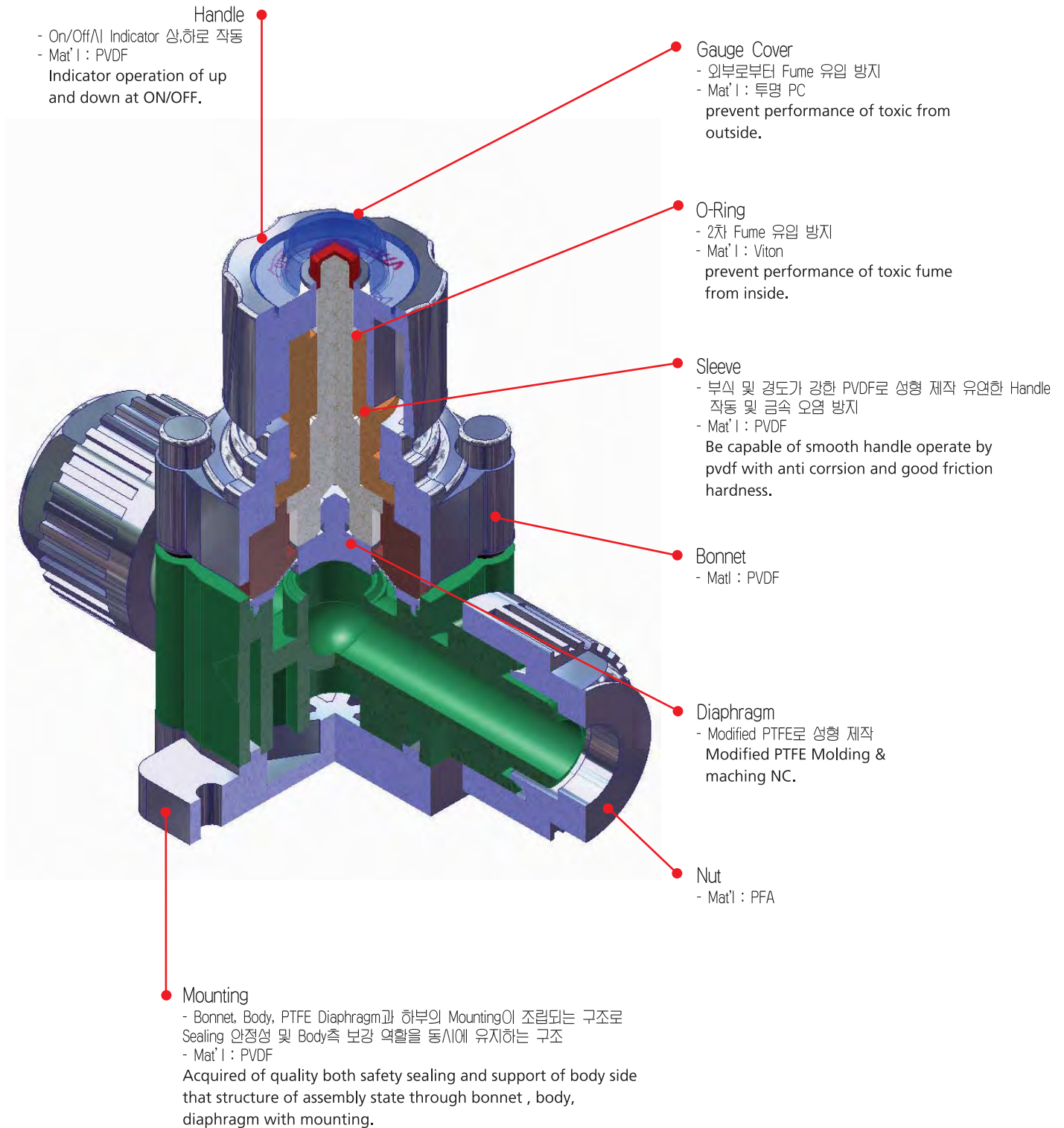


Double Seal (Union Type) 구조
- 1차 접점 Seal, 2차 면 접촉 Seal로 기밀 유지
- 과체결 방지
- 10 페이지를 참조하십시오
Double Seal(Union Type) system
Primary and Secondary seal structure and
None over locking by design nuts.
Please see 10 Page.



눈 관리 (Union Type)
- 접촉 체결관이 진동, 임의적으로 회전시
폴림여부 정도를 육안으로 확인 가능
- 10 페이지를 참조하십시오
Eye Marking (Union Type)
Easy visual checking of loose nuts on fitting
by vibration or others mis operation.
Please see 10 Page.

주요부품 구성도 (Composition of Major Parts)



재 질 구 성 (Materials Composition)

1. Body	High Grade PFA
2. Diaphragm	Modified PTFE
3. Bonnet	PVDF
4. Mounting	PVDF
5. Handle	PVDF
6. Gauge cover	PC
7. Compressor	PVDF
8. Spindle	PVDF
9. Sleeve	PVDF
10. Bolt/Washer	SUS304
11. Bolt Cap	LDPE
12. Others	Viton, PP

Bonnet 볼트 Torque (Torque valve at bonnet joint)



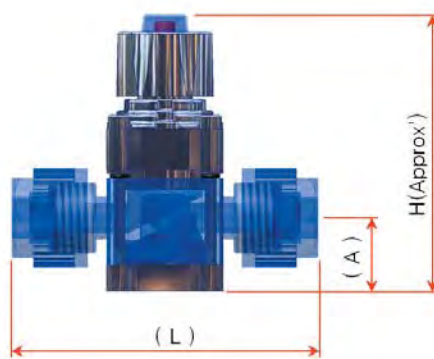
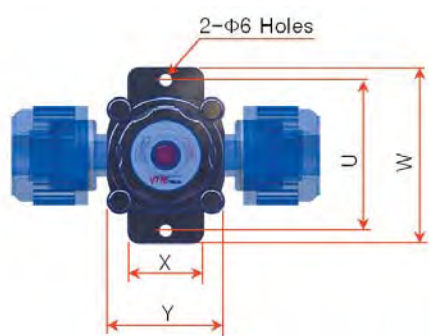
Product Size	Bolt Size	Torque - Nm
F 1/4", 3/8"	M4	2
F 1/2"	M4	2
F 3/4"	M5	4
F 1"	M5	4.5
P15A	M5	4
P20A	M5	4.5
P25A	M6	5

상기 값은 참조 Data 입니다.
Above data is reference value.

Ordering information

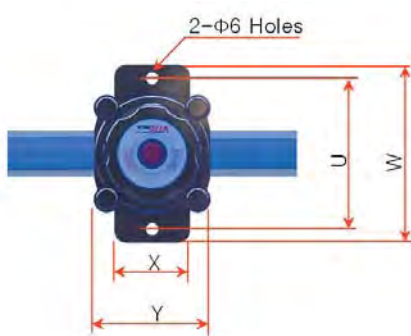
Example : PLMV —		Inlet & Outlet
		F 08
		Inlet — Outlet
		F 08 — F 08
Connection Type		Connection Size
Tube Flaring	F	04 Tube Size 1/4"
Pipe Welding	P	06 Tube Size 3/8"
		08 Tube Size 1/2"
		12 Tube Size 3/4"
		16 Tube Size 1"
		15 Pipe Size 15A
		20 Pipe Size 20A
		25 Pipe Size 25A

Part Number & Dimension Table



Unit : mm

Part Number	Orifice	A	B	H	L	U	W	X	Y	Weight (Kg)
PLMV-F04	3.1	22	8	93	100	45	55	31	33	0.23
PLMV-F06	6	22	8	93	105	45	55	31	33	0.25
PLMV-F08	8	24	8	95	123	48	61	31	37	0.32
PLMV-F12-F08	14.2	34	10	129	142	68	83	35	54	0.64
PLMV-F12	14.2	34	10	129	142	68	83	35	54	0.65
PLMV-F16	18	32	10	131	158	74	86	36	58	0.8



Unit : mm

Part Number	Orifice	A	B	H	L	U	W	X	Y	Weight (Kg)
PLMV-P15	14.2	34	10	129	135	68	83	35	54	0.5
PLMV-P20	18	32	10	131	138	74	86	36	58	0.57
PLMV-P25	26.2	43	14	166	151	85	97	40	70	1.1

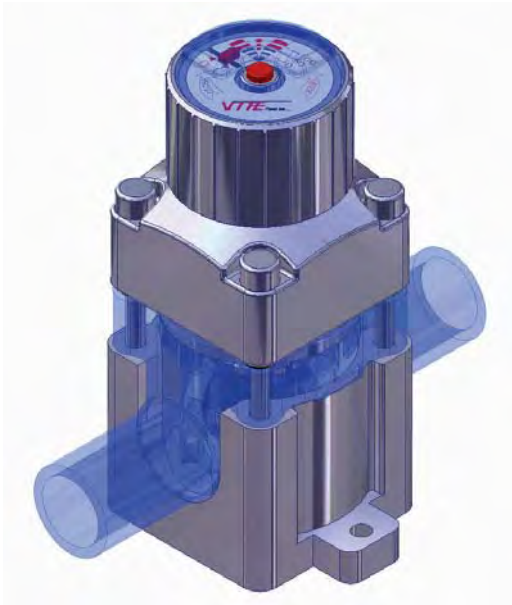
❶ 상기 치수표에 표시한 치수는 참조치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

High-Purity PureLine Valve System

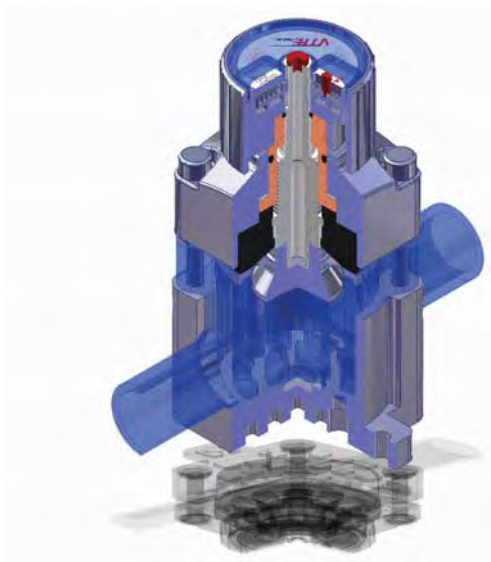
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PFA SM Manual 2-Way Valve



제품 소개 (Product Overview)



- SM(Super Mode) Series Manual Valve는 고순도 반도체, LCD에 사용 할수 있도록 설계 되었으며
 - 용이한 Handle 조작을 위한
 - On/Off/시 눈관리 기능
 - 유량의 정도 표시
 - Handle 표면 미끄럼 방지 구조로 제작 되어 있다.
 - 특히 PFA의 일체형 사출구조로 금속면으로 인한 금속오염을 최대한 방지한 구조로 설계 되어 있다.
 - PTFE Diaphragm은 최적의 설계로 제작 , NC로 가공 되었으며 얇은 막의 두께로도 높은 내압에 견딜수 있는 구조이다.
- PureLine PFA SM(Super Mode) series manual valves are verified for use in high purity semiconductor and TFT LCD Application.
- For easy operate of handle, It is adopted to as blow ;
- Visual Indicating at ON/OFF.
 - Display of flow line.
 - Special designed type for antislip.
- Especially, It is designed for most chemical resistance from metallic contamination.
- The diaphragm seat of modified PTFE is ideally suited for use in high pressure even though the thickness of seat is thin by optimized design and accruated NC machine.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²
Max' operation pressure
최고 사용 온도 : 90 deg C
Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²
Leakge test pressure
정방향의 압력 : 7 kg/cm²
Flow direction pressure
역방향의 압력 : 5 kg/cm²
Back direction pressure

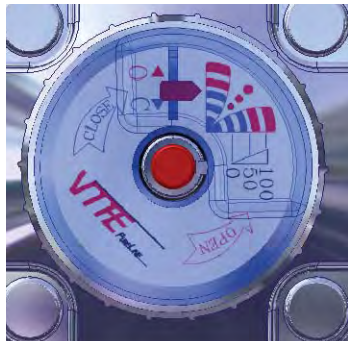
3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
F1/4"	0.24	Tube Flaring
F3/8"	0.6	Tube Flaring
F1/2"	1.2	Tube Flaring
F3/4"	4	Tube Flaring
F1"	6.7	Tube Flaring
P15A	4	Pipe Welding
P20A	6.7	Pipe Welding
P25A	14.5	Pipe Welding

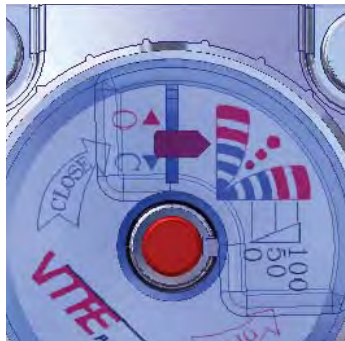
특허 및 의장 등록 (Intellectual)

- 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)
 - 매뉴얼밸브의 몸체와 다이어프램구조설계(실용신안 : 제 0395463 호)
- The structure of joint seal system for fitting and connection (Patent No : 0478754)
- The structure and design of solid valve body and its design (Utility model register No : 0395463)

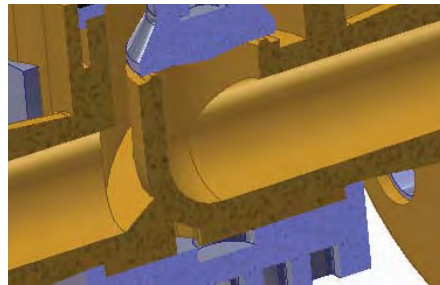
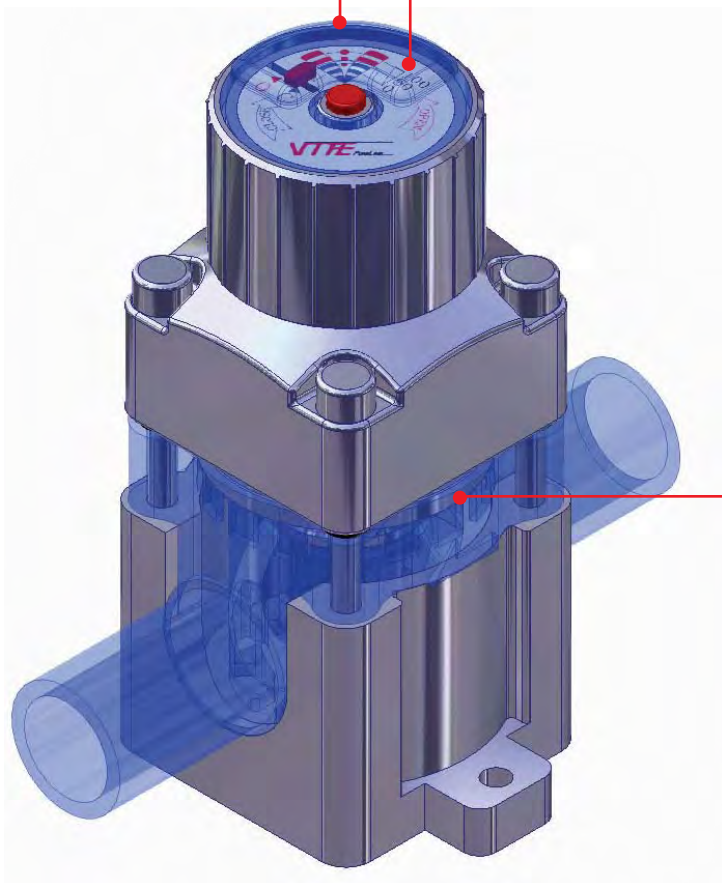
특징 (Features)



On/Off/시 조작이 용이하도록 Handle 크기 및 모양을 설계
Design of type for easy control at ON/OFF.



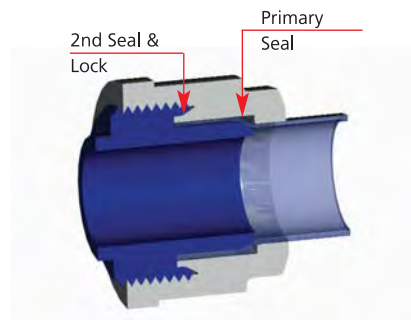
식별이 용이한
- Position Indicator
- Arrow 작동
- 눈금표시로 On/Off양 표현 실현
Unique and Easy
- Position Indicator at ON/OFF.
- Display arrow at Open/Close.
- Display of flow line at ON/OFF.



Bonnet 및 Orifice 측의 완벽한 seal 구조
Unique seat seal design of orifice and bonnet structure.



Modified PTFE로 제작 및 N.C 가공으로 균일한 품질 및 안정성 유지
Assured quality and safety by modified PTFE molding machining NC.

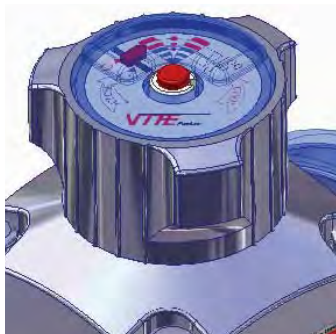


Double Seal(Union Type) 구조
- 1차 접점 Seal, 2차 면 접촉 Seal로 기밀 유지
- 과체결 방지
- 10 페이지를 참조하십시오
Double Seal(Union Type) system
Primary and Secondary seal structure and None over locking by design nuts.
Please see 10 Page.

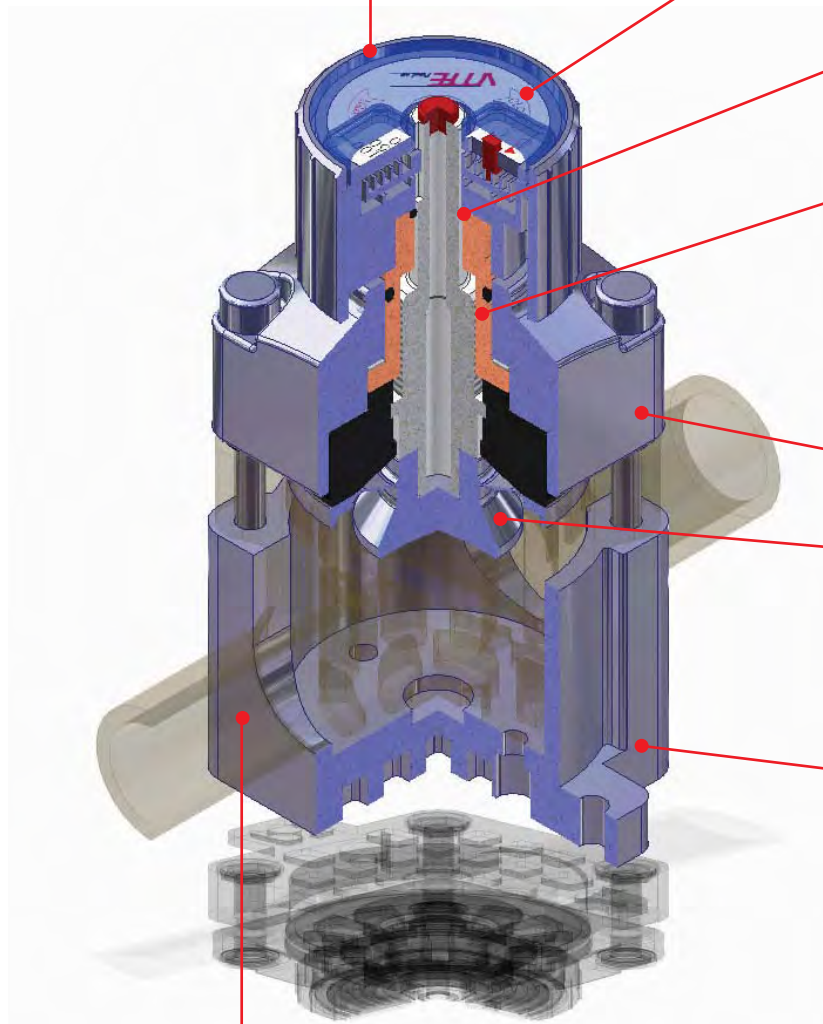


눈 관리 (Union Type)
- 접속 체결관이 진동, 임의적으로 회전시
- 풀림여부 정도를 육안으로 확인 가능
- 10 페이지를 참조하십시오
Eye Marking (Union Type)
Easy visual checking of loose nuts on fitting by vibration or others mis operation.
Please see 10 Page.

주요부품 구성도 (Composition of Major Parts)



- **Handle Part**
 - On/Off시 조작에 용이한 크기 및 모양으로 설계
 - Operator의 조작 및 관리에 용이한 눈관리 기능 (On/off/I Arrow의 움직임으로 확실한 개폐실행)
 - 좌측 그림 25A 기준
 - 아래 그림 25A 기준
 - Mat'l : PP+G/F
- Special design for easy handle control.
Easy checking by visual option (meet to open/close by arrow mark moving at ON/OFF)
Left, 25A V/
Below, 20A V/V



- **Gauge Cover**
 - 외부로부터 Fume 유입 방지
 - Mat'l : PC

Prevent performance of toxic fume from outside.
- **O-Ring**
 - 2차 Fume 유입방지 및 Leak시 외부로 액 유출 방지
 - Mat'l : Viton

Prevent performance of toxic fume from inside.
- **Sleeve**
 - 부식 및 경도가 강한 PVDF로 성형 제작 유연한 Handle 작동 및 금속 오염 방지
 - Mat'l : PVDF

Be capable of smooth handle operate by pvdf with anti corrosion and good friction hardness.
- **Bonnet**
 - Mat'l : PP+G/F
- **PTFE Diaphragm**
 - Modified PTFE로 제작 수명이 길며 사용에 안정성 유지

Modified PTFE Molding & machining NC.
- **Mounting**
 - Bonnet, Body, PTFE Diaphragm과 하부의 Mounting이 조립되는 구조로 Sealing 안정성 및 Body측 보강 역할을 동시에 유지하는 구조
 - Mat'l : PP+G/F

Acquired of quality both safety sealing and support of body side That structure of assembly state through bonnet, body, diaphragm with mounting.

- **Body**
 - 금속오염과 용출이온으로부터 안전한 High grade PFA 적용

Applied of H.P grade PFA

재 질 구 성 (Materials Composition)

1. Body	High Grade PFA
2. Diaphragm	Modified PTFE
3. Bonnet	PP+G/F
4. Mounting	PP+G/F
5. Handle	PP+G/F
6. Gauge cover	PC
7. Compressor	PPS
8. Spindle	PVDF
9. Sleeve	PVDF
10. Bolt/Washer	SUS304
11. Bolt Cap	LDPE
12. Others	Viton, PP

Bonnet 볼트 Torque (Torque valve at bonnet joint)



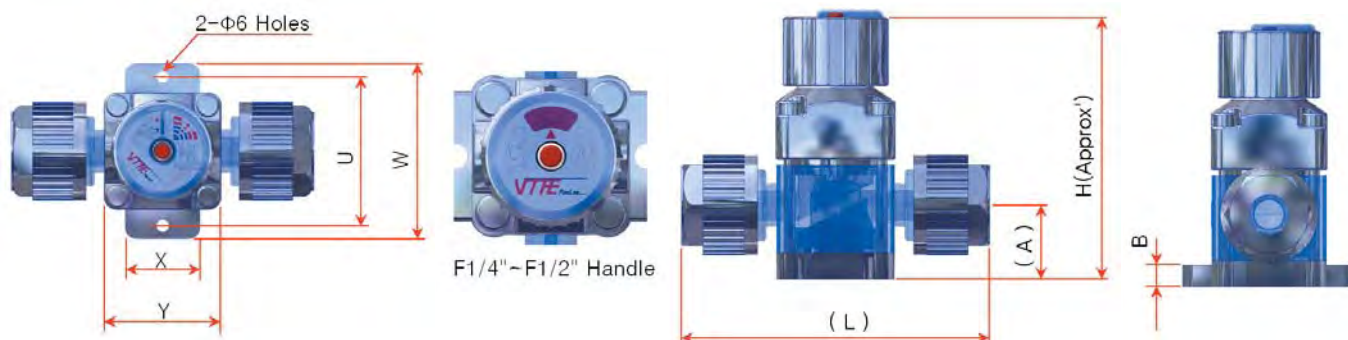
Product Size	Bolt Size	Torque - Nm
F 1/4", 3/8"	M4	2
F 1/2"	M4	2
F 3/4"	M5	4
F 1"	M5	4.5
P15A	M5	4
P20A	M5	4.5
P25A	M6	5

상기 값은 참조 Data 입니다.
Above data is reference value.

Ordering information

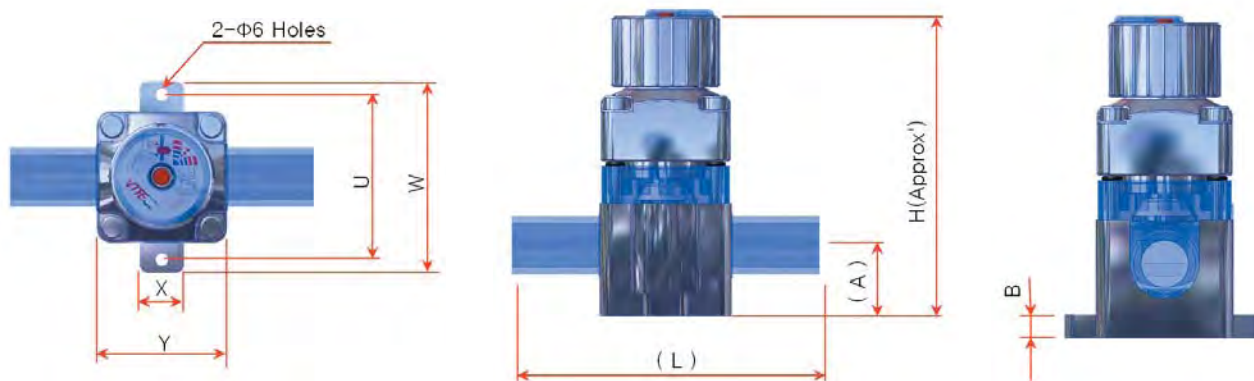
Example : PLSMV		Inlet & Outlet
		F 08
		Inlet
		F 08
		Outlet
		F 08
Connection Type		Connection Size
Tube Flaring	F	04 Tube Size 1/4"
Pipe Welding	P	06 Tube Size 3/8"
		08 Tube Size 1/2"
		12 Tube Size 3/4"
		16 Tube Size 1"
		15 Pipe Size 15A
		20 Pipe Size 20A
		25 Pipe Size 25A

Part Number & Dimension Table



Unit : mm

Part Number	Orifice	A	B	H	L	U	W	X	Y	Weight (Kg)
PLSMV-F04	3.1	22	8	89	100	46	56	31	36	0.2
PLSMV-F06	6	22	8	89	105	46	56	31	36	0.23
PLSMV-F08	8	24	8	92	123	49	62	31	39	0.29
PLSMV-F12-F08	14.2	34	10	122	142	69	84	36	55	0.57
PLSMV-F12	14.2	34	10	122	142	69	84	36	55	0.58
PLSMV-F16	20.5	32	10	136	156	74	86	20	58	0.74



Unit : mm

Part Number	Orifice	A	B	H	L	U	W	X	Y	Weight (Kg)
PLSMV-P15	14.2	34	10	122	135	69	84	36	55	0.44
PLSMV-P20	20.5	32	10	136	138	74	86	20	58	0.5
PLSMV-P25	26.2	43	10	165	151	85	97	20	70	0.81

- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

High-Purity PureLine Valve System

The World Best Knowledge Provider's

Large Flow Rate Series



PFA 1-1/2" Manual 2-Way Valve



제 품 소 개 (Product Overview)



- 퓨어라인 PFA 1-1/2" Manual Diaphragm Valve는 독특한 시트씰과 체결구조로 고순도 반도체 약액 라인에 사용 가능하며 특히 대용량 유량 공급이 요구되는 배관 및 장비에 적용 할수 있다.
- 접촉면은 순수 PFA와 순수 PTFE로 구성 되어있어 금속오염과 용출이온으로 부터 최고의 내화학성을 갖는다.
- 특히 PTFE Diaphragm은 이중으로 구성되어 있어 내구성이 우수하다.

PureLine PFA 1-1/2" manual diaphragm valves with their unique seat seal and conjuctive nuts are verified for use in high purity semiconductor TFT LCD application. And its especially be capable of carrying to large volume chemicals to their Unit and Line.

Inside PTFE diaphragm seat and PFA body of valve is designed for most chemical resistance from metallic contamination and ionic etc.

And assured to reliability of PTFE diaphragm seat by double step design.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²
Max' operation pressure
최고 사용 온도 : 90 deg C
Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²
Leakge test pressure
정방향의 압력 : 7 kg/cm²
Flow direction pressure
역방향의 압력 : 5 kg/cm²
Back direction pressure

3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
F 1-1/2"	23	Tube Flaring

특허 및 의장 등록 (Intellectual)

- 대구경 매뉴얼 밸브의 구조 설계 특허출원 의장 등록 (의장 : 제 0389870 호)
- 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)
- 매뉴얼밸브의 몸체와 다이어프램구조설계(실용신안 : 제 0395463 호)
Large diameter manual valve patent and Design register (Design No : 0389870)
The structure of joint seal system for fitting and connection (Patent No : 0478754)
The structure and design of solid valve body and its design (Utility model register No : 0395463)

특징 (Features)



On/Off시 조작이 용이하도록 Handle 크기 및 모양을 설계
Design of type for easy control at ON/OFF.



식별이 용이한
- Position Indicator
- Arrow 작동
- 눈금표시로 On/Off양 표현 실현
Unique and Easy
- Position Indicator at ON/OFF.
- Display arrow at Open/Close.
- Display of flow line at ON/OFF.

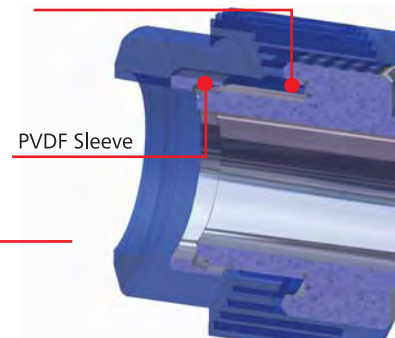


눈 관리
- 접속 체결관이 진동, 임의적으로 회전시
- 풀림여부 정도를 육안으로 확인 가능
- 10 페이지를 참조하십시오

Eye Marking

Easy visual checking of loose nuts on fitting by vibration or others mis operation.
Please see 10 Page.

2nd seal & Lock



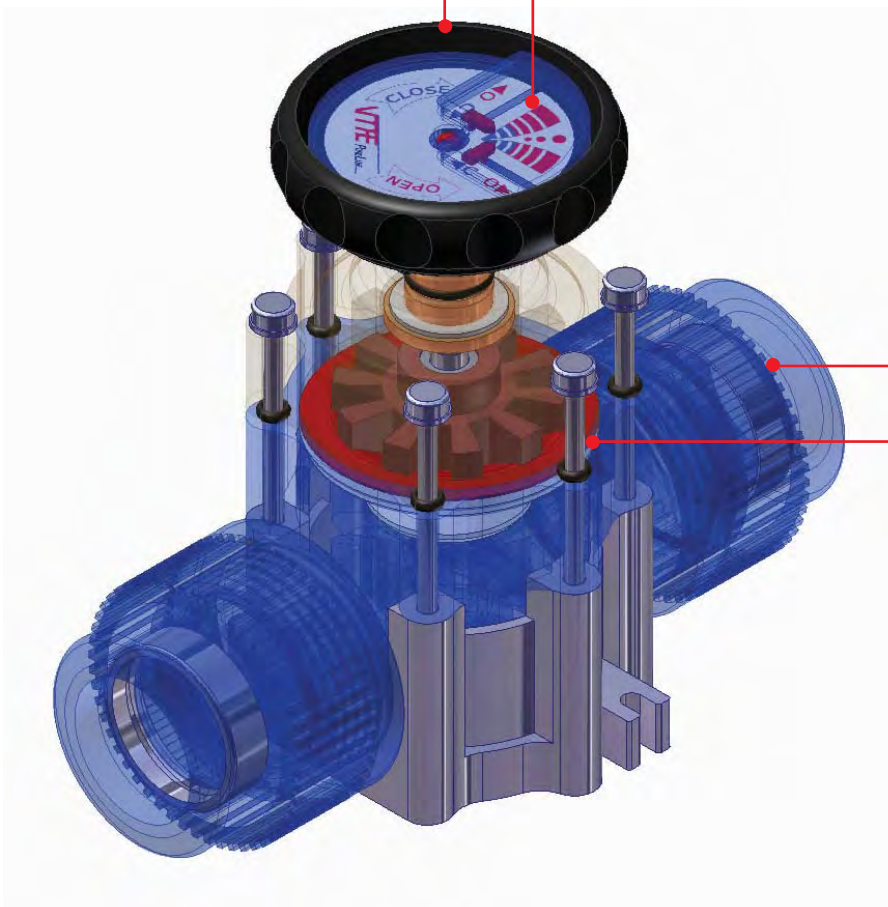
PVDF Sleeve

접속방식

- PFA Tube 확장방식
- 1차, 2차 Seal 구성으로 No Leak
- PVDF Sleeve Ring 삽입으로 PFA Tube의 이탈방지 및 확실한 Seal 실현
- 10 페이지를 참조하십시오

Fitting connection

- Applied tube flaring.
- Applied double seal system.
- Assured reliable seal by PVDF sleeve ring.
Please see 10 Page.



Diaphragm

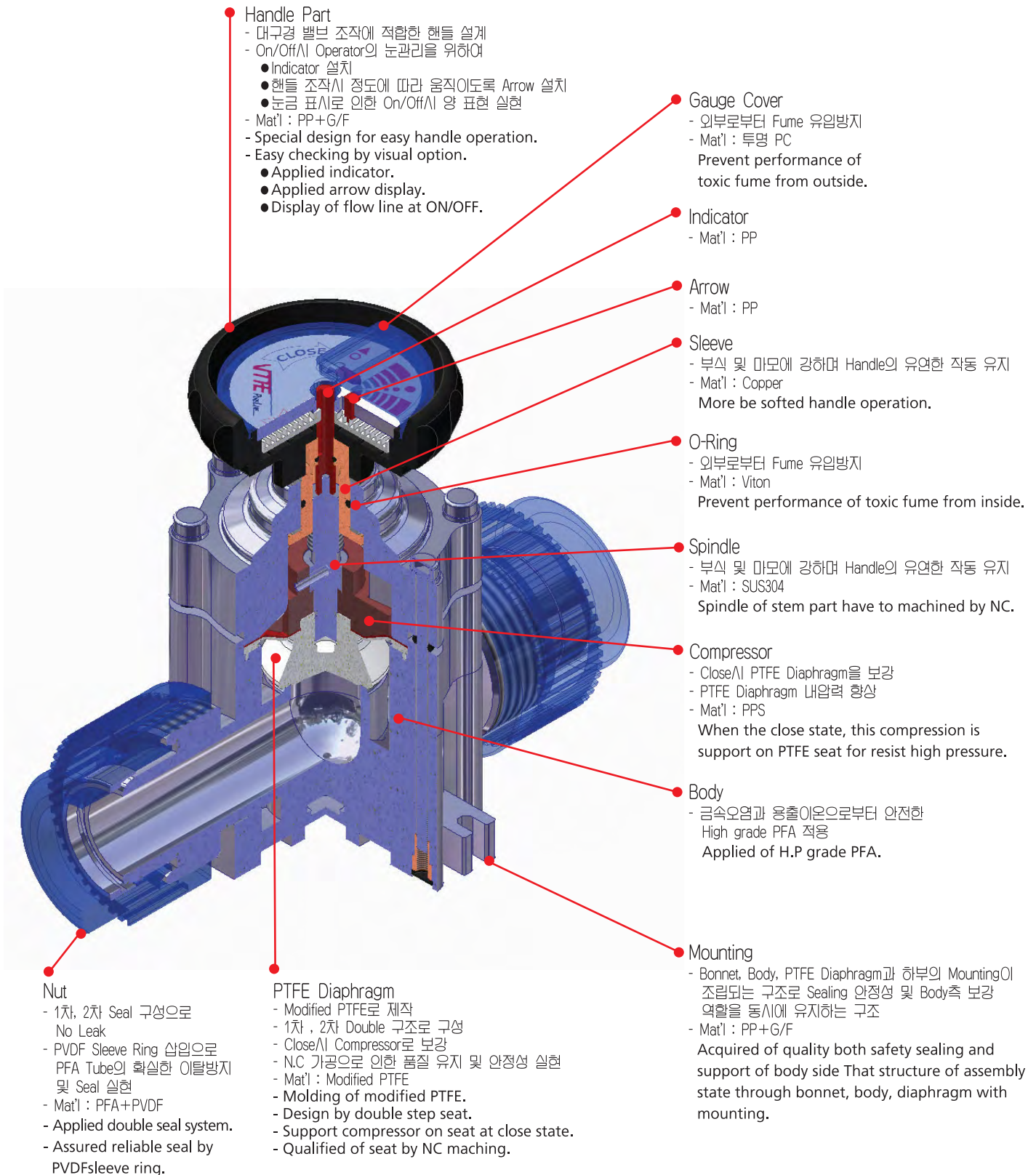
- Modified PTFE로 제작
- 1차, 2차 Double 구조로 구성
- Close/I Compressor로 보강
- NC 가공으로 인한 품질 유지 및 안정성 실현



Diaphragm

- Molding of modified PTFE.
- Design by double step seat.
- Support compressor on seat at close state.
- Qualified of seat by NC machining.

주요부품 구성도 (Composition of Major Parts)



재 질 구 성 (Materials Composition)

1. Body	High Grade PFA
2. Diaphragm	Modified PTFE
3. Bonnet	PP+G/F
4. Mounting	PP+G/F
5. Handle	PP+G/F
6. Gauge cover	PC
7. Compressor	PPS
8. Spindle	SUS304
9. Sleeve	Copper
10. Bolt/Washer	SUS304
11. Bolt Cap	LDPE
12. Others	Viton, PP

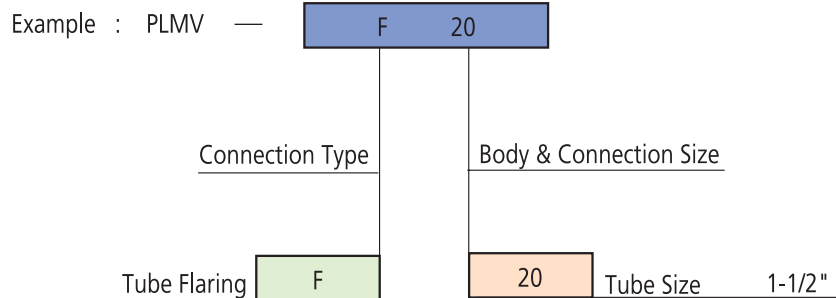
Bonnet 볼트 Torque (Torque valve at bonnet joint)



Product Size	Bolt Size	Torque - Nm
F 1-1/2"	M5	3.5

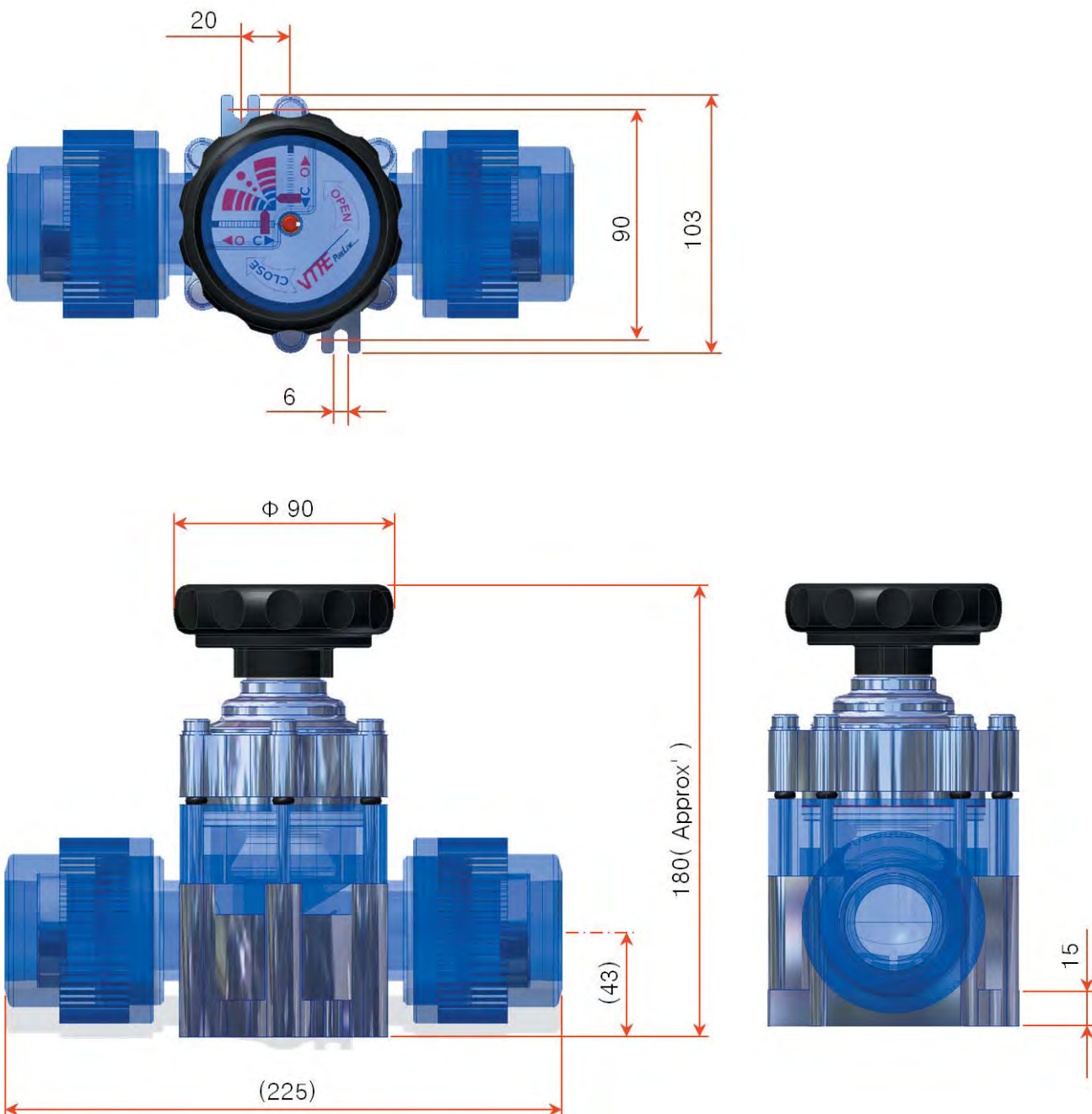
상기 값은 참조 Data 입니다.
Above data is reference value.

Ordering information



Dimension Table

(Part No. : PLMV-F20), Weight - 1.96 Kg

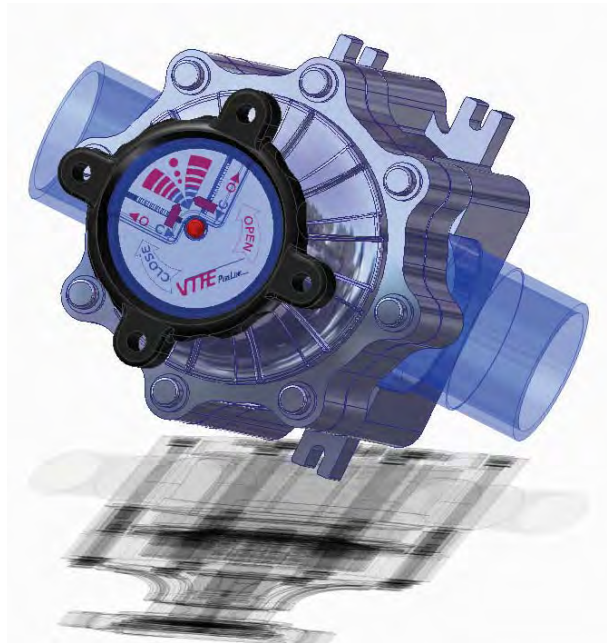


- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

High-Purity PureLine Valve System

The World Best Knowledge Provider's

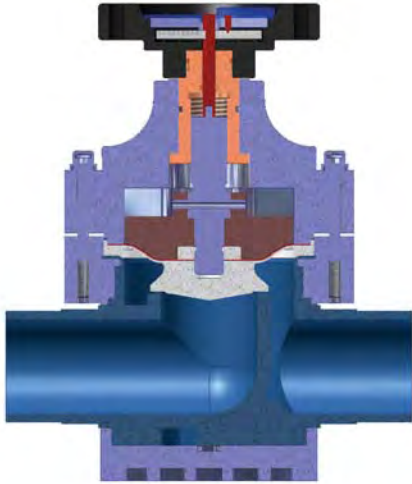
Large Flow Rate Series



PFA 40A & 50A Manual 2-Way Valve



제품 소개 (Product Overview)



- 퓨어라인 PFA 40A, 50A 2-Way Manual Diaphragm Valve는 독특한 시트셀과 체결구조로 고순도 반도체 약액 라인에 사용 가능하며 특히 대용량 유량 공급이 요구되는 배관 및 장비에 적용 할수 있다.
- 접촉면은 순수 PFA와 순수 PTFE로 구성 되어있어 금속오염과 용출이온으로 부터 최고의 내화학성을 갖는다.
- 특히 PTFE Diaphragm은 이중으로 구성되어 있어 내구성이 우수하다.

PureLine PFA 40A,50A manual diaphragm valves with their unique seat seal and conjuctive nuts are verified for use in high purity semiconductor TFT-LCD application. And its especially be capable of carrying to large volume chemicals to their Unit and Line.

Inside PTFE diaphragm seat and PFA body of valve is designed for most chemical resistance from metallic contamination and ionic etc.

And assured to reliability of PTFE diaphragm seat by double step design.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 6 kg/cm²
Max' operation pressure
최고 사용 온도 : 100 deg C
Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²
Leakge test pressure
정방향의 압력 : 7 kg/cm²
Flow direction pressure
역방향의 압력 : 6 kg/cm²
Back direction pressure

3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
P40A	40	Pipe Welding
P50A	60	Pipe Welding

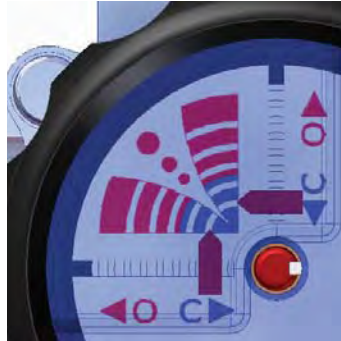
특허 및 의장 등록 (Intellectual)

- 대구경 매뉴얼 밸브의 구조 설계 특허출원 의장 등록 (의장 : 제 0389870 호)
- 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)
- 매뉴얼밸브의 몸체와 다이어프램구조설계(실용신안 : 제 0395463 호)
- Large diameter manual valve patent and Design register (Design No : 0389870)
- The structure of joint seal system for fitting and connection (Patent No : 0478754)
- The structure and design of solid valve body and its design (Utility model register No : 0395463)

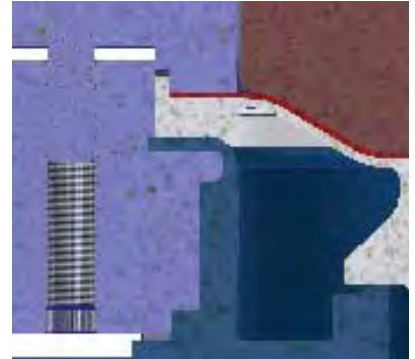
특징 (Features)



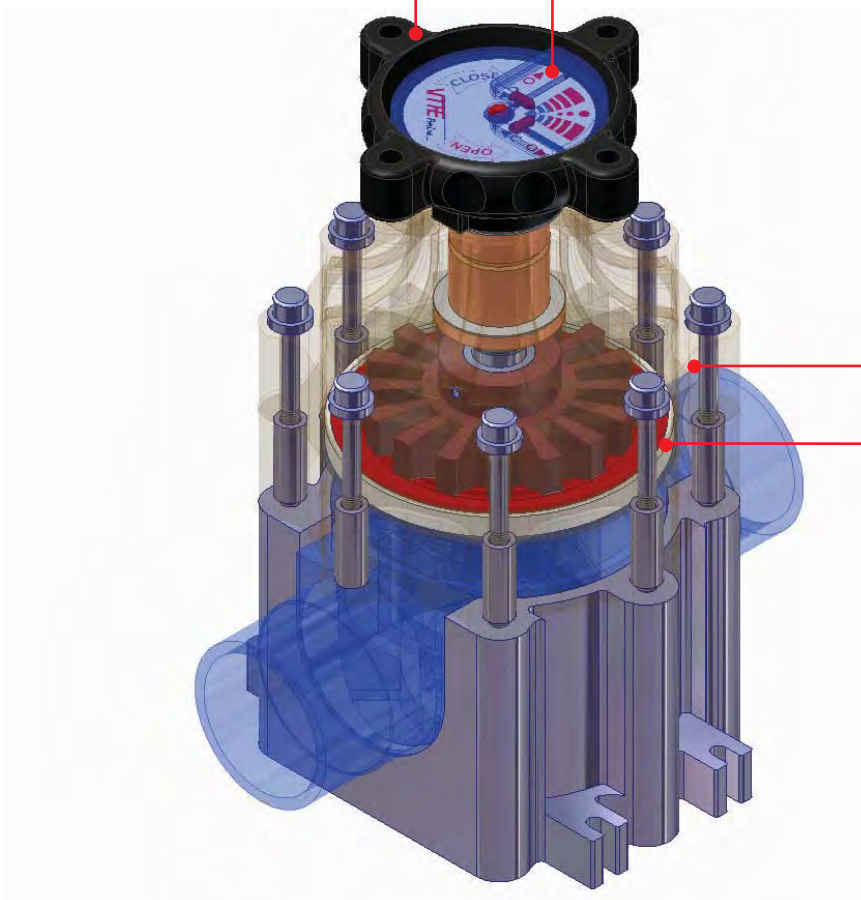
On/Off시 조작이 용이하도록 Handle 크기 및 모양을 설계
Design of type for easy control at ON/OFF.



식별이 용이한
- Position Indicator
- Arrow 작동
- 눈금표시로 On/Off양 표현 실현
Unique and Easy
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- Display of flow line at ON/OFF.

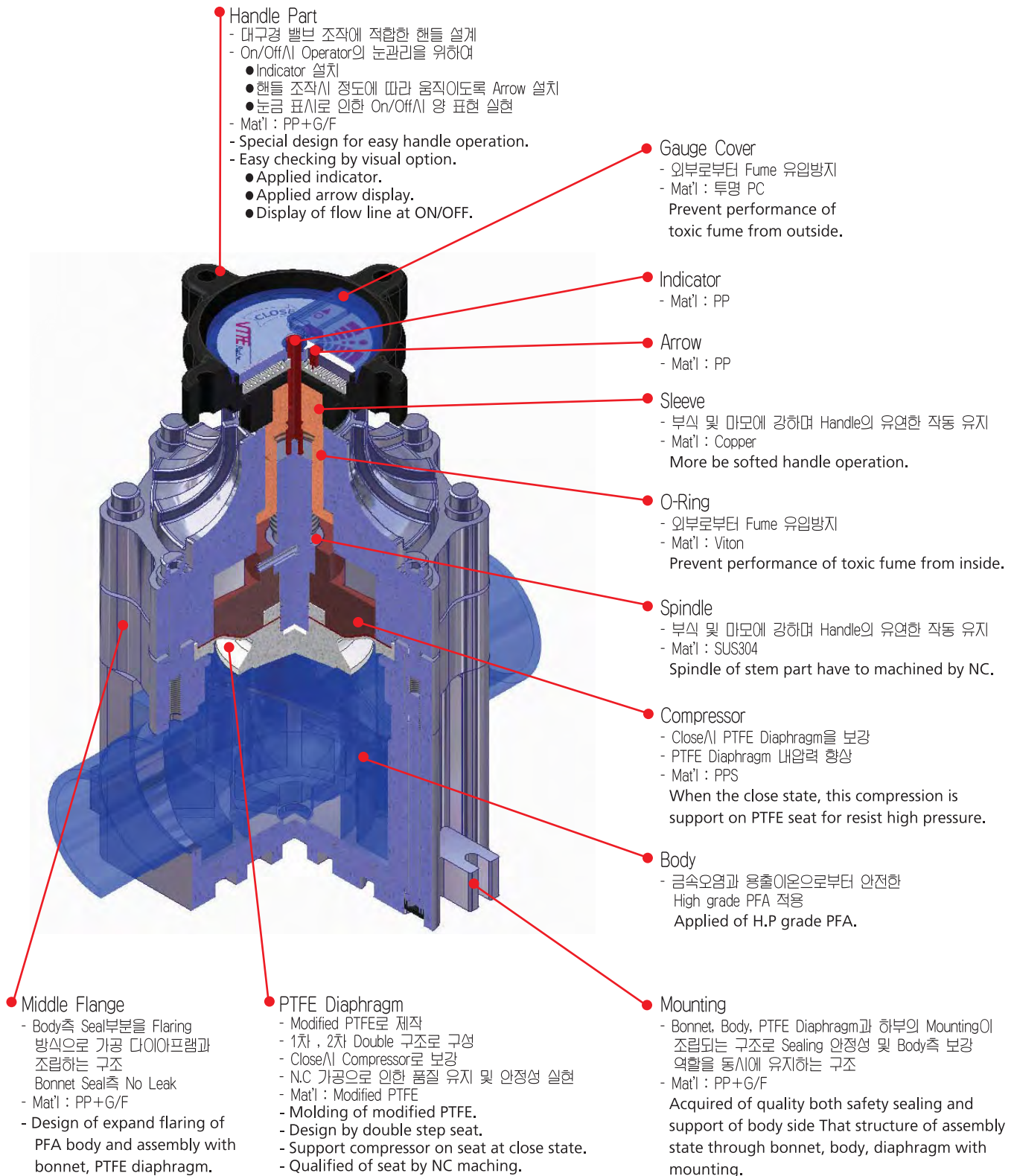


Bonnet Seal
- 기존 밸브와 차별화된 Seal 방식 No Leak
- Body측 Seal부분을 Flaring 방식으로 처리
다이하프램과 조립하는 구조
Applied of design seal on bonnet and body distinguish compare to current valve.
Design of expand flaring of PFA body and assembly with bonnet, PTFE diaphragm.



Diaphragm
- Modified PTFE로 제작
- 1차, 2차 Double 구조로 구성
- Close시 Compressor로 보강
- NC 가공으로 인한 품질 유지 및 안정성 실현
- Molding of modified PTFE.
- Design by double step seat.
- Support compressor on seat at close state.
- Qualified of seat by NC machining.

주요부품 구성도 (Composition of Major Parts)



재 질 구 성 (Materials Composition)

1. Body	High Grade PFA
2. Diaphragm	Modified PTFE
3. Bonnet	PP+G/F
4. Mounting	PP+G/F
5. Handle	PP+G/F
6. Gauge cover	PC
7. Compressor	PPS
8. Spindle	SUS304
9. Sleeve	Copper
10. Bolt/Washer	SUS304
11. Bolt Cap	PP, LDPE
12. Others	Viton, PP

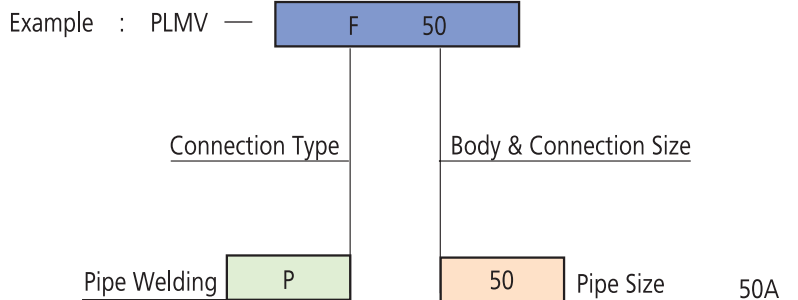
Bonnet 볼트 Torque (Torque valve at bonnet joint)



Product Size	Bolt Size	Torque - Nm
P40A	M6	7
P50A	M6	7

☞ 상기 값은 참조 Data 입니다.
 Above data is reference value.

Ordering information

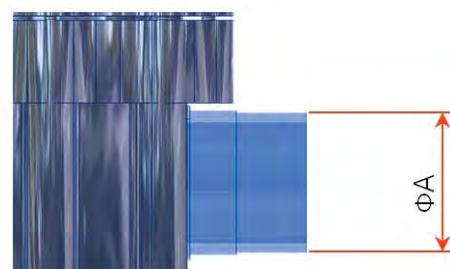
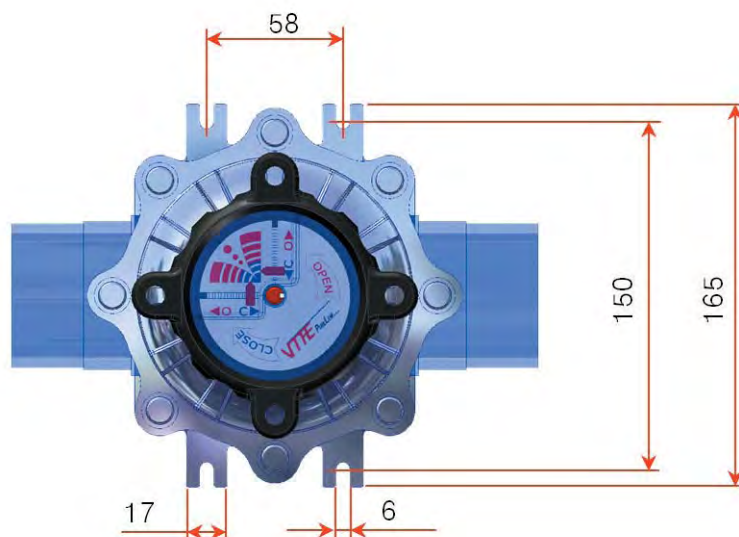


Dimension Table

(Part No. : PLMV-P40, PLMV-P50), Weight - 3.8 Kg

Unit : mm

Size	Connection	
	ØA(O.D)	Th'k
P40	50.5	3.7
P50	60.3	4.1



Connection Pipe Size



- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

High-Purity PureLine Valve System

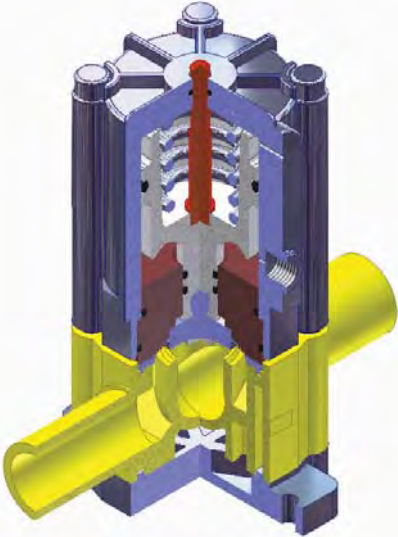
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PFA Pneumatic 2-Way Valve



제품 소개 (Product Overview)



- 고순도 반도체 및 LCD의 공급약품을 이송연결시키는 라인의 제어변으로 사용된다.
- 접액면은 순수 PFA와 순수 PTFE로 이루어져 금속오염과 용출이온으로부터 최고의 내화학적성을 갖는다.
- PTFE Diaphragm은 최적의 설계로 제작, 가공 되었으며 얇은 막의 두께로도 높은 내압에도 이상이 없는 구조이다.
- PTFE Diaphragm은 자사에서 내구성 2,000,000cycle test를 실시하였으며 품질 보증 cycle은 300,000 입니다.
- Union type의 Seal부분은 이중씼(Double Seal)구조의 피팅연결이 밸브의 접속부 기밀을 보증하며 눈관리의 적색표시 체크링이 너트의 풀림을 사전에 확인 할수 있다.

PureLine PFA pneumatic valve are verified for use in high purity semiconductor, TFT-LCD application.

Inside PTFE diaphragm seat and PFA body of valve is designed for most chemical resistance from metallic contamination and ionic etc.

The diaphragm seat of modified PTFE is ideally suited for use in high pressure even though the thickness of seat is thin. Pureline had completed reliable test for PTFE diaphragm, 2 million cycle. And Quality assurance cycle life is certified 300,000 cycle times.

The union type fitting seal is structure of double seal system. This is assured to leakage of fitting connection and capable to check of loose nuts by red arrow marking before accident.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²

Max' operation pressure

최고 사용 온도 : 90 deg C

Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²

Leakge test pressure

정방향의 압력 : 5 kg/cm²

Flow direction pressure

역방향의 압력 : 5 kg/cm²

Back direction pressure

3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
F1/4"	0.24	Tube Flaring
F3/8"	0.6	Tube Flaring
F1/2"	1.2	Tube Flaring
F3/4"	4	Tube Flaring
F1"	6.7	Tube Flaring
F1-1/2"	23	Tube Flaring
P15A	4	Pipe Welding
P20A	6.7	Pipe Welding
P25A	14.5	Pipe Welding
P40A	40	Pipe Welding
P50A	60	Pipe Welding

특허 및 의장 등록 (Intellectual)

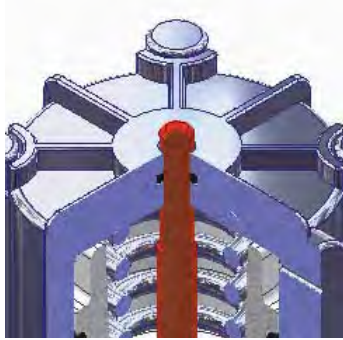
■ 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)

■ 매뉴얼밸브의 몸체와 다이어프램구조설계(실용신안 : 제 0395463 호)

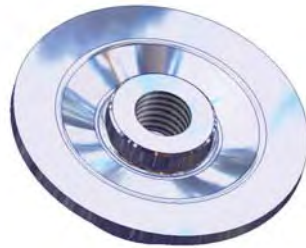
The structure of joint seal system for fitting and connection (Patent No : 0478754)

The structure and design of solid valve body and its design (Utility model register No : 0395463)

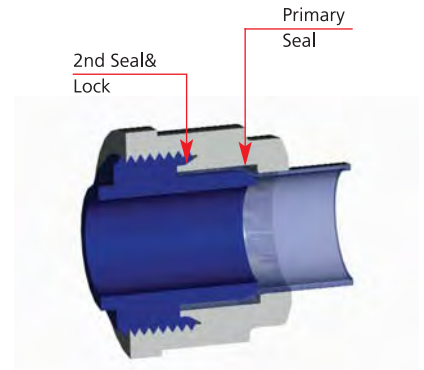
특징 (Features)



On/Off/I Spindle의 상.하 작동으로
식별 용이
Easy visual indicate at ON/OFF
by spindle operation.



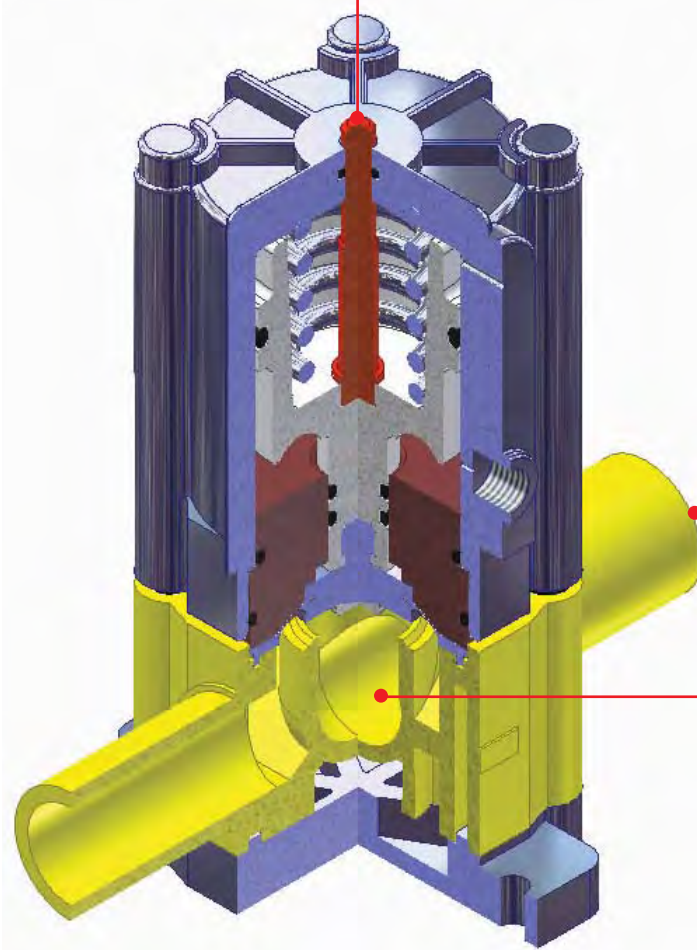
Modified PTFE로 성형 및 N.C 가공으로 균일한
품질, 안정성 유지
Assured quality and safety by modified
PTFE molding, machining NC.



Double Seal(Union Type) 구조
- 1차 접점 Seal, 2차 면 접촉 Seal로 기밀 유지
- 과체결 방지
- 10 페이지를 참조하십시오
Double Seal(Union Type) system
Primary and Secondary seal structure and
None over locking by design nuts.
Please see 10 Page.

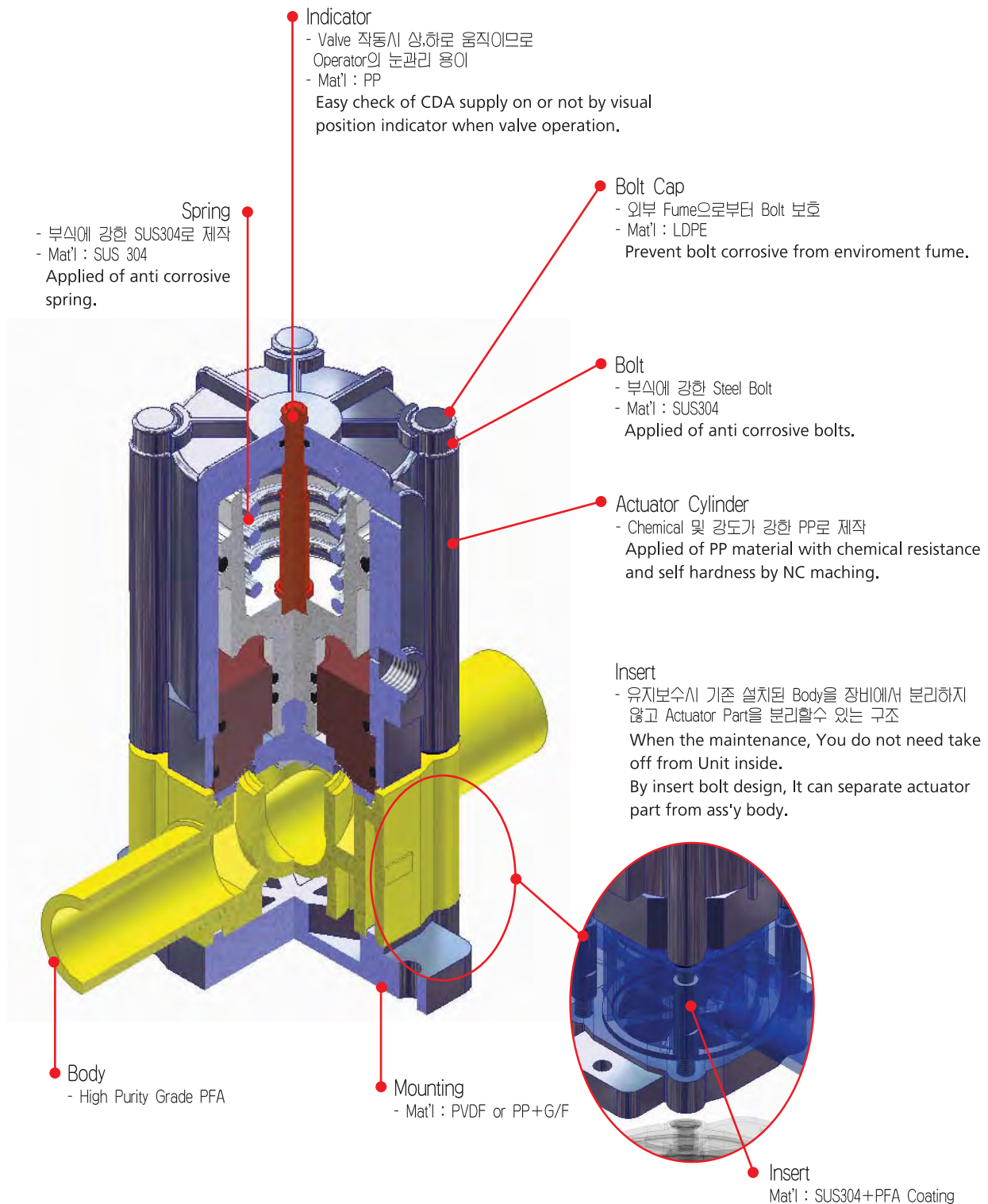


눈 관리 (Union Type)
- 접촉 체결관이 진동, 임의적으로 회전시
폴리머부 정도를 육안으로 확인 가능
- 10 페이지를 참조하십시오
Eye Marking (Union Type)
Easy visual checking of loose nuts on fitting
by vibration or others mis operation.
Please see 10 Page.



다이아프램 시트셀과 몸체 설계에 의한 누수방지
Unique seat seal design and structure of
body.

주요부품 구성도 (Composition of Major Parts)



재 질 구 성 (Materials Composition)

1. Body	High Grade PFA
2. Diaphragm	Modified PTFE
3. Actuator Cylinder	PP
4. Piston	PP
5. Indicator	PP
6. Compressor	PP
7. Spring	SUS304+PFA Coating
8. Mounting	PVDF or PP+G/F
9. Bolt/Washer	SUS304
10. Bolt Cap	LDPE
11. Others	Viton, PP

Bonnet 볼트 Torque (Torque valve at bonnet joint)



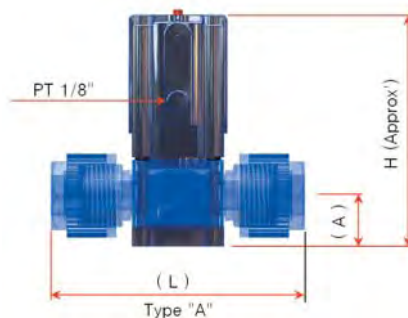
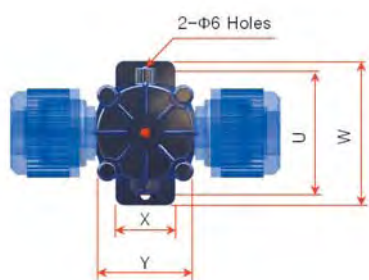
Product Size	Bolt Size	Torque - Nm
F 1/4", 3/8"	M4	2
F 1/2"	M4	2
F 3/4"	M5	4
F 1"	M5	4.5
P15A	M5	4
P20A	M5	4.5
P25A	M6	5

상기 값은 참조 Data 입니다.
Above data is reference value.

Ordering information

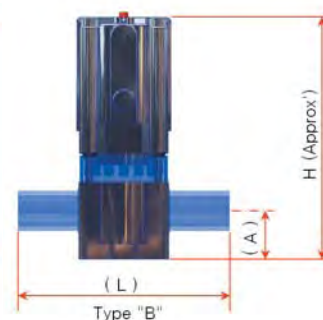
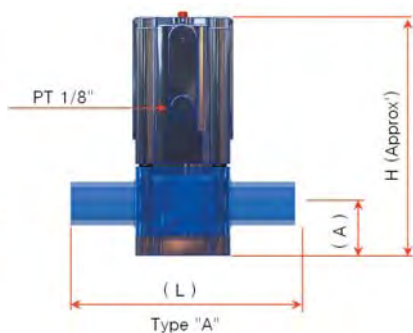
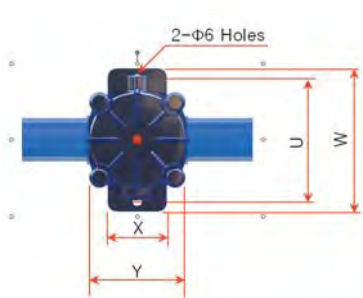
Example : PLPV		Inlet & Outlet			
		F	08		
		Inlet		Outlet	
		F	08	F 08	
		—			
		Connection Type		Connection Size	
Tube Flaring	F			04	Tube Size 1/4"
Pipe Welding	P			06	Tube Size 3/8"
				08	Tube Size 1/2"
				12	Tube Size 3/4"
				16	Tube Size 1"
				15	Pipe Size 15A
				20	Pipe Size 20A
				25	Pipe Size 25A

Part Number & Dimension Table



Unit : mm

Part Number	Orifice	Type	A	B	H	L	U	W	X	Y	Weight (Kg)
PLPV-F04	3.1	A	22	8	85	100	45	55	31	33	0.24
PLPV-F06	6	A	22	8	85	105	45	55	31	33	0.27
PLPV-F08	8	A	24	8	99	123	48	61	31	37	0.39
PLPV-F12-F08	14.2	A	34	10	140	142	68	83	35	54	0.8
PLPV-F12	14.2	A	34	10	140	142	68	83	35	54	0.85
PLPV-F16	20.5	A	32	10	148	158	74	86	36	58	1.1



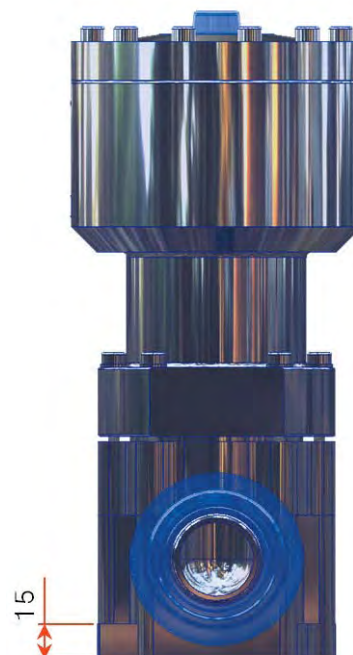
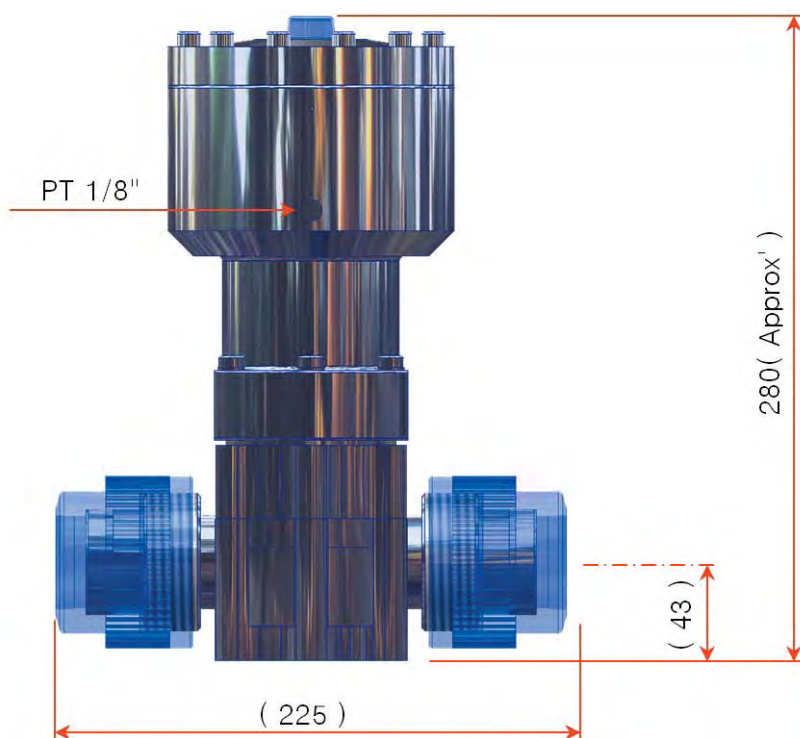
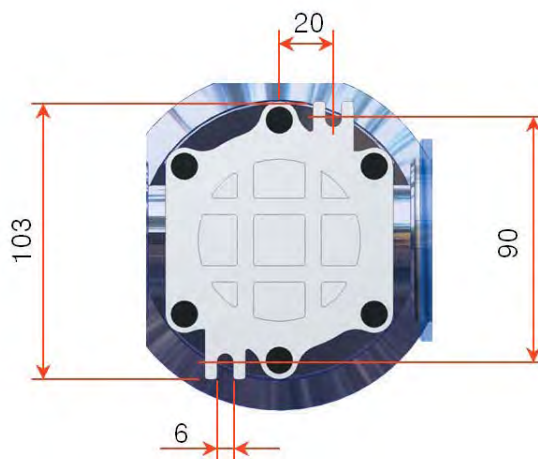
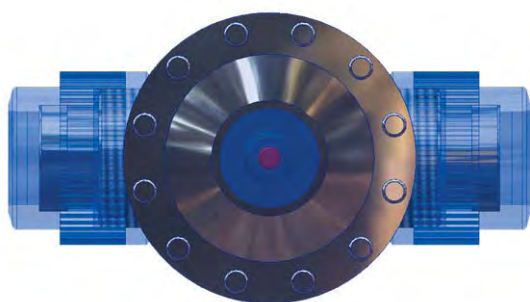
Unit : mm

Part Number	Orifice	Type	A	B	H	L	U	W	X	Y	Weight (Kg)
PLPV-P15	14.2	A	34	10	140	135	68	83	35	54	0.67
PLPV-P20	20.5	A	32	10	148	138	74	86	36	58	0.73
PLPV-P25	26.2	B	43	10	190	151	85	97	20	70	1.17

- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

Part Number & Dimension Table

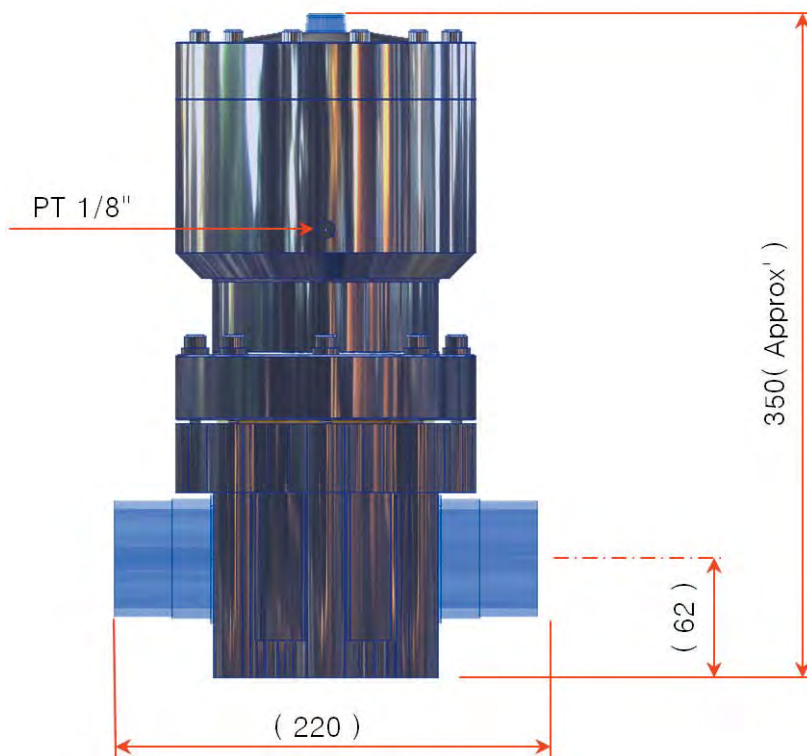
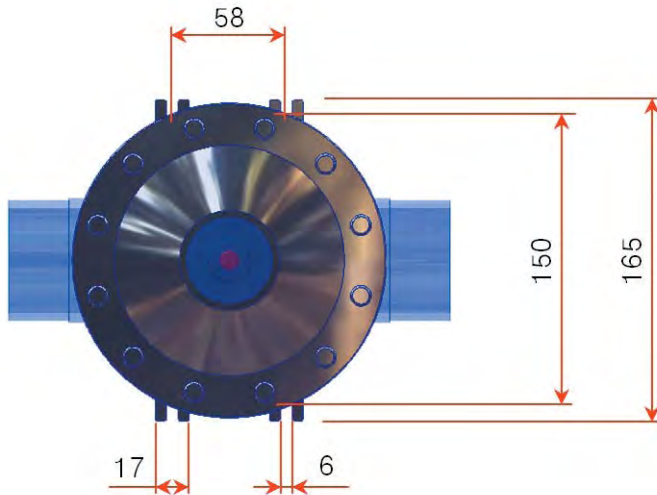
(Part No. : PLPV-F20), Weight - 3 Kg



- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
 Above all dimensions are for reference only.

Part Number & Dimension Table

(Part No. : PLPV-P40, PLPV-P50), Weight - 5.8 Kg

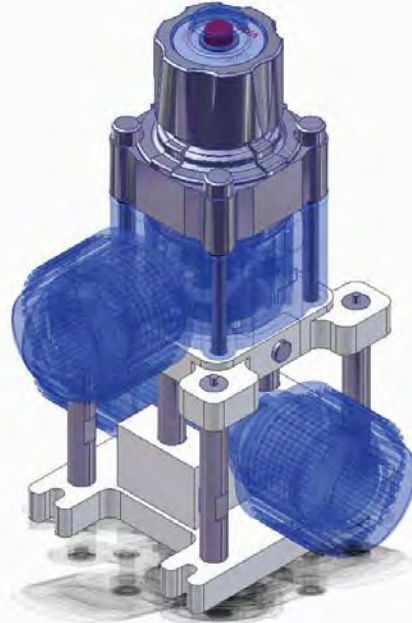
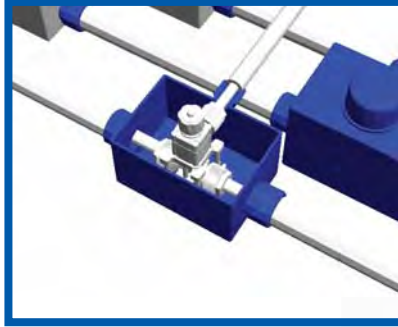


- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

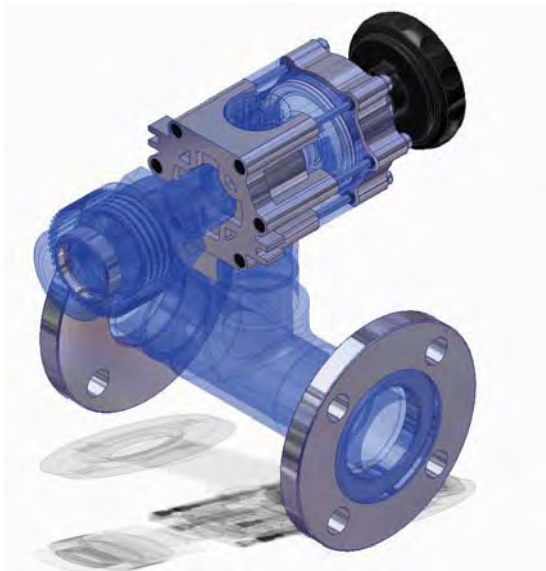
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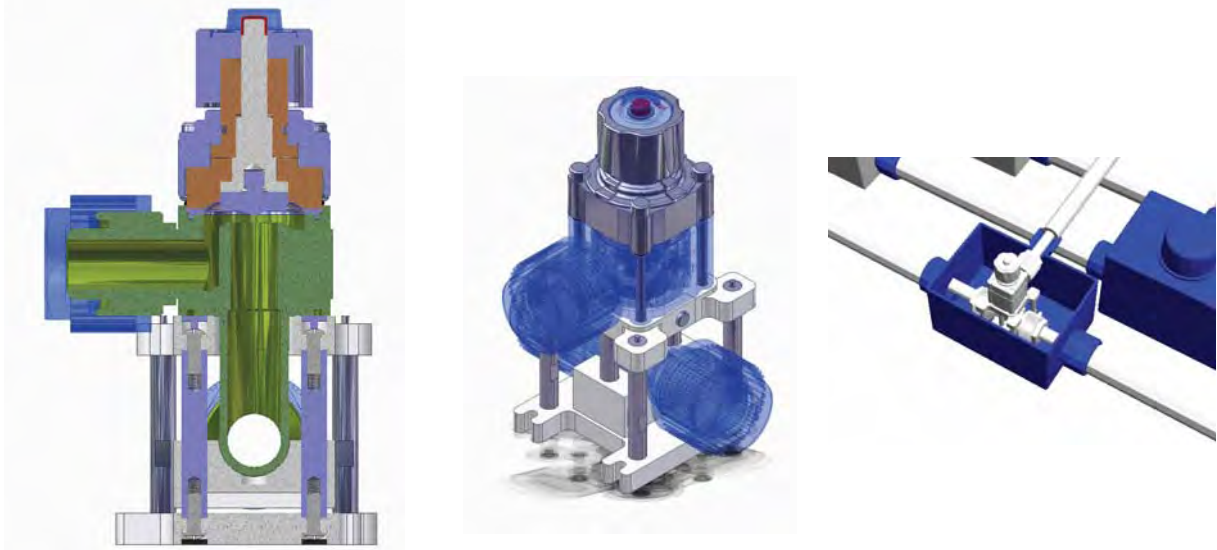
Tee Shut-Off



PFA TS Manual Operated Valve



제품 소개 (Product Overview)



- 고순도 반도체 및 LCD의 공급약품을 이송연결시키는 라인의 제어변으로 사용된다.
- 접액면은 순수PFA와 순수 PTFE로 구성되어 있어 금속오염과 용출이온으로부터 최고의 내화학성을 갖는다.
- TS Valve는 동일한 위치 및 공간에서 복수의 라인연결이 가능하다.
- 기존의 배관구성을 단순화하여 비용절감 및 누수 Point를 축소 관리 항목이 줄어들어 안정성 확보에 획기적인 제품이다.

PureLine PFA TS valve are verified for use in high purity semiconductor and TFT-LCD application.

Inside PTFE diaphragm seat and PFA body of valve is designed for most chemical resistance from metallic contamination and ionic etc.

TS valve is capable to two lines connection at same position and space.

compare to current valve, TS valve is more economise by cost down, cause of simple designed Line and reduce to leakage point than current line composition.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²

Max' operation pressure

최고 사용 온도 : 90 deg C

Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²

Leakge test pressure

정방향의 압력 : 7 kg/cm²

Flow direction pressure

역방향의 압력 : 5 kg/cm²

Back direction pressure

3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
F1/2", 3/4"	4	Tube Flaring
F1"	6.7	Tube Flaring
F1-1/2"	23	Tube Flaring

특허 및 의장 등록 (Intellectual)

■ 티에스밸브의 특허/의장 : (특허 : 제 0481802 호) (의장 : 제 0373648 호)

■ 일본 : 특허 심사중

■ 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)

■ (실용신안 : 제 0395463 호)

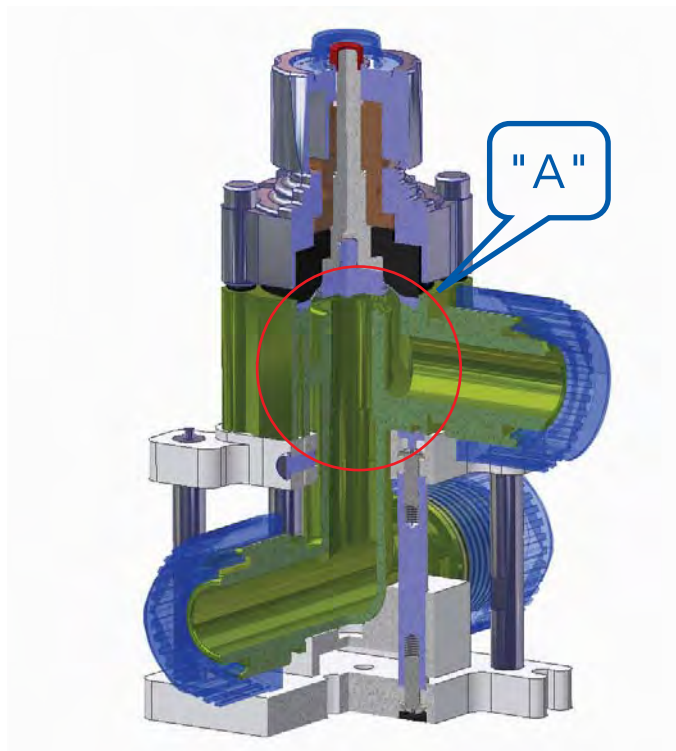
Issued patent and Design of TS valve - Patent No : 0481802 - Design No : 0373648

Patent issue to japan

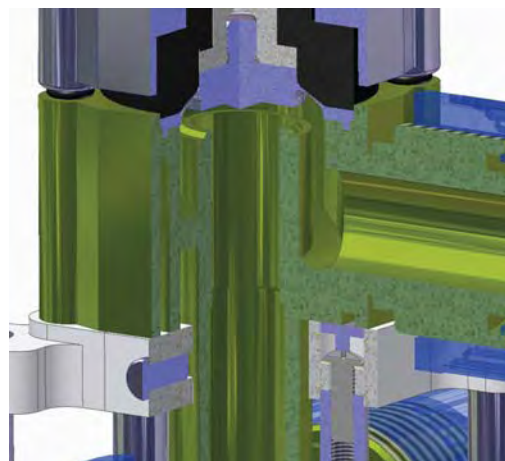
The structure of joint seal system for fitting and connection (Patent No : 0478754)

The structure and design of solid valve body and its design (Utility model register No : 0395463)

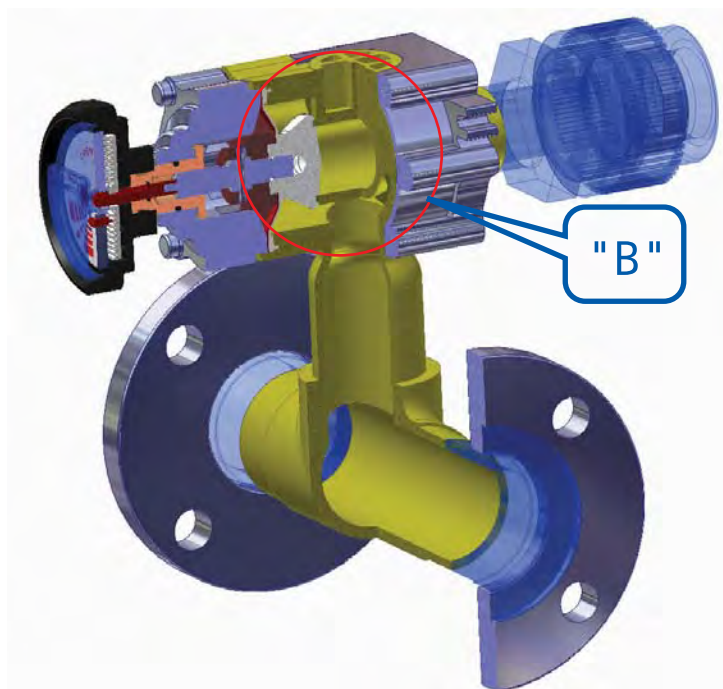
Size별 제품 구조 (Kinds of Product TS valve)



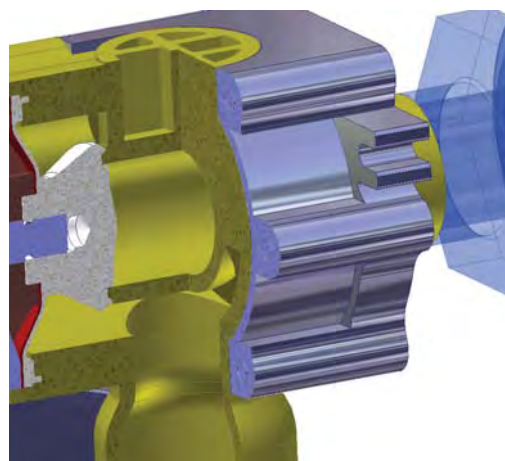
Section View - Line 1/2", 3/4", 1", 1-1/2"



Detail For "A"



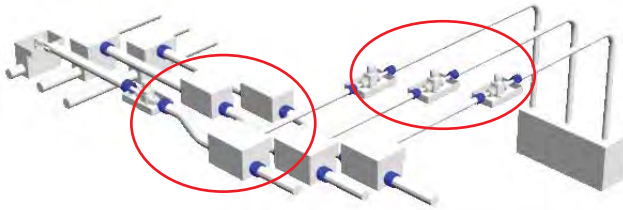
Section View - Line 2"



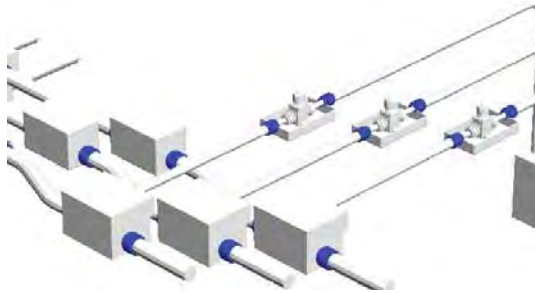
Detail For "B"

적용 전후 배관 (Compare to Line Design by TS Valve)

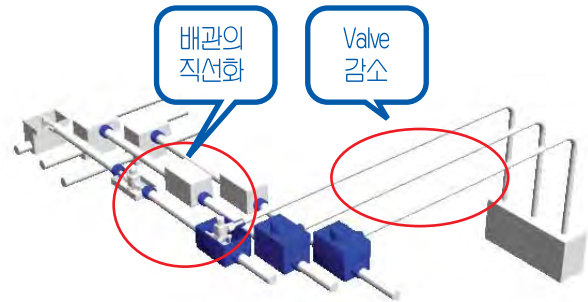
1. TS Valve 적용전 배관 구성도 (Current Line)



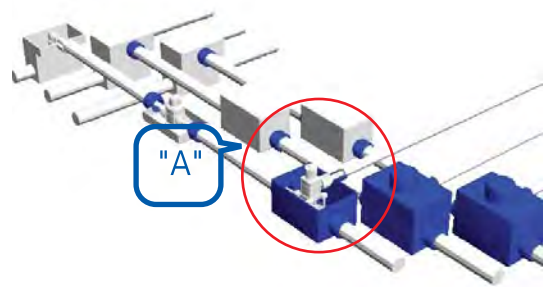
적용전 배관 상세 (Line Detail Before)



2. TS Valve 적용후 배관 구성도 (Modified Line by TS valve)



적용후 배관 상세 (Line Detail After)



적용시 장점 (Benefits)

- 배관구성의 단순화
- 유틸리티의 공간면적 활용도가 높다.
- 유형효과 (Visible Effect)
 - 비용절감 Cost reduction
 - 부품비 : Valve box, Valve & Fittings, Leak sensor, etc
 - 인건비 : Line Connection, control relay, test, etc
- 무형효과 (Invisible Effect)
 - Leak Point 감소 - 관리항목 축소 - 안전성 확보

Line Design is simplification.

Assured space for utility.

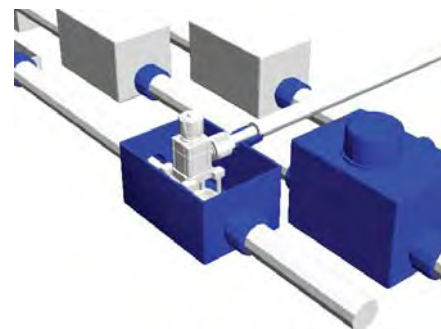
Visible Effect

Cost reduction

- Part cost : Valve box, Valve & Fittings, Leak sensor, etc...
- Labor cost : Line Connection, control relay, test , etc...

Invisible Effect

- Reduce of Leak point parts.
- Simplify maintenance and control.
- Reliable safety by less leak point.



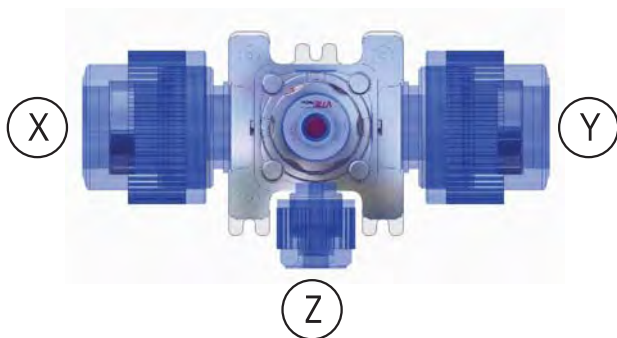
" A " Part detail (TS Valve)

재 질 구 성 (Materials Composition)

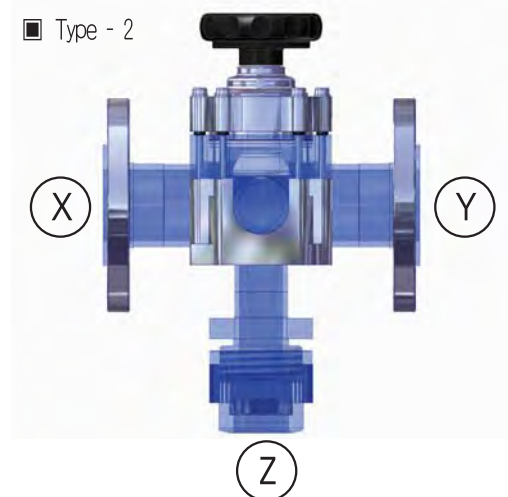
	Valve Body F 3/4", 1"	Valve Body F 1-1/2"
1. Body		High Grade PFA Modified PTFE
2. Diaphragm		
3. Bonnet	PVDF	PP+G/F
4. Mounting		PP+G/F
5. Handle	PVDF	PP+G/F
6. Gauge cover		PC
7. Compressor	PVDF	PPS
8. Spindle	PVDF	SUS304
9. Sleeve	PVDF	Copper
10. Support Bar	PP+G/F	SUS304+PFA Coating
11. Bolt/Washer		
12. Bolt Cap		
13. Others		SUS304 LDPE Viton, PP

Ordering information

■ Type - 1



■ Type - 2



Example : PLTSMV — X측
F 08 — Y측
F 08 — Z측
F 08

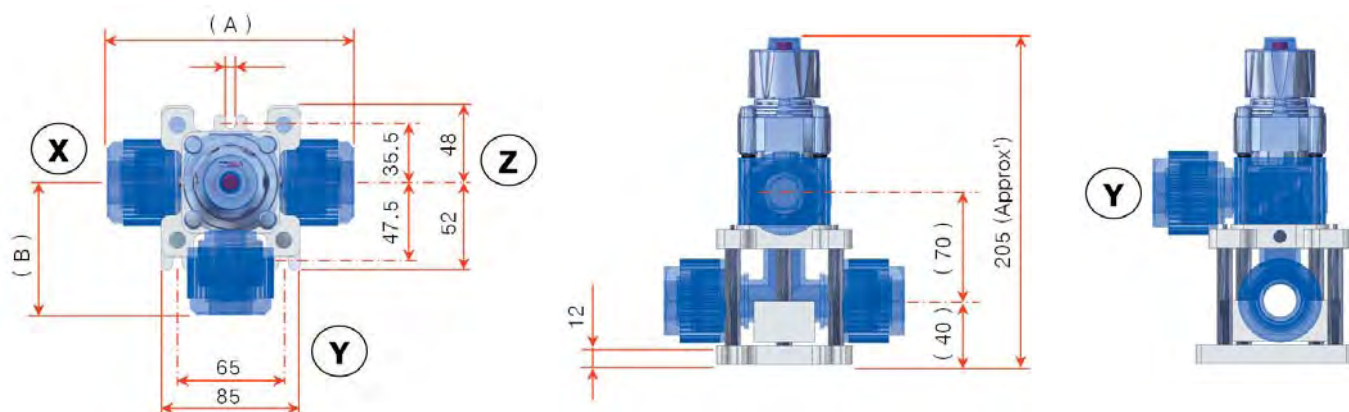
Connection Type	
Tube Flaring	F
Pipe Type +	P
Flange Joint	

Connection Size	
08	Tube Size 1/2"
12	Tube Size 3/4"
16	Tube Size 1"
20	Tube Size 1-1/2"

50	Pipe Size 50A
----	---------------

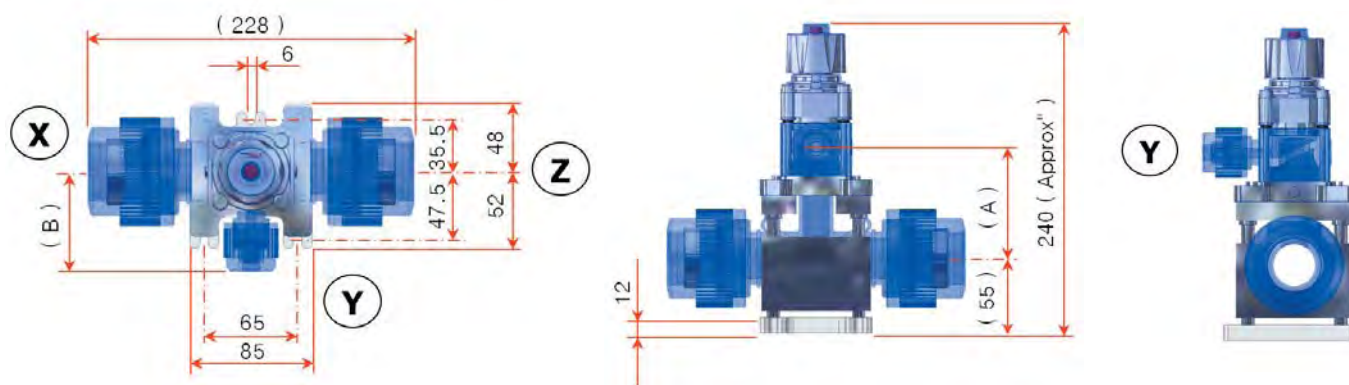
Flange 규격은 Order 시 별도로 명기하여 주시기 바랍니다.
Could you notified to flange size when the order confirm.

Part Number & Dimension Table



Unit : mm

Part Number	Size			A	B	Weight (Kg)
	X	Y	Z			
PLTSMV - F08 - F08 - F08	1/2 "	1/2 "	1/2 "	120	69	0.9
PLTSMV - F12 - F08 - F12	3/4 "	1/2 "	3/4 "	128	69	0.95
PLTSMV - F12 - F12 - F12	3/4 "	3/4 "	3/4 "	128	71	0.99
PLTSMV - F16 - F08 - F16	1 "	1/2 "	1 "	150	69	1.07
PLTSMV - F16 - F12 - F16	1 "	3/4 "	1 "	150	71	1.1
PLTSMV - F08 - F16 - F08	1/2 "	1 "	1/2 "	120	79	1.0
PLTSMV - F12 - F16 - F12	3/4 "	1 "	3/4 "	128	79	1.1
PLTSMV - F16 - F16 - F16	1 "	1 "	1 "	150	79	1.2



Unit : mm

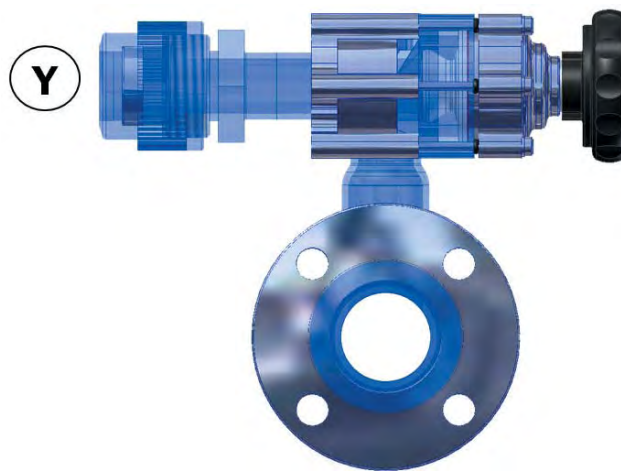
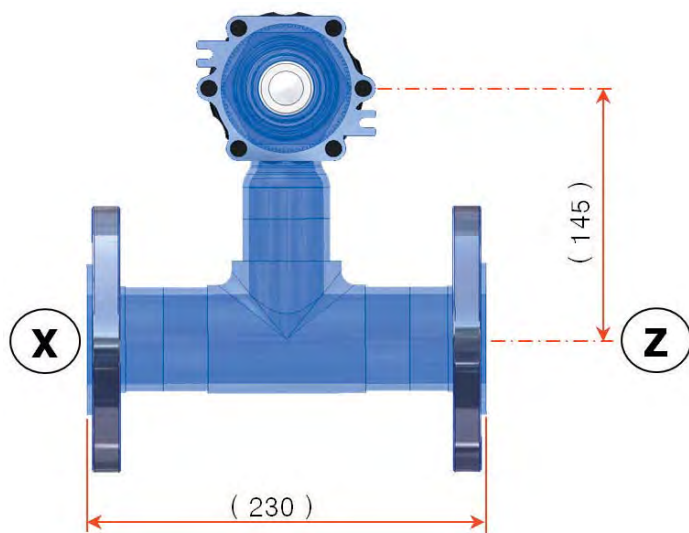
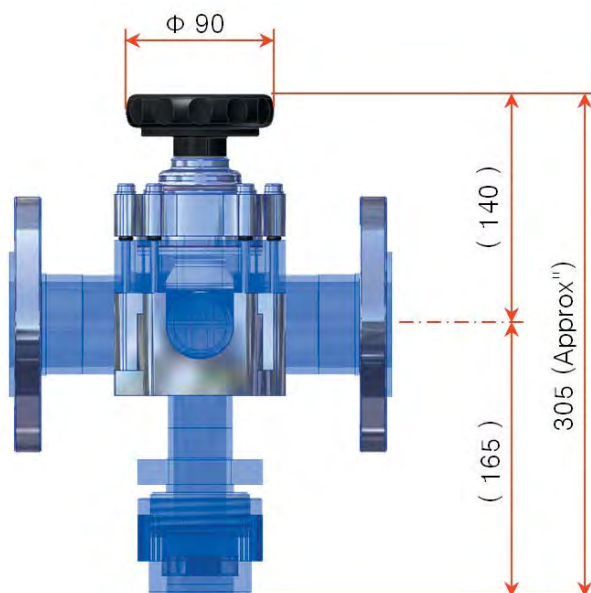
Part Number	Size			A	B	Weight (Kg)
	X	Y	Z			
PLTSMV - F20 - F08 - F20	1-1/2 "	1/2 "	1-1/2 "	87	69	2.0
PLTSMV - F20 - F12 - F20	1-1/2 "	3/4 "	1-1/2 "	87	71	2.0
PLTSMV - F20 - F16 - F20	1-1/2 "	1 "	1-1/2 "	85	79	2.1

- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

Part Number & Dimension Table

(Part No. : PLTSMV-P50-F20-P50)

"Y" : F1-1/2", "X", "Z" : P50



- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.



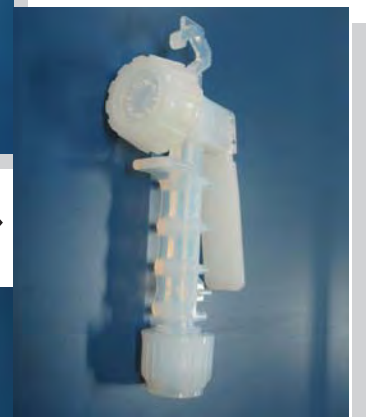
← PMI(Pneumatic and Manual Integrated) Valve
↓



PFA Fully Lined Flange Manual Valv ➡



PFA DI Water & Nitrogen Spray Gun ➡



PFA Fully Lined Flange Manual Valv ➡

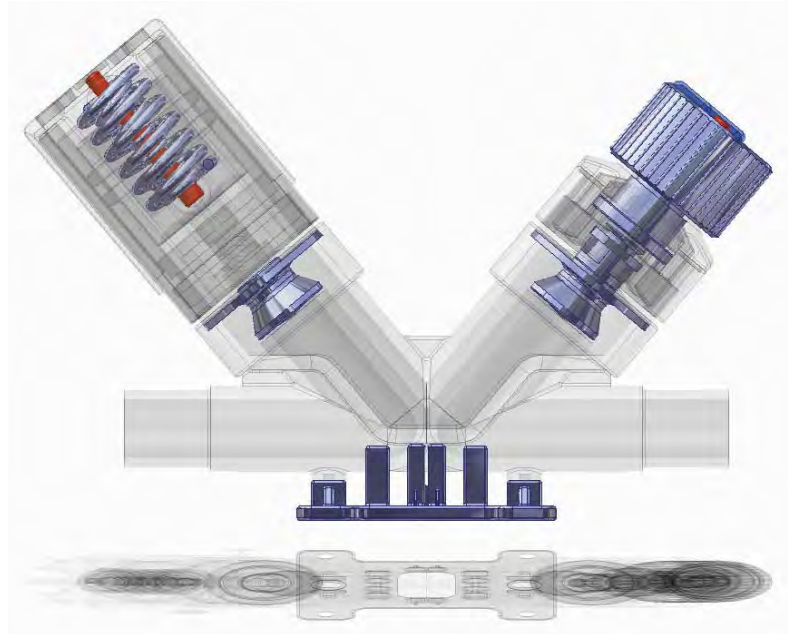


↑
← New Model PFA Lined Diaphragm Valve

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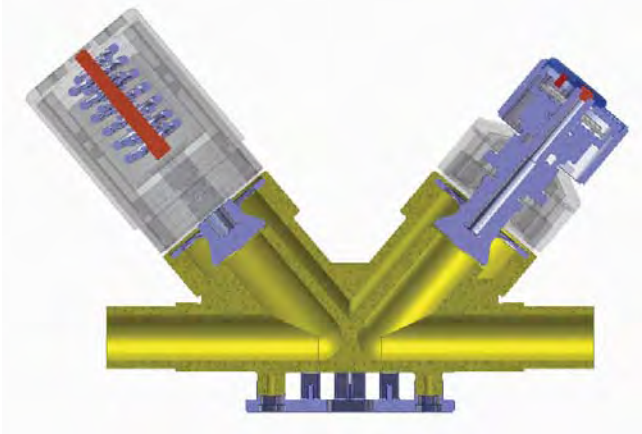
Pneumatic and Manual Integrated



PFA PMI Valve



제품 소개 (Product Overview)



- PMI(Pneumatic and Manual Integrated)Valve는 기존의 Pneumatic Valve와 Manual Valve을 용접 또는 Union 방식으로 연결하여 배관에 사용하는 방식에서 Pneumatic Valve + Manual Valve측 Body의 일체화를 실현하여 Leak Point 감소, 기존 양 Valve의 적용시 대비 설치공간 감소, 기존의 Manual Valve 유량 흐름을 파악할수 없었던 단점을 개량한 차세대 Valve 이다.
- 접액면은 순수 PFA와 순수 PTFE로 구성되어 있어 금속 오염과 용출이온으로 부터 최고의 내화학성을 갖는다.
- PTFE Diaphragm은 최적의 설계로 제작, 가공 되었으며 얇은 막의 두께로도 높은 내압에 견딜수 있는 구조로 되어 있다.
- PMI(Pneumatic and Manual Integrated) Valve은 현재 특허 출원이 되어 있다.

PureLine PMI valve is integrated structure either pneumatic valve or manual valve with 2-way gate.

From one line body both pneumatic and manual, PMI valve have advantage as like reduce of leak point, acquired space compare to install current pneumatic and manual valve, easily check to flow line with economical cost down. Inside PTFE Diaphragm seat and PFA body of valve is designed for most chemical resistance from metallic contamination and ionic etc.

The diaphragm seat of modified PTFE is ideally suited for use in high pressure even though the thickness of seat is thin.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²

Max' operation pressure

최고 사용 온도 : 90 deg C

Max' operation temperature

2. 기밀 시험 압력 : 8 kg/cm²

Leakage test pressure

정방향의 압력 : 5 kg/cm²

Flow direction pressure

역방향의 압력 : 5 kg/cm²

Back direction pressure

3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
P 15A	5.5	HPBOND
P 20A	7.5	HPBOND
F1"	7.5	Union

특허 및 의장 등록 (Intellectual)

■ 피엠아이밸브로 특허출원(특허출원 : 제 10-2006-63173호)

■ 수지제 배관접속구조의 특허 (특허 : 제 0478754 호)

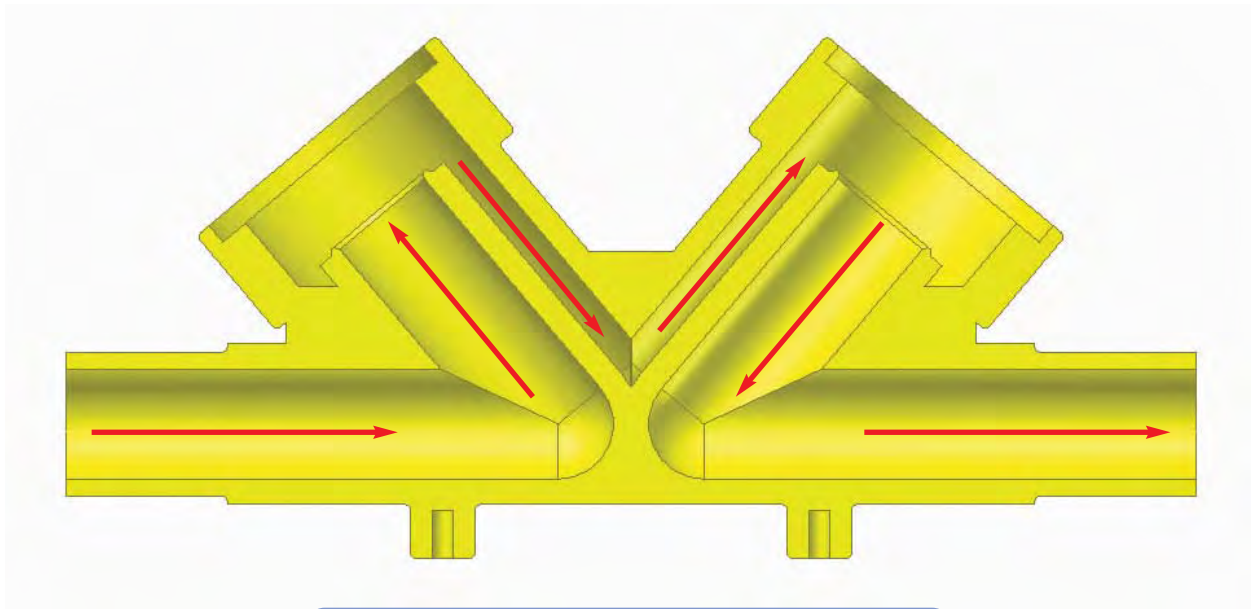
■ (실용신안 : 제 0395463 호)

PMI valve patent issue (Issue No : 10-2006-63173)

The structure of joint seal system for fitting and connection (Patent No : 0478754)

The structure and design of solid valve body and its design (Utility model register No : 0395463)

유체 흐름 및 조합 예 (Flow Direction)



PMI (Pneumatic and Manual Intergrated) Valve의 유체흐름



PMI Valve 조합 예 - 1
 Pneumatic Valve + Manual Valve

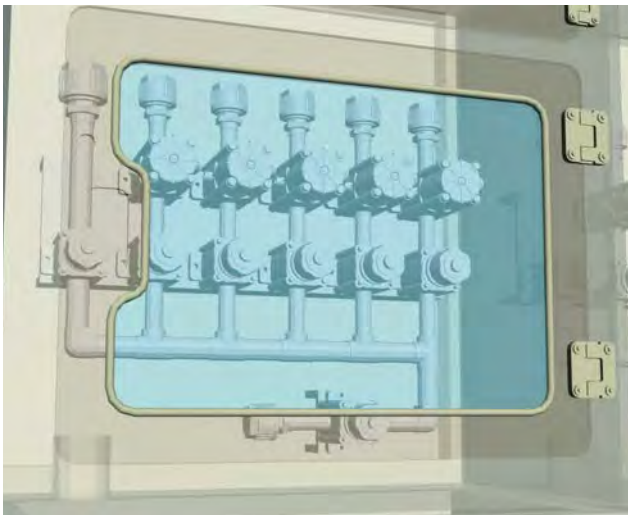


PMI Valve 조합 예 - 2
 Pneumatic Valve + Pneumatic Valve

재 질 구 성 (Materials Composition)

1. Body	PFA + SUS304 Flange Insert
2. Union Nuts	PFA
3. Diaphragm	Modified PTFE
4. Bonnet	PP + G/F
5. Mounting	PP
6. Handle	PP + G/F
7. Gauge Cover	PC
8. Compressor	Pneumatic Side - PP, Manual Side - PPS
9. Spindle	PVDF
10. Springs	SUS304
11. Bolts	SUS304
12. Bolt Caps	LDPE

적용시 장점 (Features)



기존 Pneumatic+Manual Valve 적용시

1. 양 Valve의 연결로 인한 Point 발생.
2. Valve 설치시 공간 비중 비대.
3. Cost Price 증대.

Install of Current PN valve and MN valve.

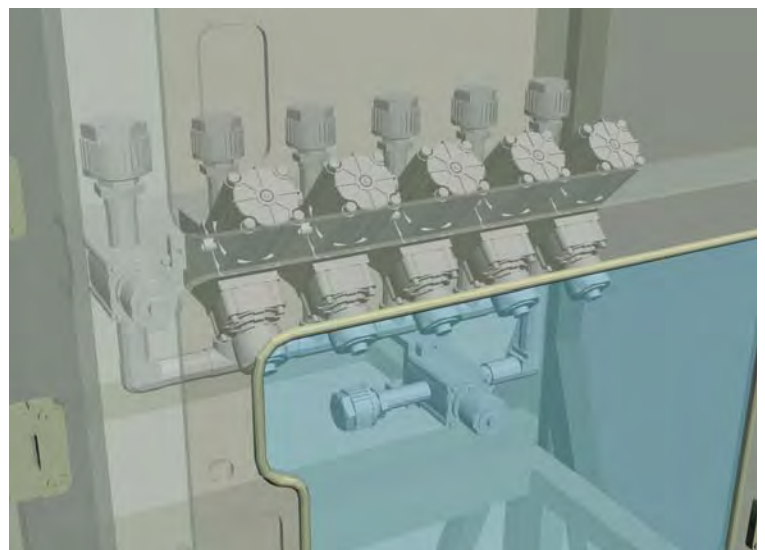
1. Need to fitting connection between PN and MN valve, ie, leak point.
2. Need to space for composition unit.
3. Increasing of cost price for part and line work.

PMI Valve 적용시

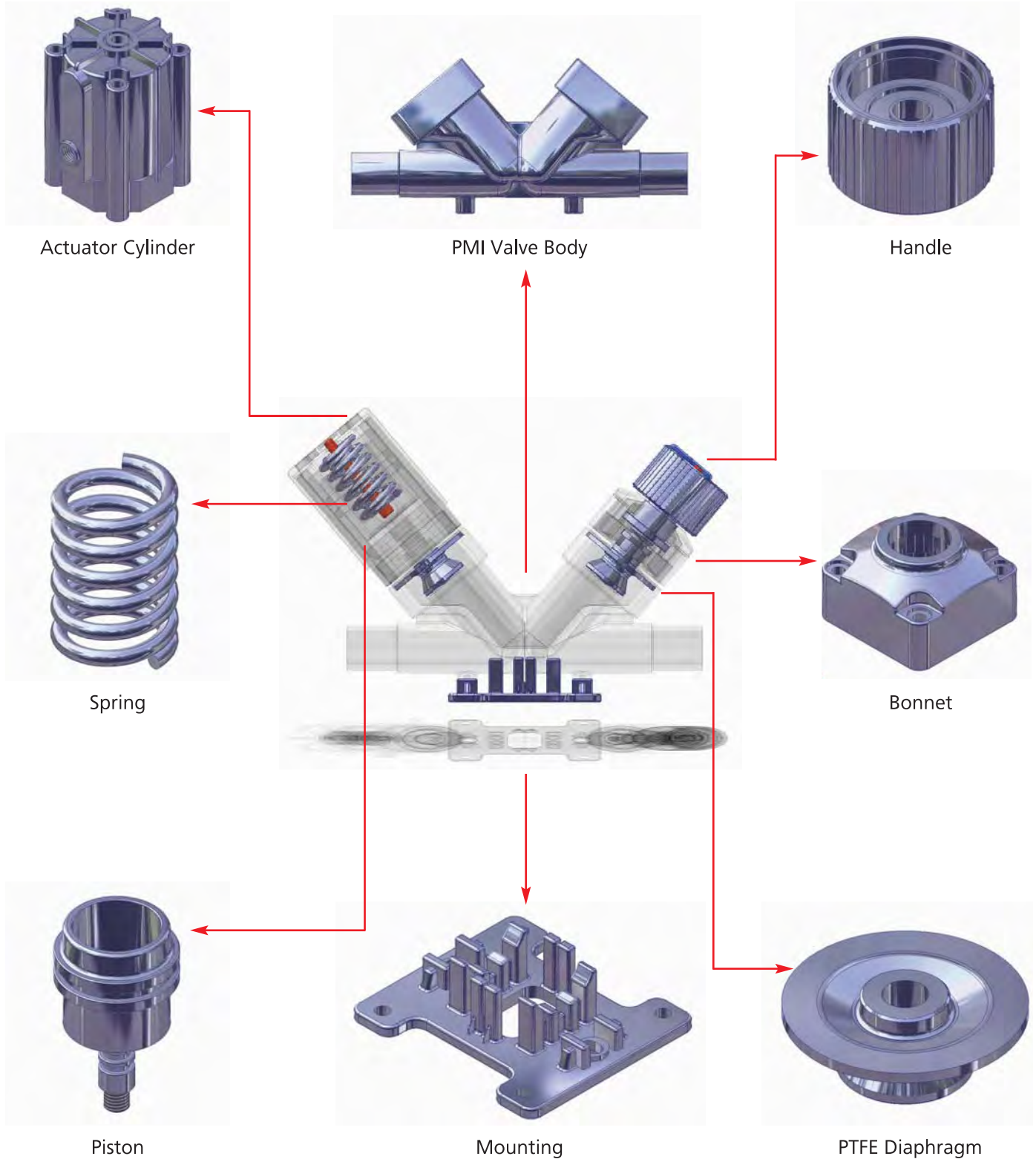
1. Body의 일체화로 연결 Point 감소.
2. 필요에 따라 Valve 조합 가능.
 - 2-1. Pneumatic Valve + Manual Valve
 - 2-2. Pneumatic + Pneumatic Valve
 - 2-3. Manual Valve + Manual Valve
3. Valve 설치시 기존 Valve 대비 Space 감소.
4. Cost Price 감소.
5. 핸들 작동이 용이하다.

Install of PMI valve

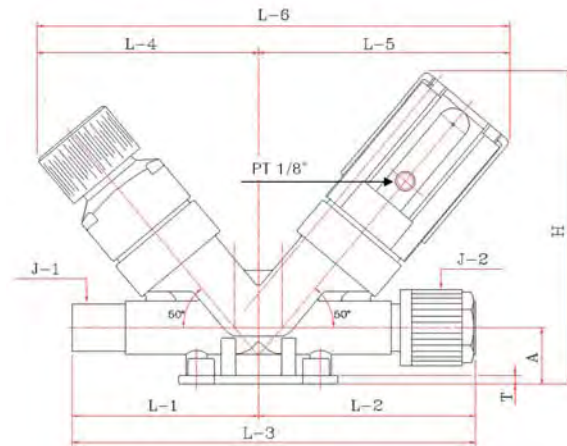
1. Need not fitting connection between PN and MN valve, ie, reduce leak point.
2. Available by needs(Option)
 - 2-1. Pneumatic Valve + Manual Valve
 - 2-2. Pneumatic + Pneumatic Valve
 - 2-3. Manual Valve + Manual Valve
3. Minisize space for install.
4. Capable of economical cost price.
5. Easy operation of handle at 45° position.



주요부품 구성도 (Composition of Major Parts)



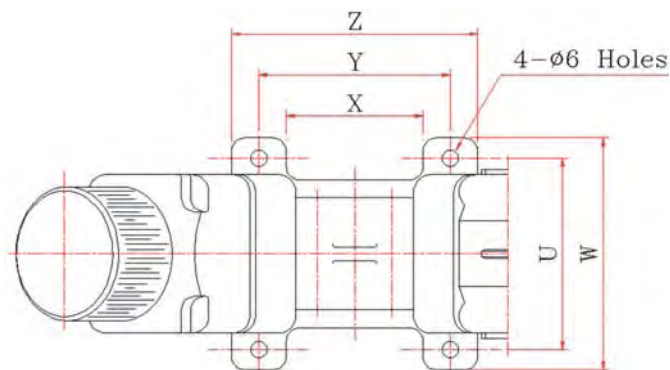
Part Number & Dimension Table



Unit : mm

Part Number 형 태 및 크 기	A	H	T	L						접속방식	
				L-1	L-2	L-3	L-4	L-5	L-6	J-1	J-2
PLPMI - M/P - P15 Manual + Pneumatic P15A	32	178	5	105	105	210	125	142	267	Pipe	Pipe
PLPMI - M/P - P20 Manual + Pneumatic P20A	32	178	5	105	105	210	125	142	267	Pipe	Pipe
PLPMI - M/P - F16 Manual + Pneumatic F 1"	32	178	5	125	125	250	125	142	267	Union	Union
PLPMI - M/P - P20 - F16 Manual + Pneumatic P20A-F 1"	32	178	5	105	125	230	125	142	267	Pipe	Union

Mounting Dimension Table



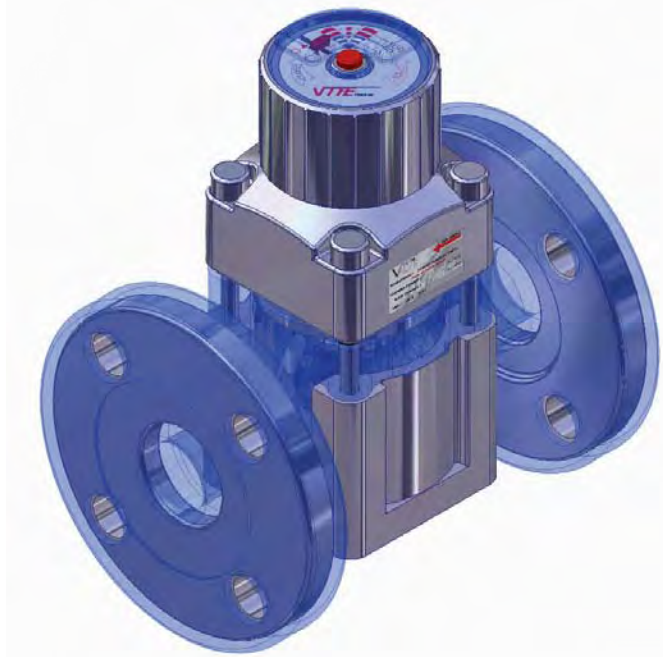
Unit : mm

Part Number / 형 태 및 크 기	U	W	X	Y	Z
PLPMI-M/P-P15 / Manual + Pneumatic P15A	68	82	50	70	90
PLPMI-M/P-P20 / Manual + Pneumatic P20A					
PLPMI-M/P-F16 / Manual + Pneumatic F 1"					
PLPMI-M/P-P20-F16 / Manual + Pneumatic P20A-F 1"					

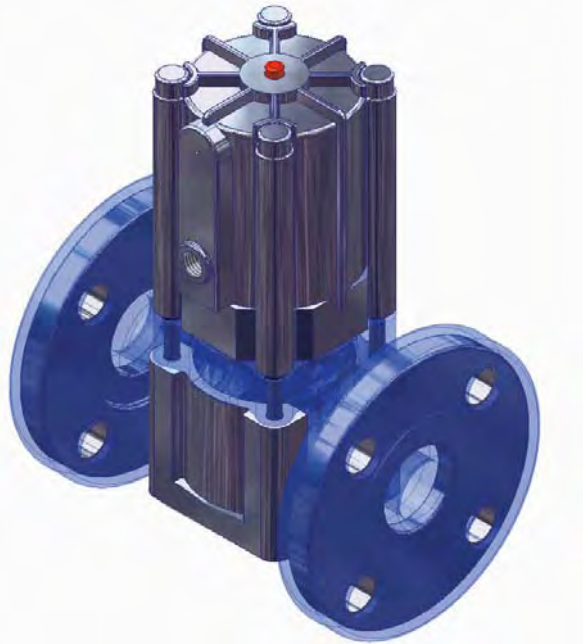
- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
 - 기호 "L", "H" 관련 치수는 대략적인 치수입니다.
 - 상기 Size 이외의 제품도 제작 가능합니다.
- Above all dimensions are for reference only.
Manufacture is available size of except.

High-Purity PureLine Valve System

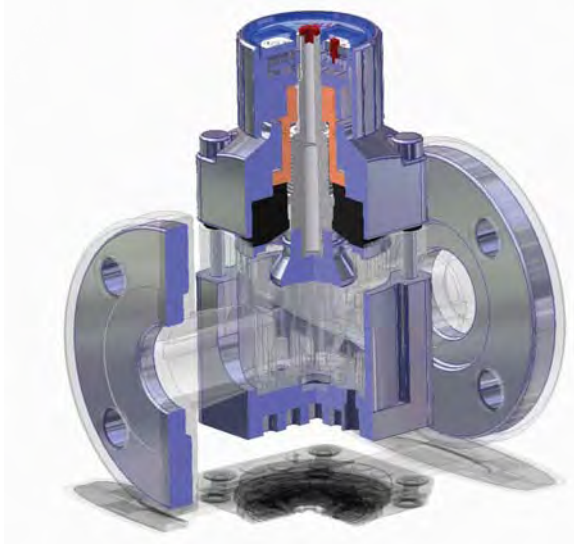
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PFA Fully Lined Flange M & P Valve



제품 소개 (Product Overview)



- 본 밸브는 반도체를 제조하는 Chemical Process와 부식성 액체 Line에 적용 할수 있는 제품으로 일반 PFA Lined Diaphragm와 차별화된 구조로 설계하였으며 대체용으로도 적용 할 수 있다. (예 - 초순수라인 및 화학 배관등)
- 유체 접촉부는 High Grade PFA, Modified PTFE Diaphragm을 적용, 강산, 강알칼리 용제 등 부식성이 강한 약액 Line에 적용 가능하며, 외부 환경에도 내부식성을 유지한다.
- PFA Lined Diaphragm Valve와 비교 Rubber Diaphragm 경도변화에 영향을 받지 않는 Seal 및 PTFE Diaphragm 구조로 설계되어 신뢰성이 우수하며, 경량 구조로 설계 설치가 용이한 Clean Valve 이다.
- 특히 PFA의 일체형 사출구조로 금속면으로 인한 금속오염을 최대한 방지한 구조로 설계 되어 있다.

PureLine PFA Fully lined flange manual and pneumatic valve is verified for use in high purity semiconductor and TFT-LCD, precision chemical application.

Inside wet surface is covered by H.P grade PFA and modified PTFE seat against strong chemicals.

PTFE diaphragm without rubber seat design is more effective seal than within rubber seat and more lighter weight than current valve weight.

Especially, It is designed for most chemical resistance from metallic contamination.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 5 kg/cm²
Max' operation pressure
최고 사용 온도 : 90 deg C
Max' operation temperature
2. 기밀 시험 압력 : 8 kg/cm²
Leakge test pressure
정방향의 압력 : 7 kg/cm² (For Manual Valve)
Flow direction pressure 5 kg/cm² (For Pneumatic Valve)
역방향의 압력 : 5 Kg/cm²
back direction pressure

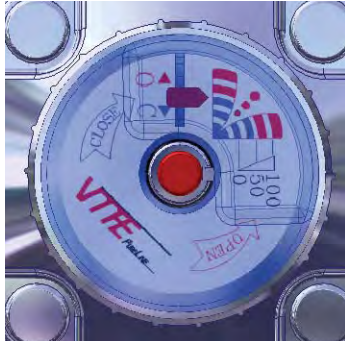
3. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
20A	7.5	JIS10KG Flaring
25A	14.5	JIS10KG Flaring

특허 및 의장 등록 (Intellectual)

- 매뉴얼밸브의 몸체와 다이어프램구조설계(실용신안 : 제 0395463 호)
The structure and design of solid valve body and its design (Utility model register No : 0395463)

특징 (Features)



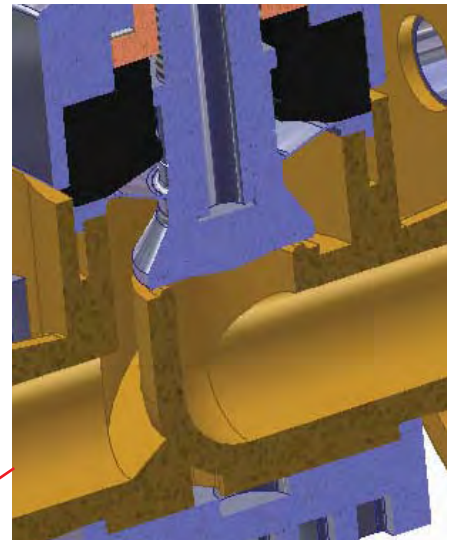
On/Off시 조작이 용이하도록 Handle 크기 및 모양을 설계
Design of type for easy control at ON/OFF.



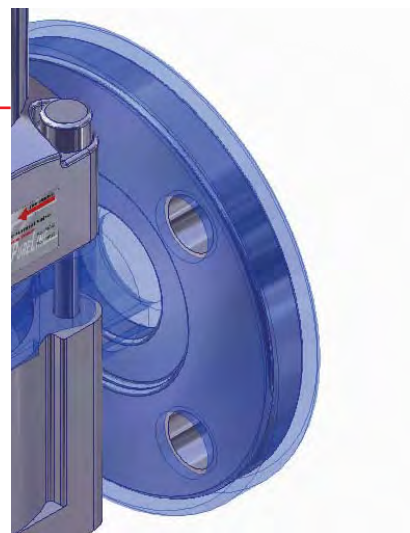
식별이 용이한
- Position Indicator
- Arrow 작동
- 눈금표시로 On/Off양 표현 실현
Unique and Easy
- Position Indicator at ON/OFF.
- Display arrow at Open/Close.
- Display of flow line at ON/OFF.



Modified PTFE로 제작 및 N.C 가공으로 균일한 품질 및 안정성 유지
Assured quality and safety by modified PTFE molding machining NC.

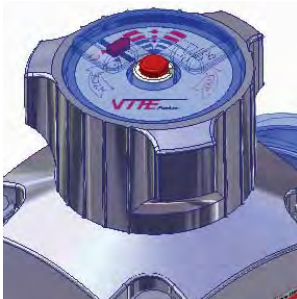


Bonnet 및 Orifice 측의 완벽한 seal 구조
Unique seat seal design of orifice and bonnet structure.



Bolting /I PFA의 단점을 보완. SUS304 Flange Insert
When the flange bolting need to counter Flange, it is more effective seal strength by inserted stainless steel flange.

주요부품 구성도 (Composition of Major Parts)



- Handle Part
 - On/Off/시 조작에 용이한 크기 및 모양으로 설계
 - Operator의 조작 및 관리에 용이한 눈관리 기능 (On/off/시 Arrow의 움직임으로 확실한 개폐실행)
 - 좌측 그림 20A 기준
 - 아래 그림 25A 기준
 - Mat'l : PP+G/F

Special design for easy handle control.
Easy checking by visual option (meet to open/close by arrow mark moving at ON/OFF)
Left, 25A V/
Below, 20A V/V

- Gauge Cover
 - 외부로부터 Fume 유입 방지
 - Mat'l : PC
- Prevent performance of toxic fume from outside.

- O-Ring
 - 2차 Fume 유입방지 및 Leak/시 외부로 액 유출 방지
 - Mat'l : Viton
- Prevent performance of toxic fume from inside.

- Sleeve
 - 부식 및 경도가 강한 PVDF로 성형 제작 유연한 Handle 작동 및 금속 오염 방지
 - Mat'l : PVDF
- Be capable of smooth handleoperate by pvdf with anti corrsion and good friction hardness.

- Bonnet
 - Mat'l : PP+G/F

- PTFE Diaphragm
 - Modified PTFE로 제작 수명이 길며 사용에 안정성 유지
- Modified PTFE Molding & maching NC.

- Mounting
 - Bonnet, Body, PTFE Diaphragm과 하부의 Mounting이 조립되는 구조로 Sealing 안정성 및 Body측 보강 역할을 동시에 유지하는 구조
 - Mat'l : PP+G/F
- Acquired of quality both safety sealing and support of body side That structure of assembly state through bonnet, body, diaphragm with mounting.

- Body
 - 금속오염과 용출이온으로부터 안전한 High grade PFA 적용
- Applied of H.P grade PFA

- Insert Flange
 - 배관 Bolting/시 PFA의 단점을 보완하기위한 SUS304 Flange Insert
- When the flange bolting need to counter flange, It is more effective seal strength by inserted stainless steel flange.

재질 구성 (Materials Composition)

	Flange Manual Valve	Flange Pneumatic Valve
1. Body	High Grade PFA (Flange측 SUS304 Flange Insert)	
2. Diaphragm	Modified PTFE	
3. Bonnet	PP+G/F	
4. Actuator Part		PVDF & PP
5. Mounting		
6. Handle	PP+G/F	
7. Gauge cover	PC	
8. Compressor	PPS	PP
9. Spindle	PVDF	
10. Sleeve	PVDF	
11. Bolt/Washer	SUS304	
12. Bolt Cap	LDPE	
13. Others	Viton, PP	

Bonnet측 Bolt Torque (Torque valve at bonnet joint)



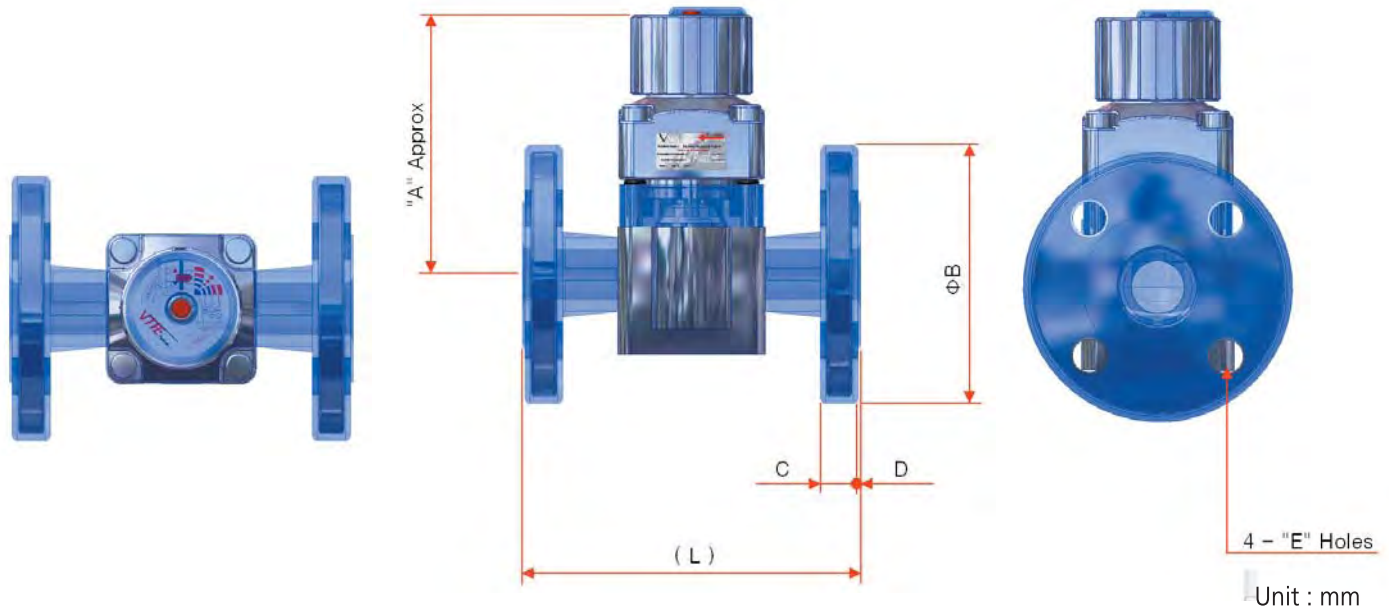
Product Size	Bolt Size	Torque - Nm
20A JIS10KG	M5	4.5
25A JIS10KG	M6	5

상기 값은 참조 Data 입니다.
Above data is reference value.

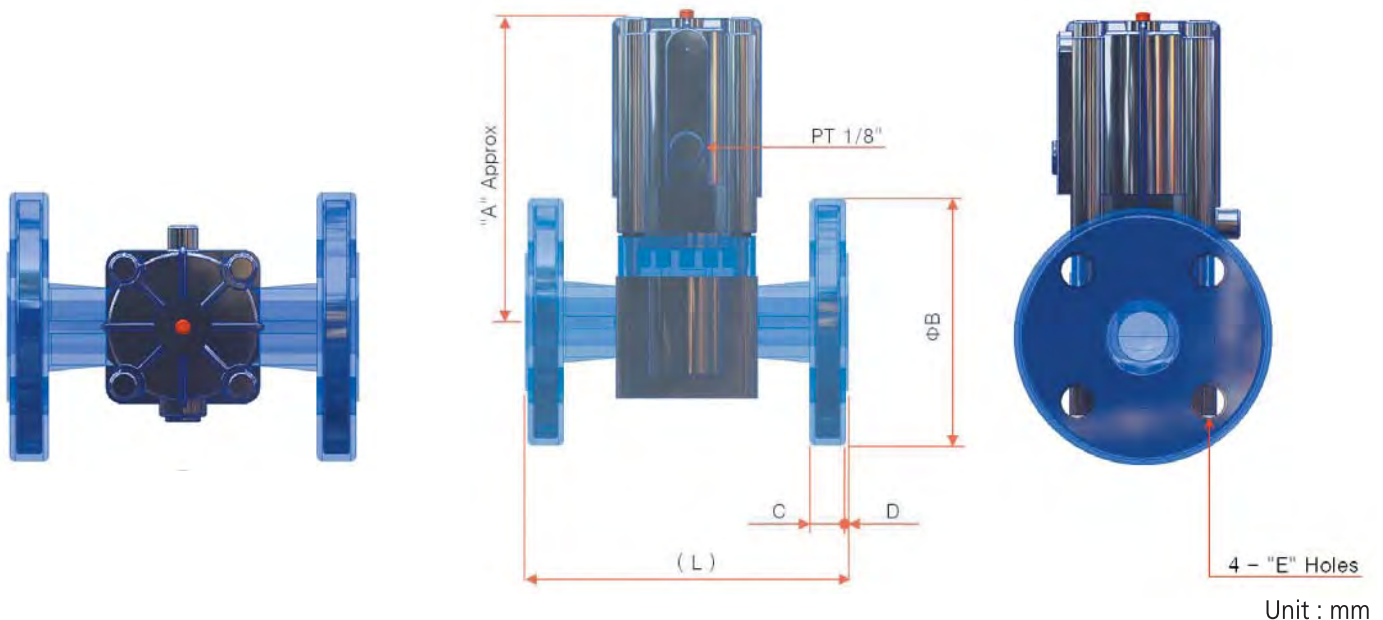
Ordering information

Example :	PLFMV	—	20	—	J1
Flange Manual Valve	PLFMV				Flange Specification
Flange Pneumatic Valve	PLFPV				J1 JIS10KG
					Body Size
			20	: 20A	
			25	: 25A	

Part Number & Dimension Table



Part Number	Orifice	A	ø B	C	D	E	L	Weight (Kg)
JIS10KG Flange						Bolt Hole		
PLFMV-20-J1	20.5	104	104	15	1	13	135	1.64
PLFMV-25-J1	26.2	122	125	16	1	17	145	2.64

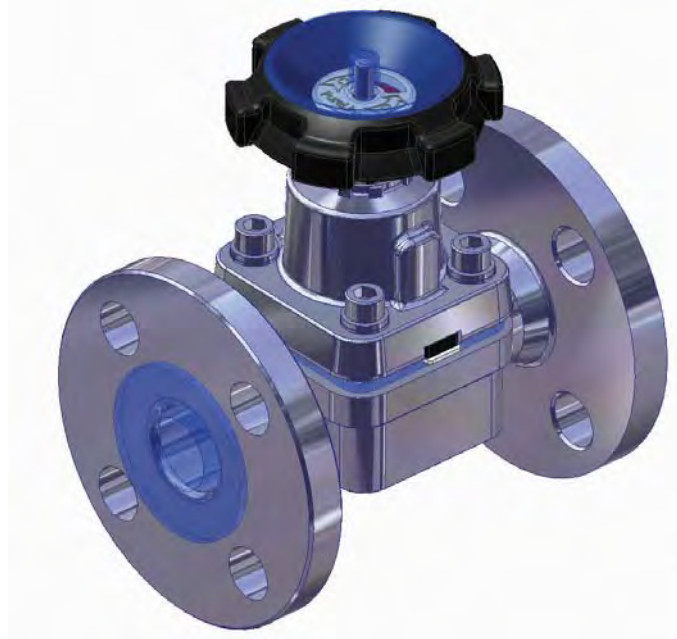


Part Number	Orifice	A	ø B	C	D	E	L	Weight (Kg)
JIS10KG Flange						Bolt Hole		
PLFPV-20-J1	20.5	128	104	15	1	13	135	1.85
PLFPV-25-J1	26.2	148	125	16	1	17	145	3

- 상기 치수표에 표시한 치수는 참조 치수이며 보증치수가 아닙니다.
Above all dimensions are for reference only.

High-Purity PureLine Valve System

The World Best Knowledge Provider's



New Model PFA Lined Diaphragm Valve



제품 소개 (Product Overview)



- 퓨어라인의 New PFA Lining Diaphragm Valve은 눈관리, 기밀성, 유량을 한단계 Up grade한 신형 Valve이다.
- 접액면은 순수 PFA와 순수 PTFE로 구성되어 있어 금속이온과 용출이온으로 부터 최상의 내화학성을 갖는다.
- PTFE Diaphragm은 최적의 설계로 제작, 성형 가공 되었으며 얇은 두께로도 높은 내압에 성능을 발휘하는 구조로 되어 있다. 또한 Body측 Bonnet Seal 성능을 크게 향상 하였다.
- 따라서 고순도 반도체 및 LCD의 공급약품을 이송하는 배관 Line의 제어변으로 사용에 적합하다.

PureLine PFA lined diaphragm valve is more successfully performance through locking system leakage zero.

Inside wet surface is covered by PFA and PTFE. Also, free of oil by mold.

PTFE diaphragm seat of valve is optimized design and ideally suited for use in high pressure although thin thickness. therefore, this valve is available to semiconductor and TFT-LCD application.

사용조건 및 규격 (Operation Specification)

1. 최고 사용 압력 : 8 kg/cm²

Max' operation pressure

최고 사용 온도 : 120 deg C

Max' operation temperature

2. 기밀 시험 압력 : 10 kg/cm²

Leakge test pressure

3. 라이닝 전압시험 : 20,000 Volt

Pinhole test

4. 적용규격별 Data (Cv data by applicated size)

Size	Cv - Max'	Connection Type
15A	7	JIS 10KG Flange
20A	7	JIS 10KG & ANSI 150# Flange
25A	10	JIS 10KG & ANSI 150# Flange
40A	26	JIS 10KG & ANSI 150# Flange
50A	43	JIS 10KG & ANSI 150# Flange

특허 및 의장 등록 (Intellectual)

사출에 의한 제조공정의 특허 인증 (특허 : 제 0463485 호)

The procedure by injection molding for lined diaphragm valve (Patent No : 0463485)

특징 (Features)



On/Off시 Spindle의 상.하 작동으로 식별 용이
Easy visual indicate at ON/OFF by spindle operation.



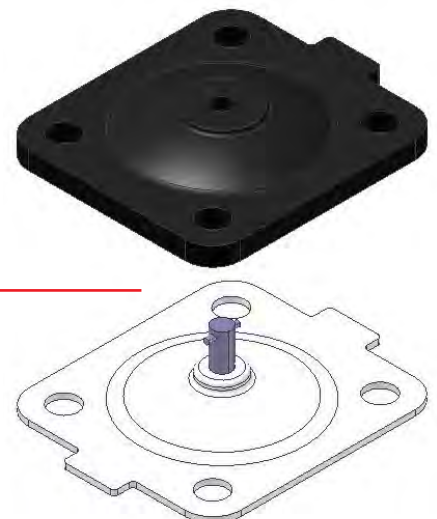
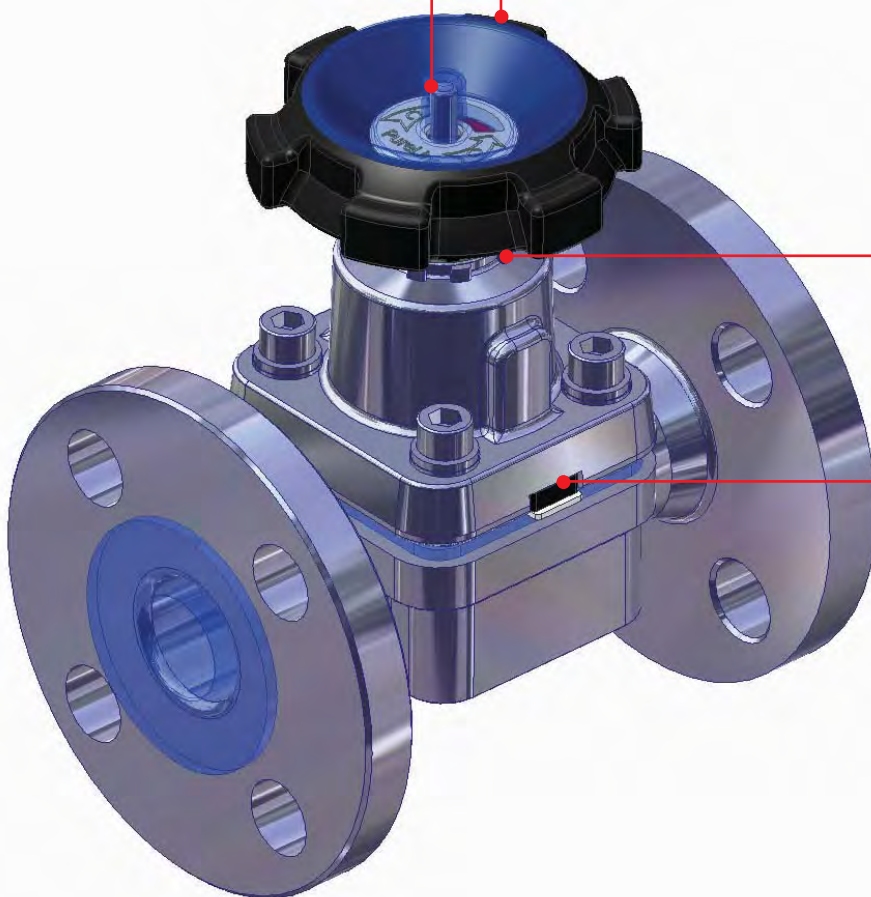
용이한 핸들조작 On/Off시 조작에 용이한
Handle Design
Handle Design of type for easy control at ON/OFF.



핸들 조작의 제한 필요시 눈관리에 용이한 Lock 장치
Applied of locking system when required to limited handle operate.



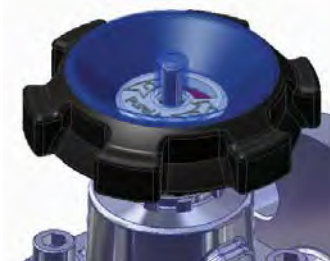
Bonnet Seal 상세도
Bonnet Seal Detail



PTFE Diaphragm EPDM+변성 PTFE Diaphragm 으로
구성되어 있어 Bonnet Seal 성능 향상 및 유연성 유지
Cv값 향상

The diaphragm Seat is designed modified
PTFE with EPDM rubber for better seal and
flexibility constance.
Cv Valve is more effective

주요부품 구성도 (Composition of Major Parts)



- **Handle Part**
 - On/Off/I 조작에 용이하도록 설계
 - 좌측 그림 15A, 20A, 25A 기준
 - 아래 그림 40A, 50A 기준
 - Mat'l : PP + G/F 15A, 20A, 25A
 - PPS 40A, 50A
 - Special design for easy handle control.
 - Left, 15A, 20A, 25A
 - Below, 40A, 50A

- **Gauge Cover**
 - 외부로부터 Fume 유입 방지
 - Mat'l : PC
 - Prevent performance of toxic fume from outside.

- **Sleeve**
 - 부식 및 마모에 강하며 Handle의 유연한 작동 유지
 - Mat'l : Copper
 - More be softened handle operation.

- **Spindle**
 - 부식 및 마모에 강하며 Handle의 유연한 작동 유지
 - Mat'l : SUS304
 - Spindle of stem part have to machined by NC.

- **Bonnet**
 - Chemical에 강하며 Simple한 형태로 설계
 - Mat'l : SCS13
 - Strong chemical resistance and simple Design.

- **Compressor**
 - Body측 Seal부분에 일치하도록 설계
 - Mat'l : PPS
 - Special design for body seal.

- **PTFE Diaphragm**
 - 순수 PTFE와 EPDM Rubber로 분리형으로 설계
 - Separated structure of PTFE and EPDM rubber.

- **Body**
 - Chemical에 강하며 Simple한 형태로 설계
 - Mat'l : SCS13
 - Strong chemical resistance and simple design.

- **Lining**
 - High Grade PFA 사출방식 Lining
 - Applied of H.P grade PFA

재 질 구 성 (Materials Composition)

1. Lining	High Grade PFA
2. Body	SCS13
3. Bonnet	SCS13
4. Diaphragm	PTFE+EPDM
5. Compressor	PPS
6. Spindle	SUS304
7. Sleeve	Copper
8. O-Ring	Viton
9. Handle	PP+G/F 15A, 20A, 25A PPS 40A, 50A
10. Bolt & Nut	SUS304
11. Others	PC, VITON

Bonnet측 Bolt Torque (Torque valve at bonnet joint)



Product Size	Bolt Size	Torque - Nm
15A JIS10KG 3/4" ANSI150#	M6	15
20A JIS10KG 1" ANSI150#	M6	15
25A JIS10KG 1" ANSI150#	M8	23
40A JIS10KG 1-1/2" ANSI150#	M10	35
50A JIS10KG 2" ANSI150#	M10	38

☞ 상기 값은 참조 Data 입니다.
Above data is reference value.

Ordering information

Example : PLLDMV —

20

Body Size

15	: 15A
20	: 3/4", 20A
25	: 1", 25A
40	: 1-1/2", 40A
50	: 2", 50A

J1

Flange Specification

J1	: JIS10KG
A1	: ANSI150#

EP

Body측 표면처리
Outside treatment on
body area.

EP : Electro Polishing

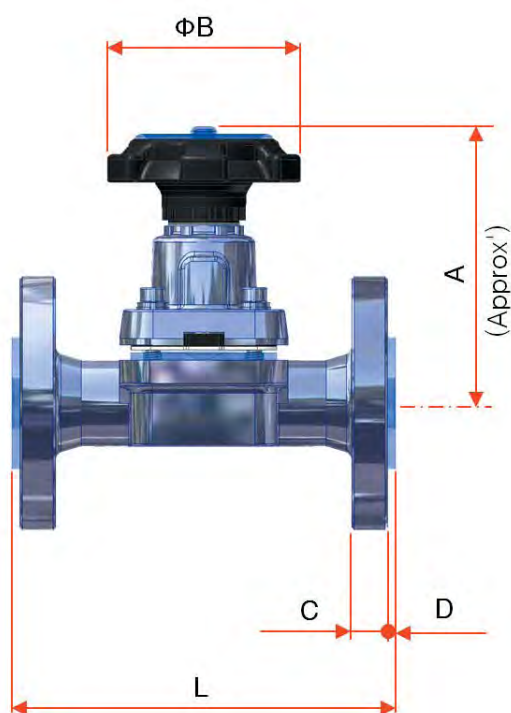
P

: Paint

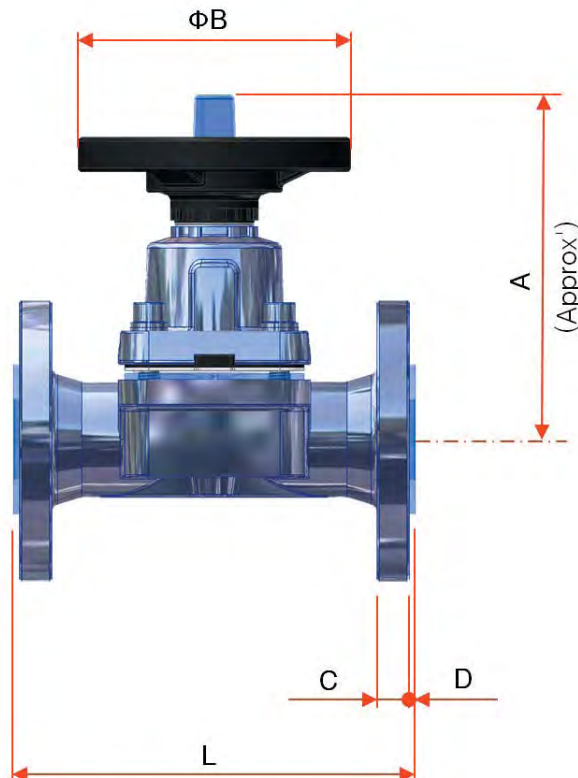
BF

: Buffing

Part Number & Dimension Table



15A, 20A, 25A Side



40A, 50A Side

Unit : mm

Part Number JIS10KG Flange	A	ø B	C	D	L	Weight (Kg)
PLDMV - 15 - J1 - XX	110	80	12.5	3	150	2.9
PLDMV - 20 - J1 - XX	110	80	14	3	150	3
PLDMV - 25 - J1 - XX	125	90	14	3	160	4.4
PLDMV - 40 - J1 - XX	170	135	16	3	200	7.5
PLDMV - 50 - J1 - XX	195	135	18	3	230	11

Part Number ANSI 150# Flange Type	A	ø B	C	D	L	Weight (Kg)
PLDMV - 20 - A1 - XX	110	80	12.5	3	150	2.9
PLDMV - 25 - A1 - XX	125	90	14	3	160	4.3
PLDMV - 40 - A1 - XX	170	135	16	3	200	7.3
PLDMV - 50 - A1 - XX	195	135	18	3	230	11

❶ 상기 치수표에 표시한 치수는 참조치수이며 보증치수가 아닙니다.
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