FINE FLOW

FLUONICS

UNGGUL PRAKARSA PRISMA

Lined Composite Plastic

Diaphragm Valve

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Lined Composite Plastic Diaphragm valve

Material Properties

Materials

PP+GF

Engineering Plastic

Engineering plastics usually have a unique combinations of properties such as heat resistance, mechanical strength, rigidity, chemical stability, self-lubrication and fire safety. They have numerous applications particularly such as in manufacturing gears and skids, in chemical plants and in car industry.

PA+GF

PPS+GF

Super Engineering Plastic

Super engineering plastics have with excellent resistance to heat, chemicals and wear. (Super engineering plastics have higher resistance to heat, chemicals and wear that engineering plastics.) They have numerous applications particularly such as in aerospace structures, semiconductor manufacturing equipment, and food and beverage processing machinery.

PFA

Perfluoroalkoxy

While PFA (Perfluoroalkoxy) has similar advantageous processing properties as in FEP (Fluorinated ethylene propylene), PFA is ten times more capable of withstanding repeated bending without fracture and has better resistance to heat (up to 260˚C) than FEP.

PTFE

Polytetrafluoroethylene

Polytetrafluoroethylene (PTFE) is a synthetic fluoropolymer of tetrafluoroethylene and a well-known brand name of PTFE-based formulas is Teflon by Chemours. PTFE has useful properties such as slippery surface, high melting point, and high resistance to attacks by various chemicals.

PVDF

Polyvinylidene Fluoride

PVDF (Polyvinylidene fluoride or polyvinylidene difluoride) has been used in special applications which require the highest purity as well as high resistance particularly to solvents, acids and hydrocarbons.

UNGGUL PRAKARSA PRISMA

Series CDI1 / CDI2

Diaphragm valve

Features

- Fully PFA Lined diaphragm valve for chemically corrosive media
- Plastic-metal hybrid structure
- Optimised flow
- Easy to clean valve interior or (해체없이 유지보수가능)
- Diaphragm Floating 구조 (집중하중을 받지 않음)
- Handwheel locking device
- Option : 다이아프램 사중막 구조

Applications

- Chemical process
- Desalination
- Water and waste water technology
- Shipbuilding
- Semiconductor
- Hazardous services (Acetic Acid, Sulfuric Acid etc.)

Series CDI1/CDI2 diaphragm valve have advanced structure (Plastic – Metal Hybrid Technology)
FINE FLOW's innovative Plastic-metal hybrid structure has longer durable service life and suitable for more aggressive environment than ordinary plastic valves.

Technical specifications

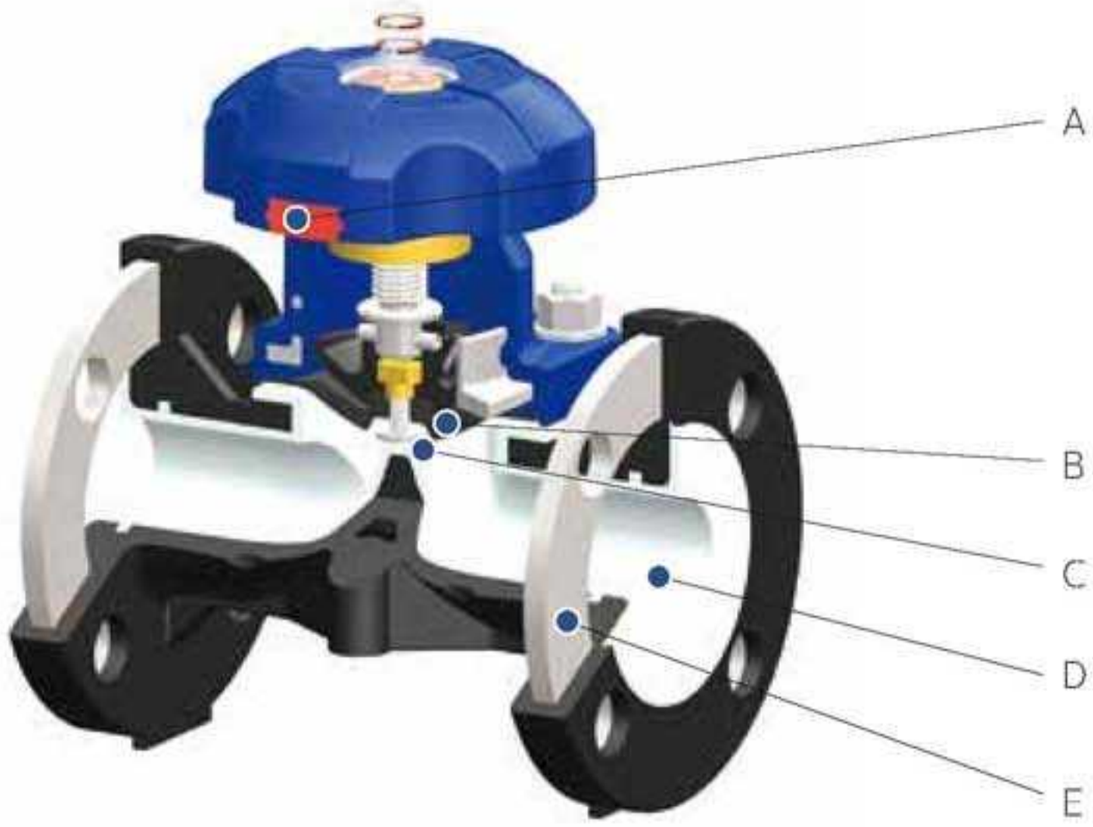
Construction	Weir type
Body type	One piece
Available size	DN15 – DN150
Face to face	DIN 3202 FINEFLOW STANDARD
End connection	DIN 2501, PN16 ANSI B16.5, Class 150 JIS B 2220, 10K
Control type	Manual, pneumatic actuator
Tightness check	API 598
Valve material	Body : PPG or PPSG with PFA Bonnet : PPG Handwheel : PPG
Seal material	PTFE Diaphragm

UNGGUL PRAKARSA PRISMA

Series **CDI1**

FINEFLOW Diaphragm

Thinner cushion rubber at bonnet sealing area ensures consistent contact pressure to bonnet and body.
Retightening for bonnet leakag
on normal condition.



Features & Benefits

Lockable Hand Lever

Using padlock, hand lever locks both full open and full close position.

PTFE-layered Rubber Diaphragm

PTFE will protect cushion rubber from damage caused of permeation.

PTFE-layered M-PTFE Diaphragm

PTFE gas barrier prevents damage to cushion rubber caused from gas permeation.

PFA / PVDF Liner

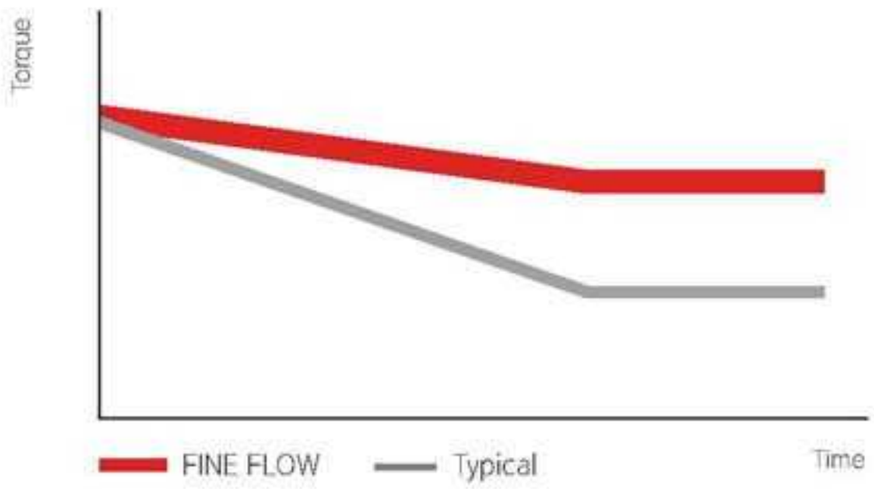
- Minimum 3mm thick as per ASTM F1545 requirement.
- Both PFA, PVDF liner available.

Advanced Structure

(Plastic - Metal Hybrid Technology)

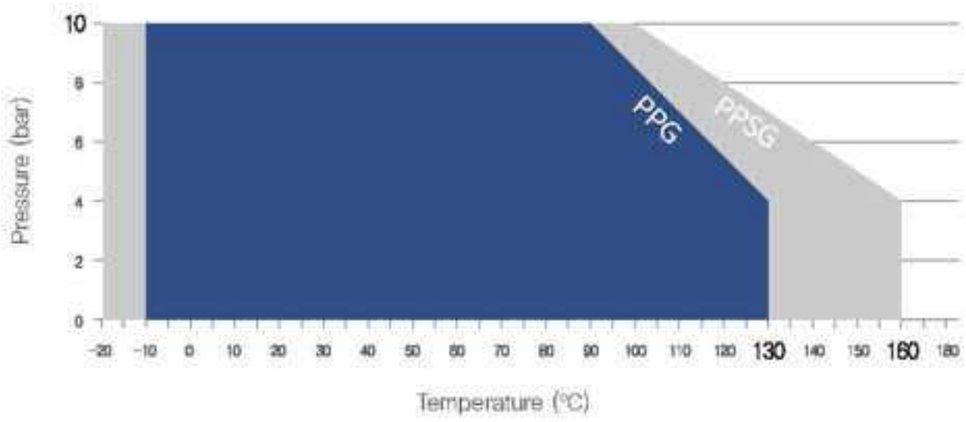
Plastic-metal hybrid structure has longer durable service life and suitable for more aggressive environment than ordinary plastic valve.

Bonnet Bolting Torque



Pressure - Temperature Chart

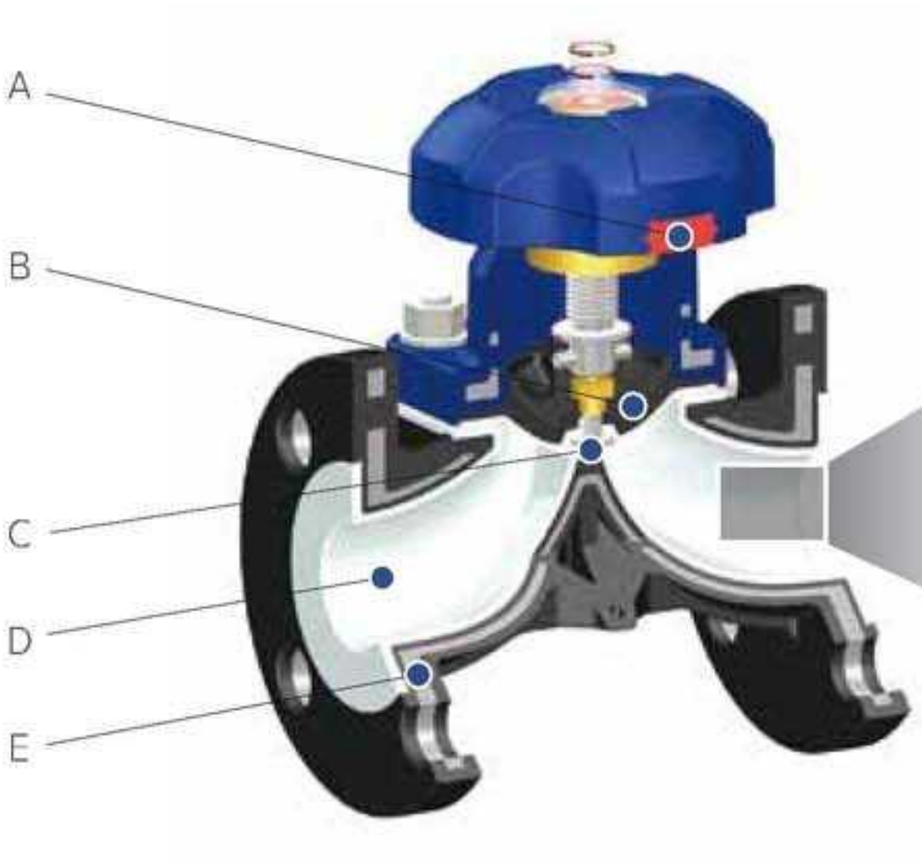
Series CDI1



UNGGUL PRAKARSA PRISMA

Series **CDI2**

FINEFLOW Optimized flow



Heavy duty service

Series CDI2 is suitable
for severe service conditions

Cv value of CDI2
Model increased 70%
compared to CDI1 model

Cv-Values

DN	Cv	
	CDI1	CDI2
15	4	
20	8	
25	10	19
40	25	41
50	40	72
65	65	
80	105	
100	225	
150	250	

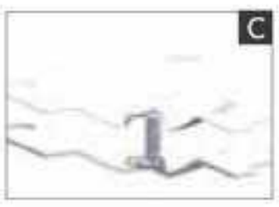
Features & Benefits

Lockable Hand Lever

Using padlock, hand lever locks in
both full open and full close position.

PTFE-layered Rubber Diaphragm

PTFE will protect cushion rubber from damage
caused of permeation.



PTFE-layered M-PTFE Diaphragm

PTFE gas barrier prevents damage to
cushion rubber caused from gas permeation.

PFA / PVDF Liner

- Minimum 3mm thick as per ASTM F1545 requirement.
- Both PFA, PVDF liner available.

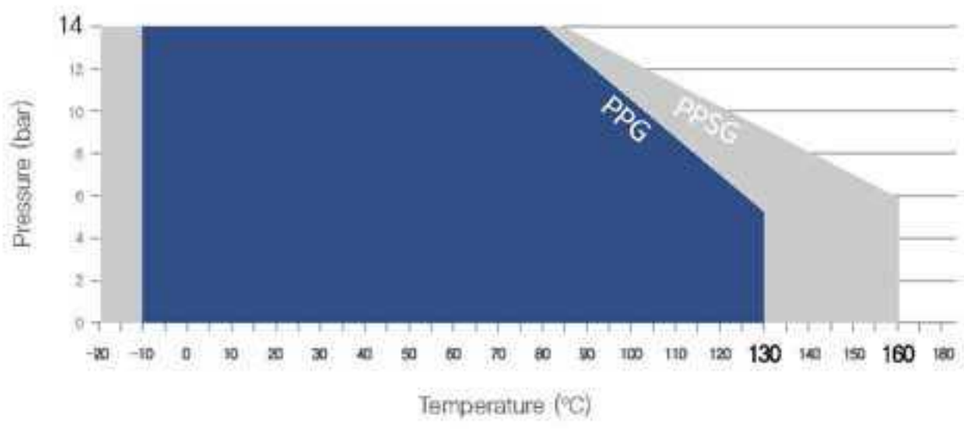
Advanced Structure

(Plastic - Metal Hybrid Technology)

Plastic-metal hybrid structure has longer durable service life and suitable for more aggressive environment than ordinary plastic valve.

Pressure - Temperature Chart

Series CDI2



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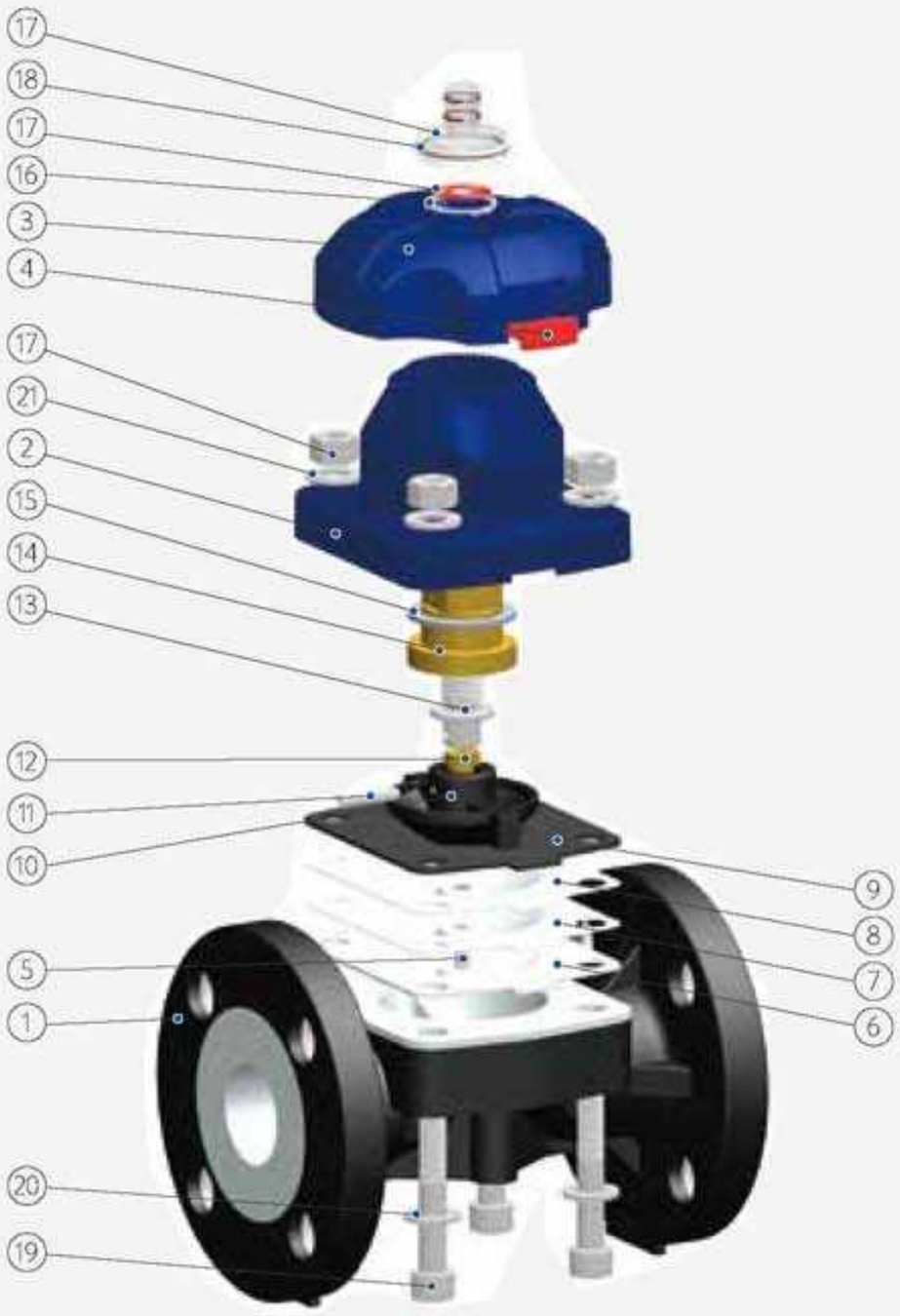
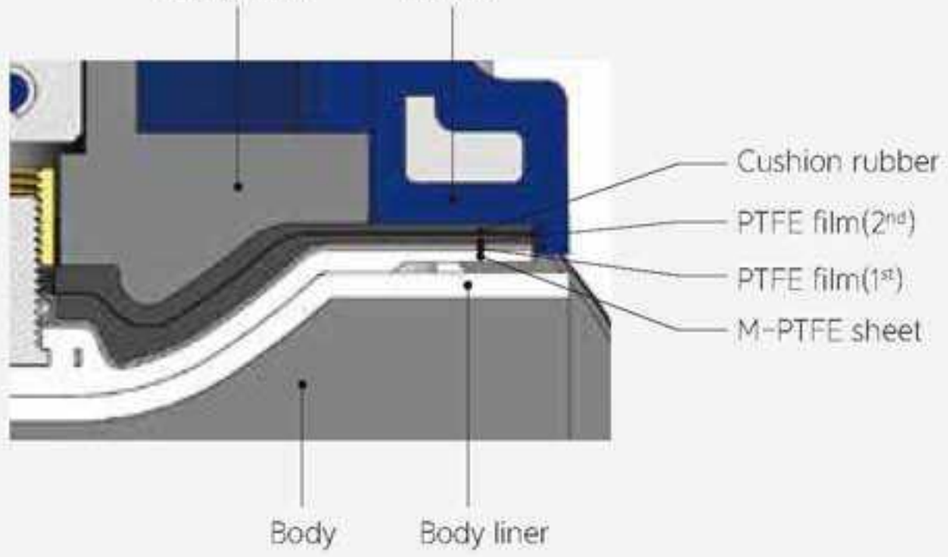
Structure & Specification

Series CDI1/CDI2



Diaphragm options



Standard (2-layered diaphragm)
- M-PTFE sheet
- Cushion rubber

Option-1 (3-layered diaphragm)
- M-PTFE sheet
- PTFE film(1st)
- Cushion rubber

Option-2 (4-layered diaphragm)
- M-PTFE sheet
- PTFE film(1st)
- PTFE film(2nd)
- Cushion rubber

Lined Composite Plastic Diaphragm Valve Series CDI1 / CDI2

No.	Description	Material	No.	Description	Material
1	Body	PPG / PPSG WITH PFA	12	Floating connection	BRASS
2	Bonnet	PPG / PPSG	13	Spindle	Stainless Steel
3	Handwheel	PPG	14	Spindle bushing	BRASS
4	Locking plate	PAG	15	Bushing bearing	POM
5	Sheet bolt	Stainless Steel/Ti-Pd	16	Snap ring	Stainless Steel
6	PTFE diaphragm	M-PTFE	17	Nameplate sticker	AL
7	Film diaphragm	PTFE	18	Indicator cap	PC
8	Film diaphragm	PTFE	19	O-ring	FKM
9	Rubber diaphragm	EPDM/FKM	20	Bolt	Stainless Steel
10	Compressor	PAG/PPSG	21	Flat washer	Stainless Steel
11	Compressor pin	Stainless Steel	22	Nut	Stainless Steel

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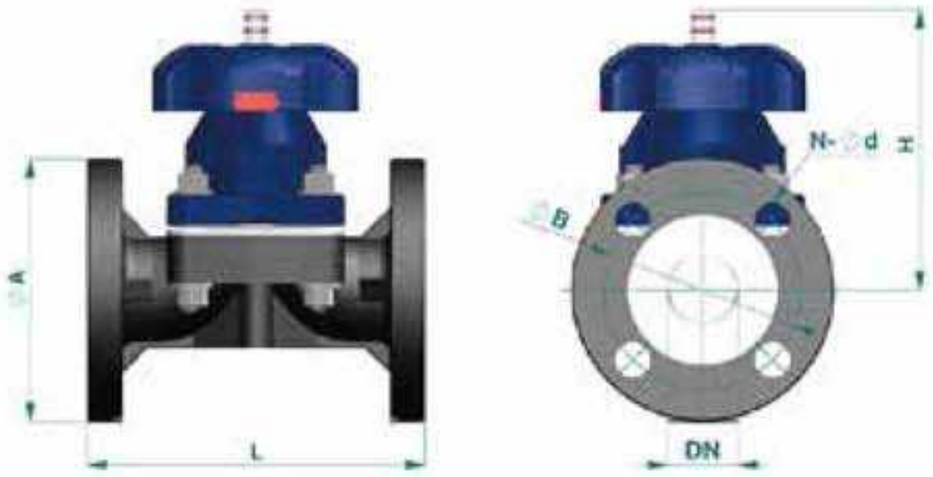
Dimension



DN	ØA			ØB			L						H	N-Ød			Ref.
	ANSI	JIS	DIN	ANSI	JIS	DIN	CDI1			CDI2				ANSI	JIS	DIN	
15	89	99	95	60.4	70	65			130				120	4-16	4-16	4-14	A
20	99	105		70	75				150				130	4-16	4-15		B
25	108	125	115	79.2	90	85	130	150	160		147	160	140	4-16	4-19	4-14	C
40	127	140	150	98.5	105	110			200		175	200	160	4-16	4-19	4-18	D
50	155	155	165	120		125	200	210	230		200	230	190	4-19	4-19	4-18	E
65	178		185	140		145			290				240	4-19		4-18	F
80	190.5	185	200	152.4	150	160	263	280	310				280	4-19	8-19	8-18	G
100	229	210	220	190.5	175	180	328	340	350				350	8-19	8-19	8-18	H
150		285			240			480					400		8-23		J

Ordering information

Autuation	Ref.
Manual	M
Automation	A

Type	Ref.
CDI1	CDI1
CDI2	CDI2

Connection	Ref.
Flanged	F
Automation	A

Body material	Ref.
PPG	P
PPSG	S

Diaphragm	Ref.
Standard	1
Option-1	2
Option-2	3

Operating	Ref.
Handwheel	H
Pneumatic	N

Standard	Ref.
ANSI 150 lbs	A
DIN PN 16	16
JIS 10K	J

Order example	M	CDI1	F	P	D1	H	A	C
Actuation	M							
Type		CDI1						
Connection			F					
Body material				P				
Diaphragm					D1			
Operating						H		
Standard							A	
Size								C

High Performance and Creative Technology Company

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(주)플로닉스

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