

Diaphragm Valve Type 15 (Manual Type)

Features

- Near-linear flow characteristics.
- Requires less handle operation force thanks to improved material and shape.
- The gauge cover also serves as an indicator, allowing easy check of opening degree.



Basic specifications

- Valve Type : Diaphragm Valve Type 15
- Size : 125 mm - 150 mm (5 inch – 6 inch)
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
PP (Conforming to ASTM D4101 Cell Classification PP0210B67272)
PVDF (Conforming to ASTM D3222 Cell Classification Type II)
- Seal Material / Diaphragm : EPDM, PTFE, FKM etc.
- Connection / Flanged : JIS B2220 10K, DIN/EN1092-1 PN10, ANSI B16.5 CLASS150

	FLUID TEMPERATURE °C {°F}	Working Pressure (Normal Temperature) MPa {psi}				Connection Method Flanged
		Diaphragm : Rubber		Diaphragm : PTFE		
		125mm	150mm	125mm	150mm	
U-PVC	0 ~ 60 { 30~140 }	0.25 {35}	0.2 {30}	0.15 {20}	0.15 {20}	○
PP	-20 ~ 90 { -5~195 }	0.25 {35}	0.2 {30}	0.15 {20}	0.15 {20}	○
PVDF	-40 ~ 120 { -40~250 }	0.25 {35}	0.2 {30}	0.15 {20}	0.15 {20}	○

	FLUID TEMPERATURE °C {°F}	Design Pressure (Normal Temperature) MPa {psi}				Connection Method Flanged
		Diaphragm : Rubber		Diaphragm : PTFE		
		125mm	150mm	125mm	150mm	
U-PVC	0 ~ 60 { 30~140 }	0.35 {50}	0.3 {40}	0.25 {35}	0.2 {30}	○
PP	-20 ~ 90 { -5~195 }	0.35 {50}	0.3 {40}	0.25 {35}	0.2 {30}	○
PVDF	-40 ~ 120 { -40~250 }	0.35 {50}	0.3 {40}	0.25 {35}	0.2 {30}	○

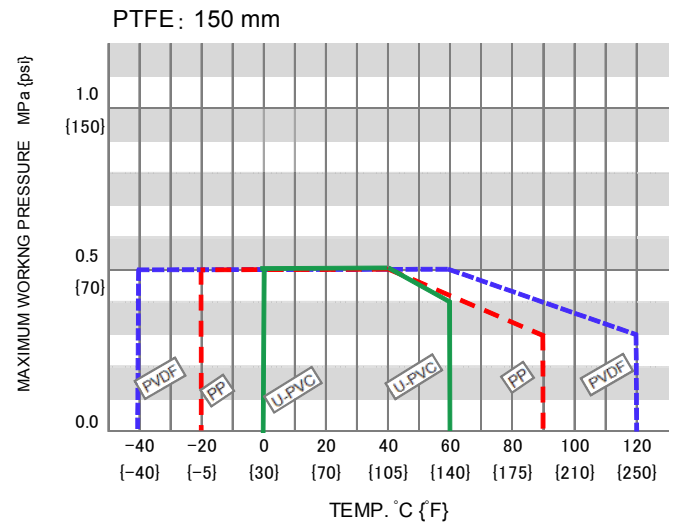
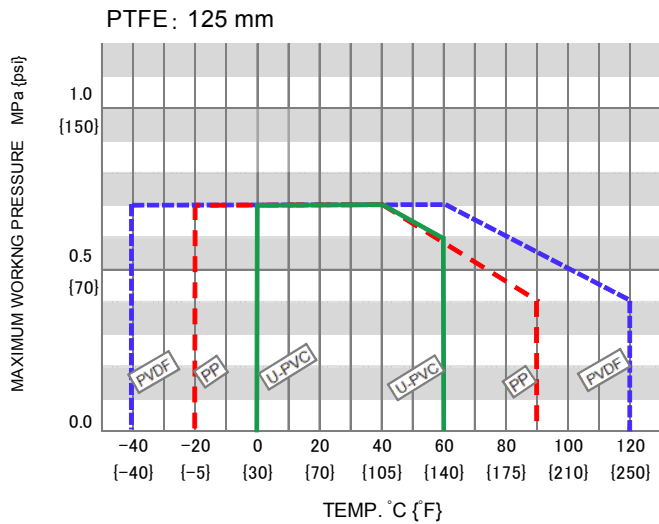
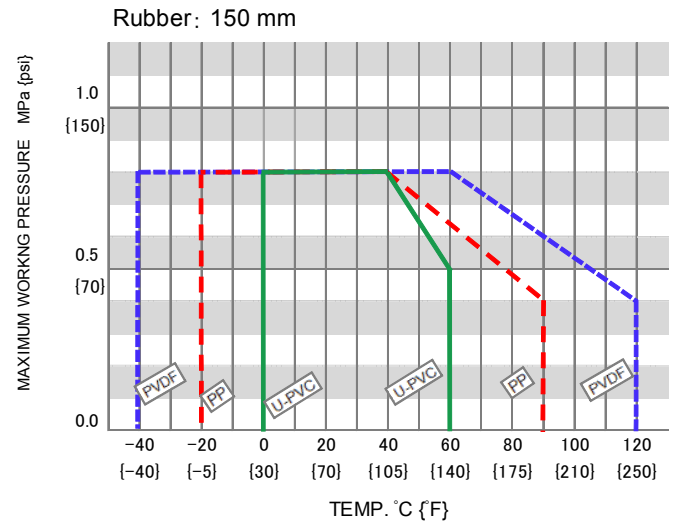
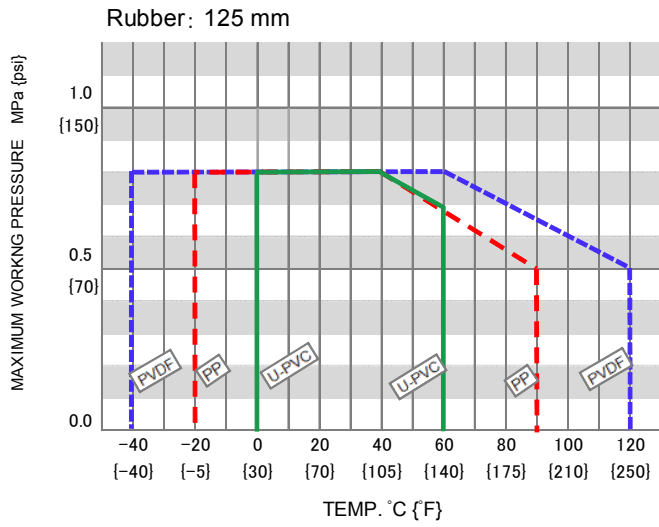
Note: The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

- * Concerning the allowable pressure for each temperature, material and actuator type, see the technical documents at the next page of this sheet.
- * The diaphragm may become loose due to temperature changes during long storage, operation stop or while in use. Check the conditions and then retighten the bolts and nut between the bonnet and the body to the "bonnet tightening torque". (Failure to do so may cause fluid leakage.)

Certificate / Approval

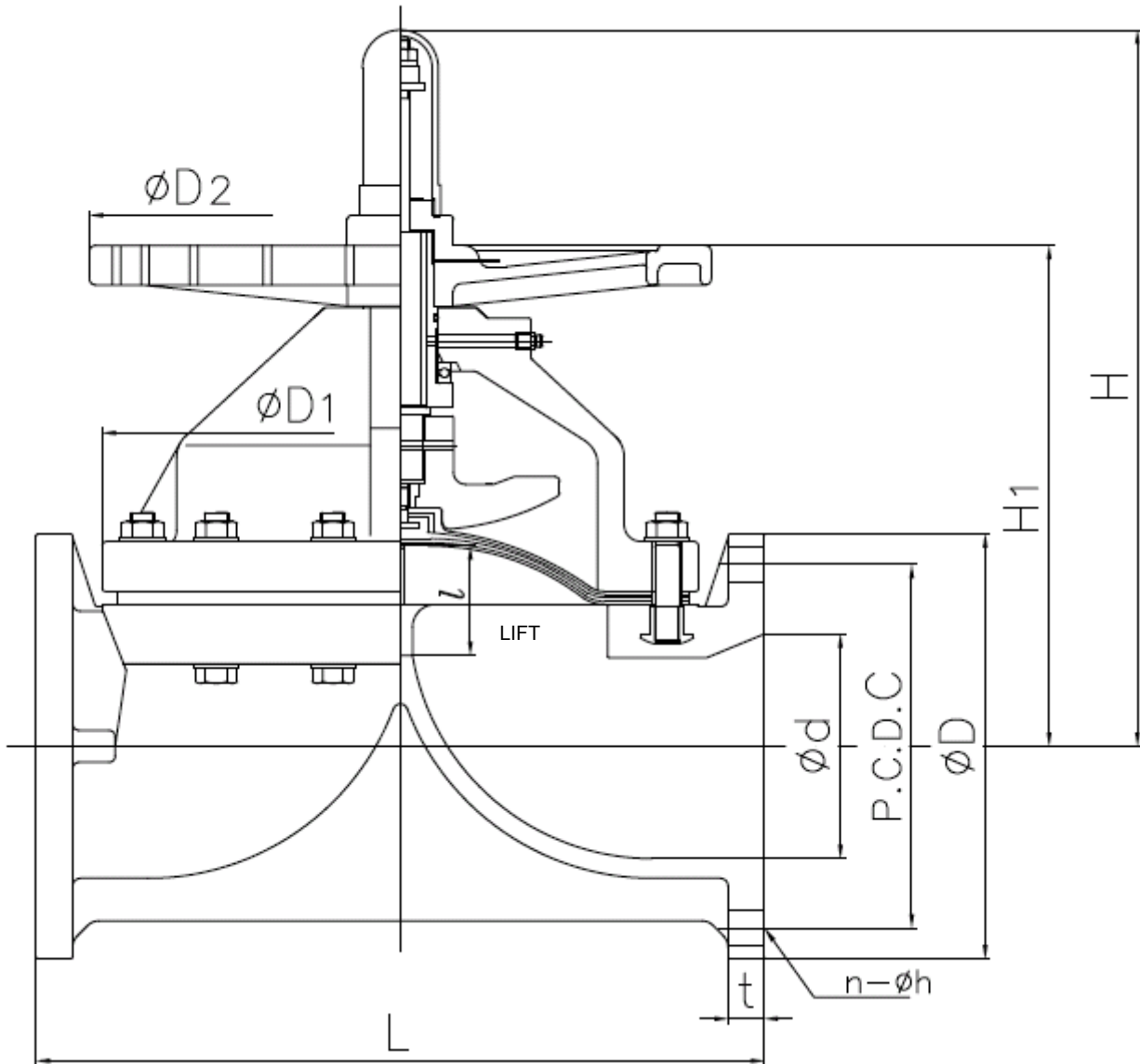
PED "For details of applicable products, please consult us."

Working pressure vs. Temperature



Note : Make sure that the temperature and pressure are within the working range during operation.
 (If the tolerance range is exceeded during use, the valve may be damaged.)

Product dimension



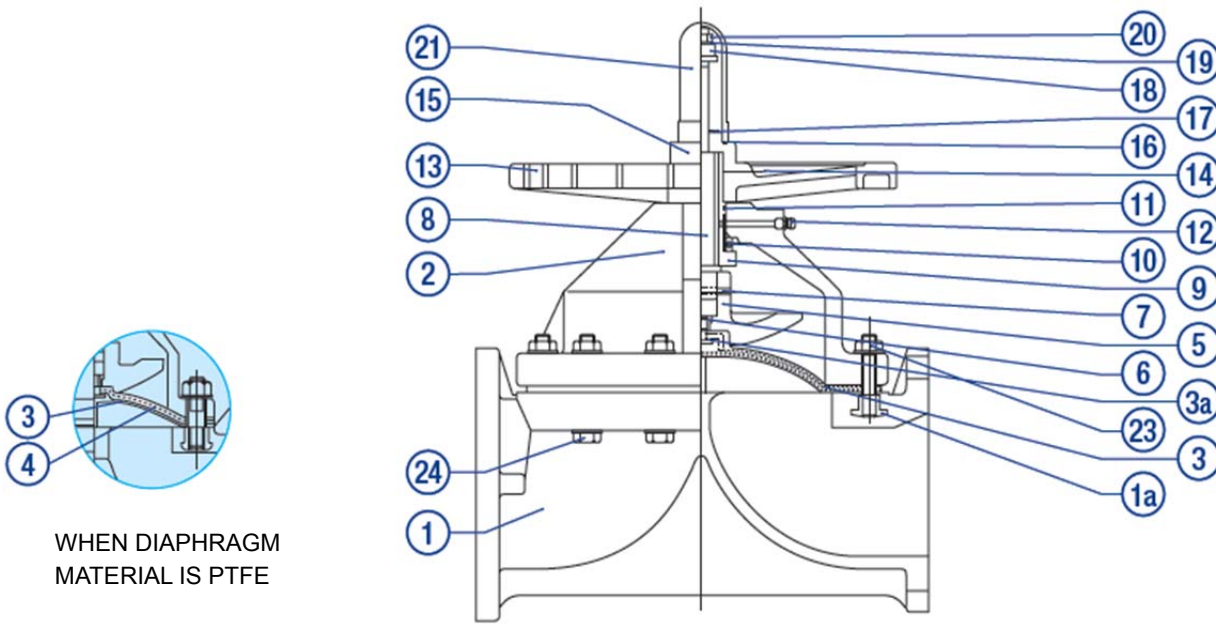
■ JIS, DIN (Unit: mm)

mm	d	D ₁	D ₂	ℓ	H	H ₁	JIS										DIN PN10							
							JIS5K				JIS10K				L	t		DIN PN10				t		
							D	C	n	h	D	C	n	h		U-PVC	PP PVDF	D	C	n	h	L	U-PVC	PP PVDF
125	125	320	300	60	420	308	235	200	8	19	250	210	8	23	410	22	24	250	210	8	18	400	22	23
150	148	385	410	70	476	334	265	230	8	19	280	240	8	23	480	24	27	285	240	8	22	480	24	27

■ ANSI (Unit: inch)

inch	mm	d	D ₁	D ₂	ℓ	H	H ₁	ANSI							
								ANSI CLASS150					t		
								D	C	n	h	L	U-PVC	PP PVDF	
5	125	4.92	12.60	11.81	2.36	16.54	12.13	10.00	8.50	8	0.88	16.14	0.87	0.94	
6	150	5.83	15.16	16.14	2.76	18.74	13.15	11.00	9.50	8	0.88	18.90	0.94	1.06	

Parts list



WHEN DIAPHRAGM MATERIAL IS PTFE

PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL			
1	1	BODY	7	1	COMPRESSOR PIN	17	1	SHEET RING			
		BONNET	8	1	STEM	18	1	STOPPER			
		U-PVC						STAINLESS STEEL(SUS304)			
		PP						(Unichrome plating)			
2	1	BONNET	9	1	SLEEVE (A)	19	1	SPRING WASHER			
		PVDF						STAINLESS STEEL(SUS304)			
		PPG ⁽¹⁾						20	1	SET NUT	STAINLESS STEEL(SUS304)
		PVDF						21	1	GAUGE COVER	PC
3	1	DIAPHRAGM	10	1	THRUST BEARING (A)			22	4	STUD BOLT·NUT	STAINLESS STEEL(SUS304)
		EPDM, PTFE, etc.						23	-	BOLT·NUT(A)	STAINLESS STEEL(SUS304)
3a	1	INSERTED METAL OF DIAPHRAGM	11	1	O-RING (A)			24	-	BOLT·NUT(A)	STAINLESS STEEL(SUS304)
		STAINLESS STEEL (SUS304)						1a	4	INSERTDE NUT	COPPER ALLOY(C3604) ⁽³⁾ STAINLESS STEEL(SUS304) ⁽⁴⁾
4	1	CUSHION ⁽²⁾	12	1	GREASE NIPPLE						
		EPDM, etc.									
5	1	COMPRESSOR	13	1	HANDLE						
		PVDF									
6	1	COMPRESSOR NUT	14	1	NAMEPLATE						
		COPPER ALLOY(C3604)									
			15	1	CAP						
			16	1	GASKET (A)						

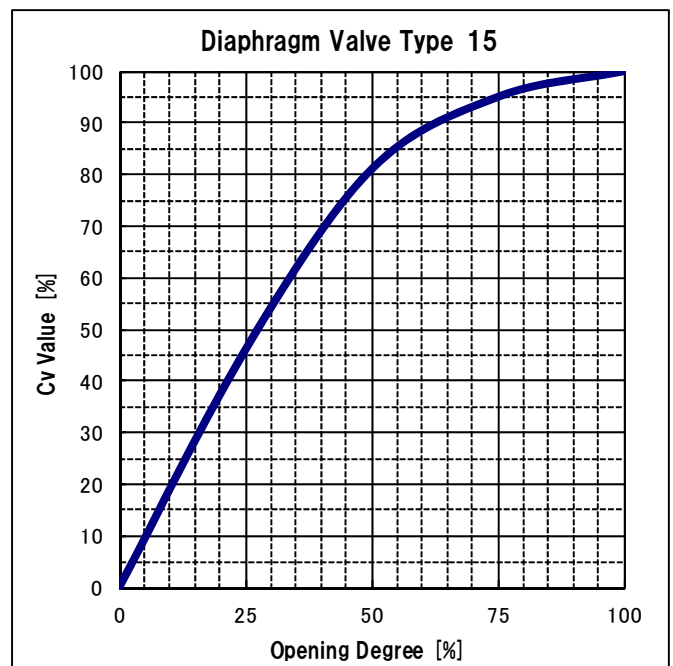
Note:

- (1) Bonnet PPG 15 - 100 mm: black. 125 - 250 mm: ivory. (2) Is used when the diaphragm material is PTFE.
- (3) Is used when the body material is U-PVC or PP. (4) Is used when the body material is PVDF.

Cv value for each opening degree

FULL-OPEN Cv VALUE

mm	125	150
inch	5	6
FULL-OPEN Cv VALUE	300	400



Handle rotation [Full open (rotation/lift) Full close]

SIZE		ROTATION
mm	inch	
125	5	10.0
150	6	12.0

Operating torque at maximum working pressure

Operating torque(O→S) Unit:N-m { ib-inch }

mm	inch	Rubber Diaphragm		PTFE Diaphragm	
			{ }		{ }
125	5	40	{ 354 }	90	{ 797 }
150	6	55	{ 487 }	120	{ 1062 }

Bonnet tightening torque

Bonnet tightening torque(O→S) Unit:N-m { ib-inch }

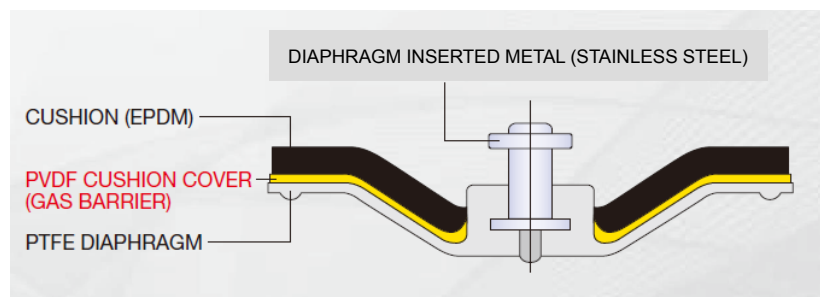
mm	inch	Rubber Diaphragm		PTFE Diaphragm	
			{ }		{ }
125	5	45	{ 400 }	45	{ 400 }
150	6	45	{ 400 }	45	{ 400 }

Options

In addition to the standard product, the following options are also available according to your requirements.

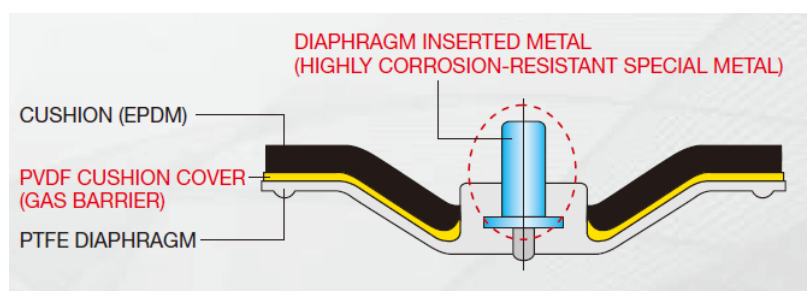
① PVDF Cushion Cover Model

For corrosive fluid transport lines, we offer PVDF cushion cover accessories having excellent gas barrier performance to prevent deterioration due to permeation of gas from the diaphragm.



② Electrolytic Model

For chlorine gas lines in electrolysis plants, we offer electrolytic options using highly corrosion resistant special metal to prevent corrosion of inserted diaphragm fittings.



Product weight

Unit : kg

mm	inch	Body material			
		U-PVC	PP	PVDF	PVDF
		Bonnet material			
		U-PVC	PP	PPG	PVDF
125	5	22.0	19.5	23.5	26.3
150	6	34.5	30.5	35.5	40.7

Product model code list

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE
V	1 5	MH	*	*	F	*	***
V MANUAL VALVE	15 TYPE 15	MH ROUND HANDLE	U U-PVC P PP F PVDF G PVDF+PPG	E EPDM T PTFE	F FLANGED	1 JIS10K 5 5K D DIN A ANSI	125 125mm · 150 150mm

Installation, Operation and Maintenance Manual

For details of Installation, Operation and Maintenance, please refer IOM at below link.

http://www.asahi-yukizai.co.jp/en/product/mt_pdf/a_manual_Valve_1_02.pdf