

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

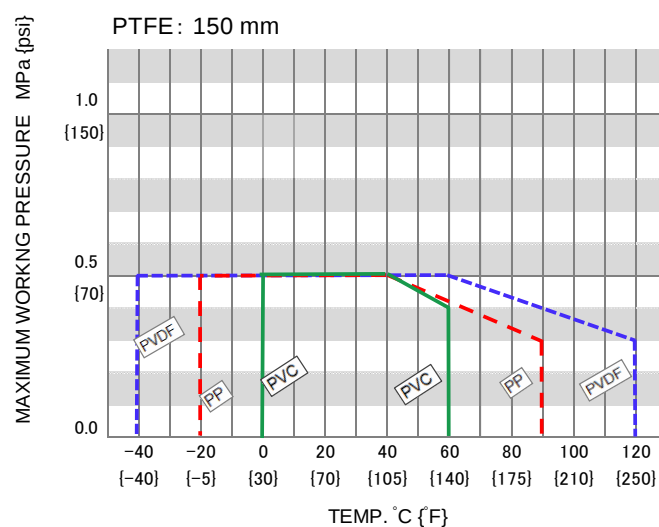
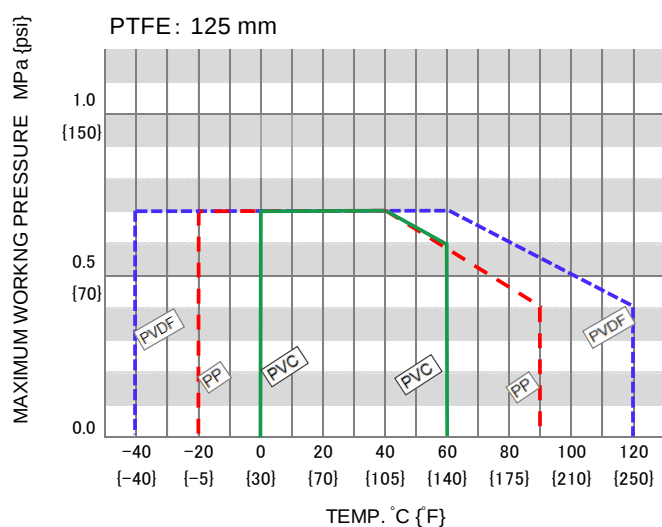
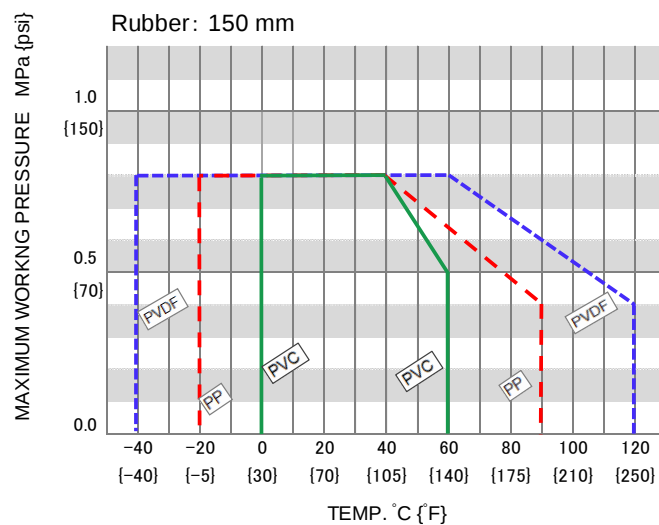
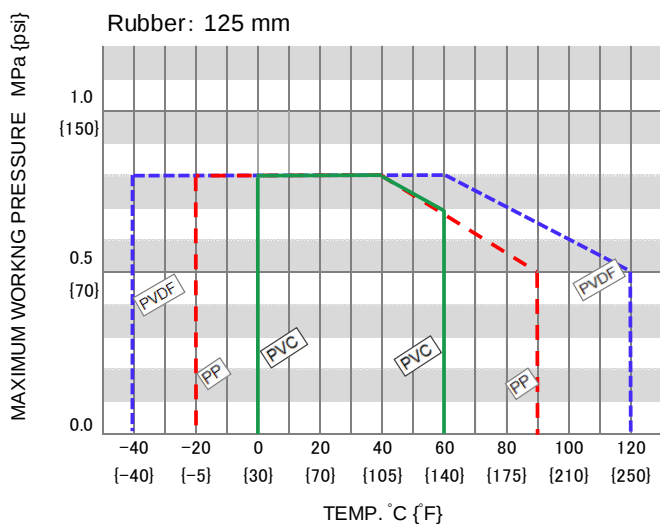
- Valve Type : Diaphragm Valve Type 15
- Size : 125 mm - 150 mm (5 inch – 6 inch)
- Body Material : U-PVC (Conforming to ASTM D1784 Cell Classification 12454A)
PP (Conforming to ASTM D4101 Cell Classification PP0110B67272)
PVDF /EL-PVDF (Conforming to ASTM D3222 Cell Classification Type II)
- Seal Material / Diaphragm : EPDM, PTFE, FKM etc.
- Connection / Flanged : JIS B2220 10K, DIN/EN1092-1 PN10, ANSI B16.5 CLASS150

Body Material	FLUID TEMPERATURE °C {°F}	Working Pressure (Normal Temperature) MPa {psi}				Connection Method
		Diaphragm : Rubber		Diaphragm : PTFE		
		125mm	150mm	125mm	150mm	Flanged
PVC	0 ~ 60 { 30~140 }	0.8 {115}	0.8 {115}	0.7 {100}	0.5 {70}	○
PP	-20 ~ 90 { -5~195 }	0.8 {115}	0.8 {115}	0.7 {100}	0.5 {70}	○
PVDF /EL-PVDF	-40 ~ 120 { -40~250 }	0.8 {115}	0.8 {115}	0.7 {100}	0.5 {70}	○

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.

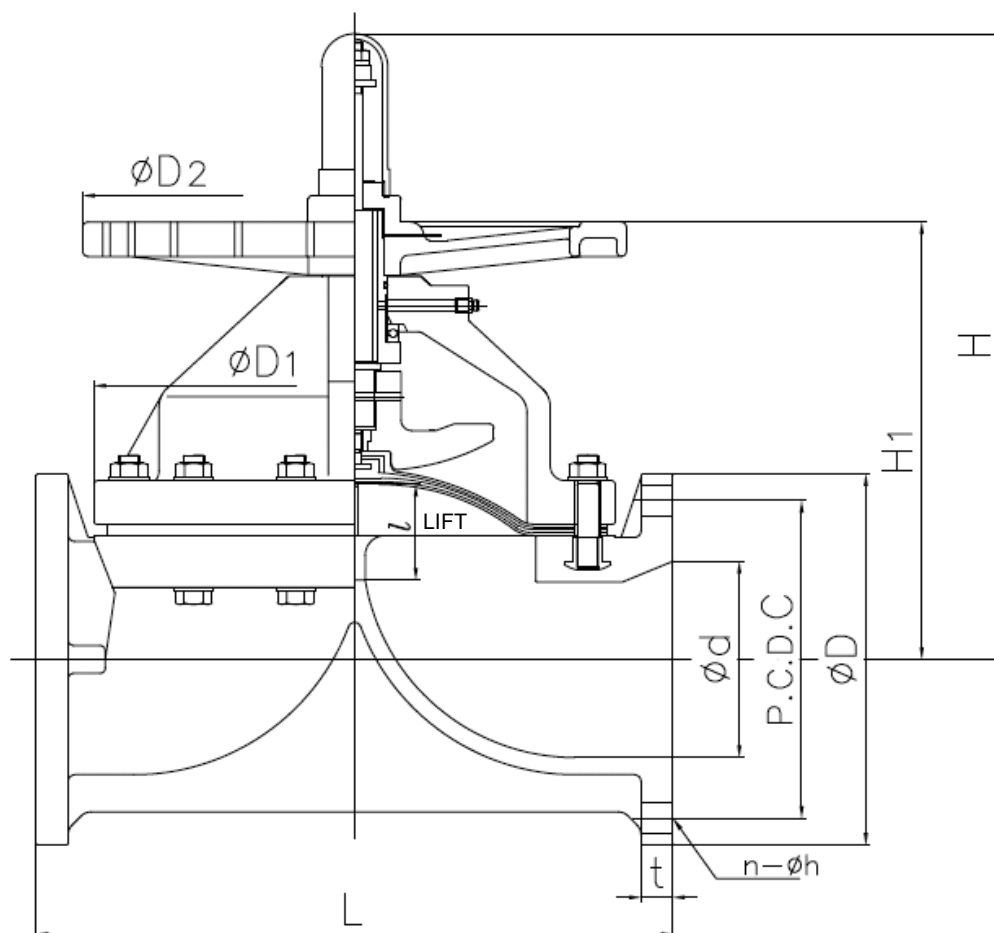
- * Concerning the allowable pressure for each temperature, material and actuator type, see the technical documents at the next page of this sheet.
- * The diaphragm may become loose due to temperature changes during long storage, operation stop or while in use. Check the conditions and then retighten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

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



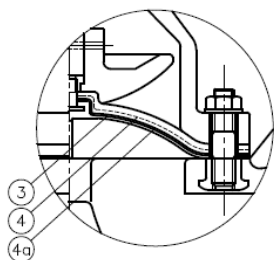
■ JIS, DIN (Unit: mm)

JIS, DIN (Unit: mm)							JIS											DIN						
mm	d	D ₁	D ₂	l	H	H ₁	JIS 5K				JIS 10K				L	t		DIN PN10				L	t	
							D	C	n	h	D	C	n	h		PVC	PP PVDF	D	C	n	h		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

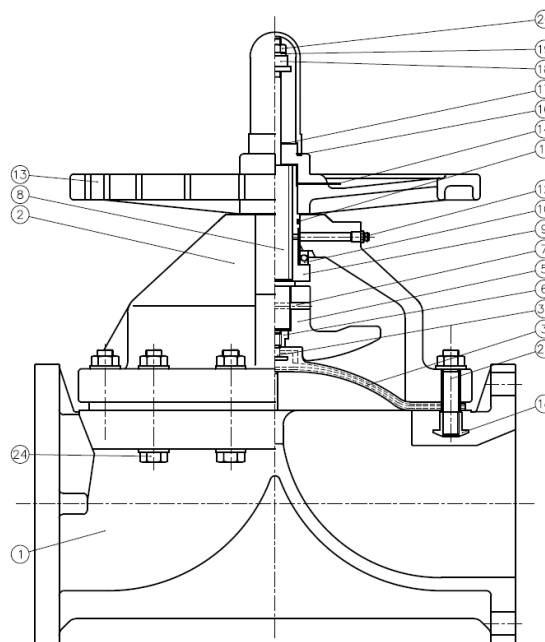
■ ANSI (Unit: inch)

								ANSI							
								ANSI CLASS150				L	t		
inch	mm	d	D ₁	D ₂	l	H	H	D	C	n	h		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
1 BODY	1	BODY / BONNET PVC / PVC PP / PP
2 BONNET	1	PVDF / PPG PVDF / PVDF
3 DIAPHRAGM	1	EPDM, PTFE, Others()
3a INSERTED METAL OF DIAPHRAGM (A)	1	STAINLESS STEEL
4 CUSHION ⁽¹⁾	1	EPDM, Others()
4a CUSHION COVER ⁽¹⁾	1	Nothing, PVDF

PART NO./NAME	QTY	MATERIAL
5 COMPRESSOR	1	PVDF
6 COMPRESSOR NUT	1	COPPER ALLOY
7 COMPRESSOR PIN	1	STAINLESS STEEL
8 STEM	1	COPPER ALLOY
9 SLEEVE (A)	1	COPPER ALLOY
10 THRUST BEARING (A)	1	HIGH CARBON CHROMIUM BEARING
11 O-RING (A)	1	NBR
12 GREASE NIPPLE	1	COPPER ALLOY
13 HAND WHEEL	1	PP
14 NAME PLATE	1	PVC

PART NO./NAME	QTY	MATERIAL
15 CAP	1	PP
16 SHEET GASKET (A)	1	EPDM
17 SHEET RING	1	STAINLESS STEEL
18 STOPPER	1	chromized STEEL
19 SPRING WASHER	1	STAINLESS STEEL
20 NUT	1	STAINLESS STEEL
21 GAUGE COVER	1	PC
23 STUD BOLT·NUT	4Sets	STAINLESS STEEL
24 BOLT·NUT (A)	-	STAINLESS STEEL
1a INSERTED NUT	4	COPPER ALLOY ⁽²⁾ STAINLESS STEEL ⁽³⁾

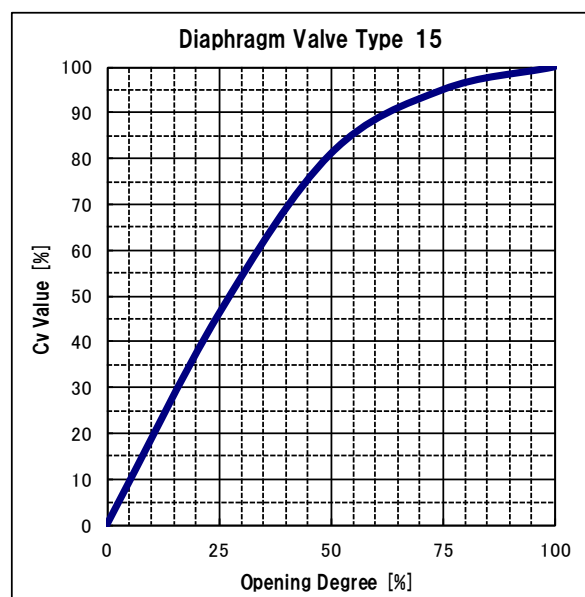
NOTE: (1) is used for PTFE Diaphragm.
(2) is used for PVC & PP body.
(3) is used for PVDF body.

Cv value for each opening degree

FULL-OPEN Cv VALUE

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

The values shown are reference
values, not guaranteed values.



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 }

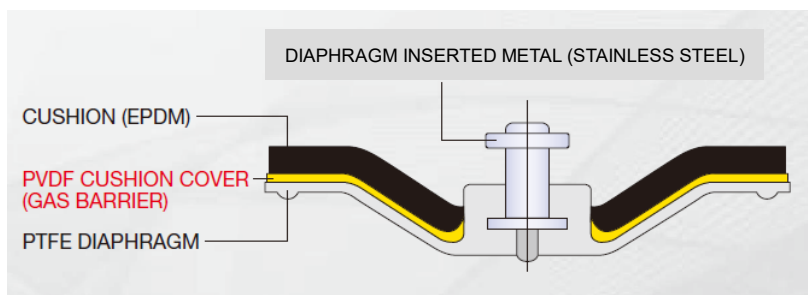
mm	inch	Rubber Diaphragm	PTFE Diaphragm
125	5	45 { 400 }	45 { 400 }
150	6	45 { 400 }	45 { 400 }

Options

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

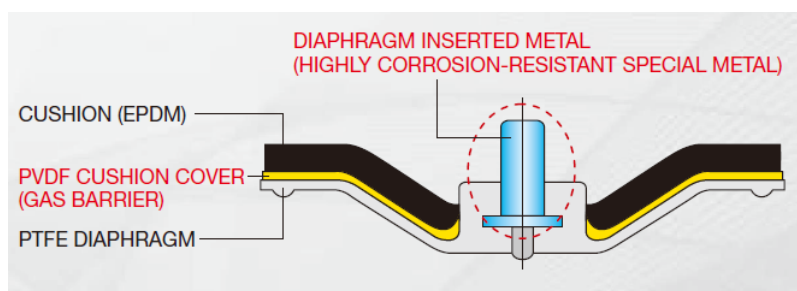
① PVDF Cushion Cover Model

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			
		PVC	PP	PVDF	PVDF
		Bonnet material			
		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	15	MH	*	*	F	*	***
V MANUAL VALVE	15 TYPE 15	MH ROUND HANDLE	U PVC P PP F PVDF G PVDF+PPG	E EPDM T PTFE	F FLANGED	1 JIS10K 5 5K D DIN J ANSI	125 125mm . 150 150mm

Installation, Operation and Maintenance Manual

For details of Installation, Operation and Maintenance, please contact our nearest distribution agent or sales office.