

Diaphragm Piston Valve

VNE Series



Standard Specifications

Item	15A-VNE-3BG	
Action Type	NC (Normally Closed) Type	
Operating Fluid	Air, Water	
Fluid Viscosity	mm ² /s	≤500
Operating Pressure	-0.1~0.5MPa (A) 、 -0.1~0.4MPa(B)	
Pressure Resistance (Hydrostatic)	MPa	1.0
Fluid Temperature	-10 ~ 50 (no freezing)	
Ambient Temperature	°C 10 ~ 50	
Valve Seat Leakage	120Pa(T80)	
Connection Port Size	Rc3/8	
Weight	kg	0.32
Mounting Method	Bottom threaded hole M4	
Pilot Fluid	Air	
Pilot Pressure	MPa	0.4 ~ 0.5
Pilot Port Size	6mm	
Vacuum Flow Rate	L/min	120(-100kPa)

JIS Symbol



Product Features

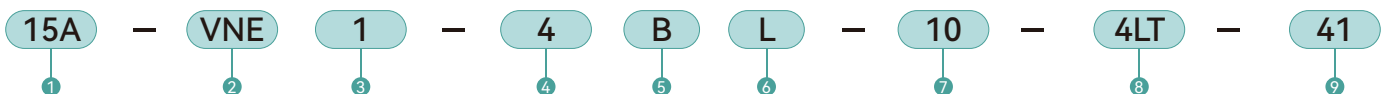
Normally closed type
Body port size Rc3/8
Operating Fluid: Air, inert gas, water, non-corrosive liquids

Mode Code System-I Series



1 Copper-Free	2 Model Type	3 Port Size	4 Orifice Diameter	5 Body Material	6 Other Options				
Copper-Free Series	VNE	3	Rc3/8 "	B	8	G	Stainless Steel	No Symbol	No Option
								B	Mounting Plate

Mode Code System-II Series



1 Copper-Free	2 Model	3 Action Type	4 Port Size	5 Orifice Diameter	6 Manifold Material	7 Supply/Exhaust Position ^[Note 4]	8 Number of stations	9 Number of inlets and outlets						
15A	VNE	1 Normally Closed	3 RC3/8	B	8	S Stainless Steel ^[Note 1]	Pilot Supply Direction		Blank	Singlevalve	Blank	1 in / 1 out ^[Note 3]		
							Blank	BottomSide					0	RightSide
			0	RightSide ^[Note 2]	1	Lowerside	3LT	3-station manifold valve	31	3 in / 1 out ^[Note 3]				
		3 Double-acting	4 RC1/2	C	12	L Aluminum alloy	1	Lowerside ^[Note 2]	2	LeftSide	4LT	4-station manifold valve	41	4 in / 1 out ^[Note 3]
							2	Left Side ^[Note 2]	3	TopSide	5LT	5-station manifold valve	51	5 in / 1 out ^[Note 3]
			3	Top Side ^[Note 2]	4	BottomSide	6LT	6-station manifold valve	61	6 in / 1 out ^[Note 3]				

[Note]: Maximum number of manifold stations is 6. Please contact us for special requirements.

[Note 1]: For 8mm port size single valve, stainless steel manifold plate material is optional.

[Note 2]: For 6/5/4/3/2-station manifolds, pilot supply can only be from port 1/3 direction. For single manifold, pilot supply can be from 0/1/2/3 directions. For multi-station manifolds with 1 inlet, pilot supply can be from 0/2 directions.

[Note 3]: For X-in Y-out configurations (e.g., 4 in 1 out): Pilot supply direction is from base valve port 1/3 direction; 1 outlet direction defaults to 0 direction; 2 outlet direction can be 0/2 direction (must be specified). (For 4 in 4 out): Outlet direction corresponds to load direction 1/3. (For 1 in 4 out): Outlet direction corresponds to load direction 1/3. (For 2 in 4 out): Pilot supply direction is from base valve port 1/3 direction. For multi-station manifolds, inlet and outlet directions cannot be the same.

* Please contact us for other special requirements regarding pilot supply directions.

[Note 4]: Refer to the right figure "Pilot Direction" for outlet direction.

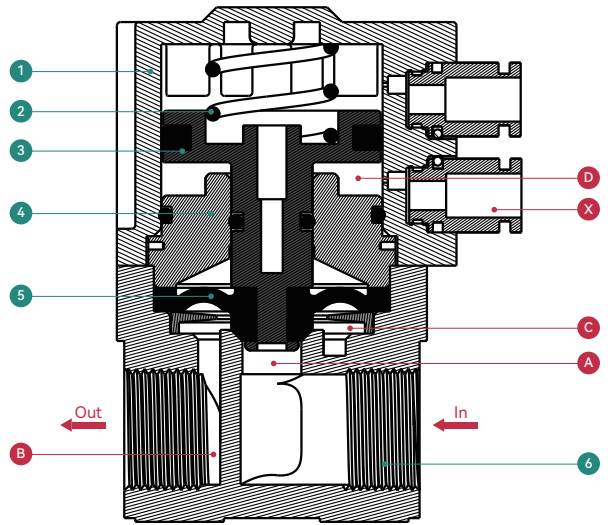
Diaphragm Piston Valve

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VNE Diaphragm Valve Operating Principle & Structure

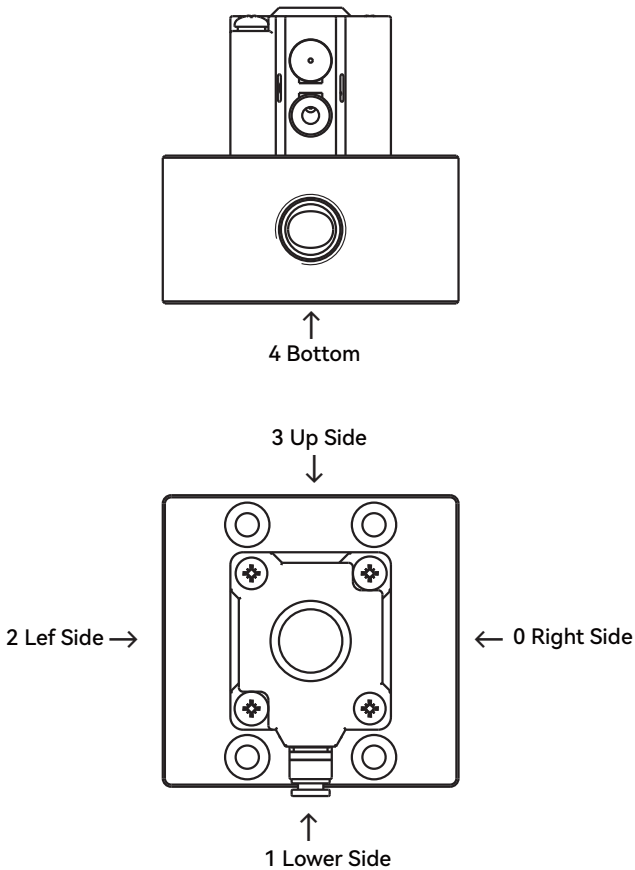
► This model is an normally closed diaphragm valve. When no positive pilot pressure is applied to port X, the piston is pressed by the compression spring, causing the diaphragm to seal against the valve body orifice, thus blocking the connection between chamber A and chambers B/C. When positive pilot pressure is applied, the pressure in chamber D becomes higher than atmospheric pressure, pushing the piston upward. The diaphragm is lifted, allowing chambers A and B/C to connect.

1	Cylinderbody	2	Compressionspring	3	Piston
4	Adapter	5	Diaphragm	6	Valvebody



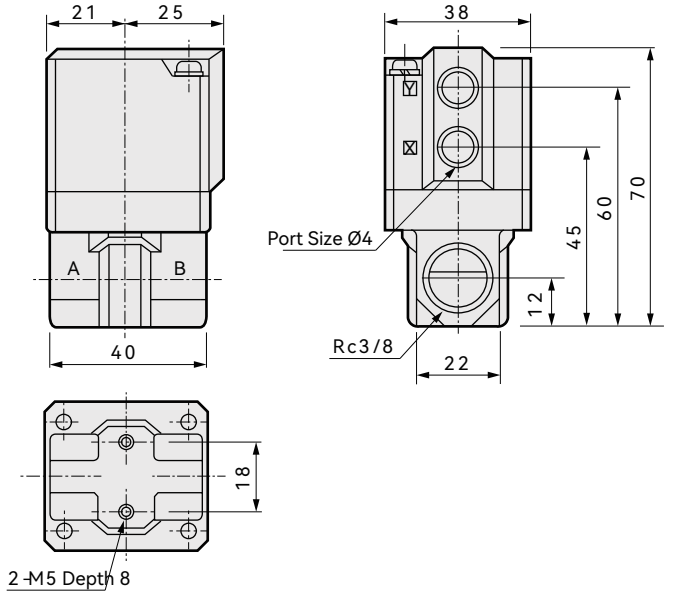
Pilot Direction

► Supply/Exhaust Position

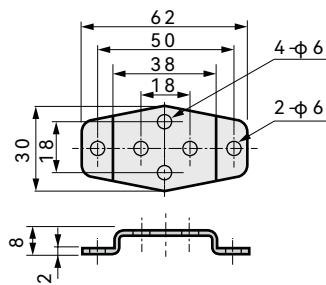


Outline Drawing (mm)

► 15A-VNE-3BG



► Mounting plate (Material: Stainless steel)



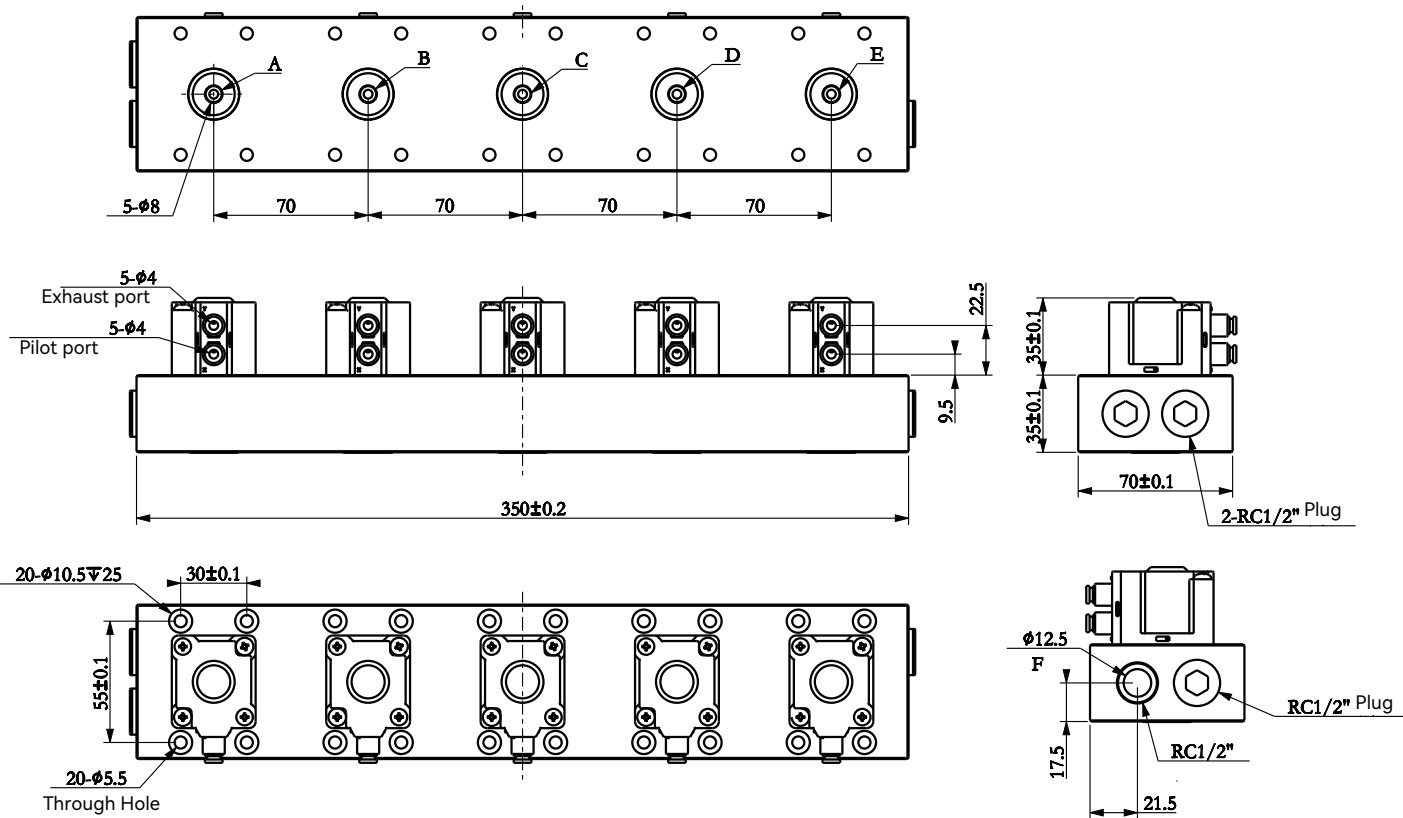
Diaphragm Piston Valve VNE Series

VNE Extended Series

► 15A-VNE1-4BL-0-5LT-51

Technical Notes:

1. This pneumatically operated valve requires operating air pressure of 0.4–0.5MPa. The medium through the valve body is gas.
2. This valve body is normally closed. The medium flows from A or B or C or D or E to F.
3. The working pressure at ports A, B, C, D, E is -0.1 to 0.5MPa. The working pressure at port F is -0.1 to 0.4MPa.
4. Vacuum flow rate at ports A, B, C, D, E: 150L/min(-100kPa).



Diaphragm Piston Valve

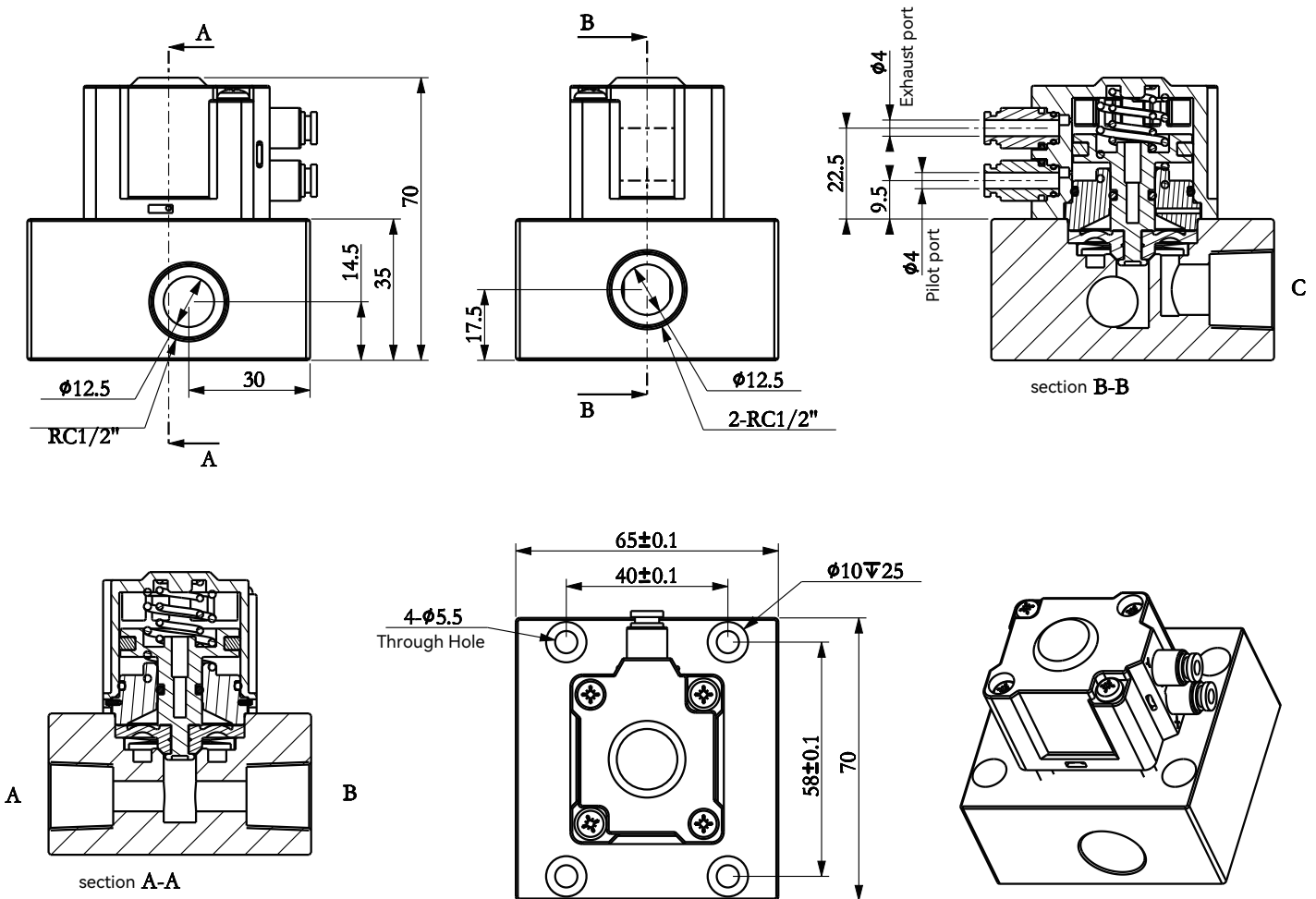
VNE Series

VNE Extended Series

► 15A-VNE1-4BL-21

Technical Notes:

1. This pneumatically operated valve requires operating air pressure of 0.4–0.5MPa. The medium through the valve body is gas.
2. This valve body is normally closed. The medium flows from A or B to C.
3. The working pressure at ports A and B is -0.1 to 0.5MPa. The working pressure at port C is -0.1 to 0.4MPa.
4. Vacuum flow rate at ports: 150L/min(-100kPa).



Diaphragm Piston Valve

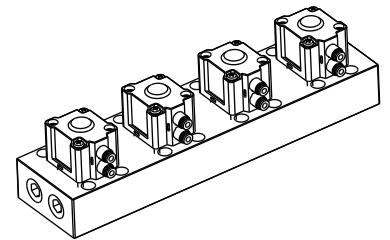
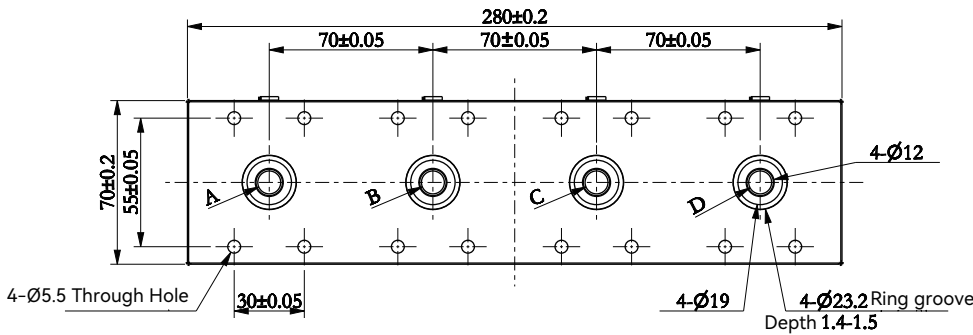
VNE Series

VNE Extended Series

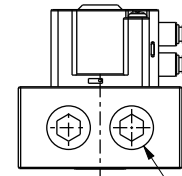
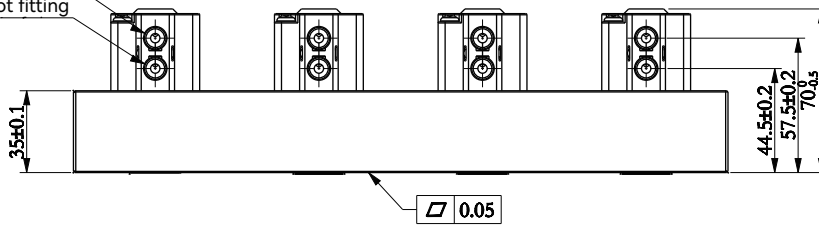
► 15A-VNE1-4CL-0-4LT-41

Technical Requirements:

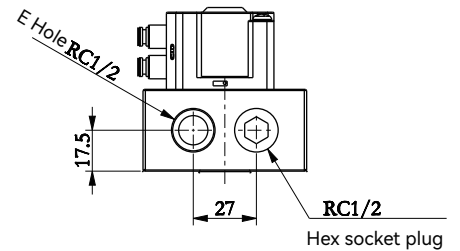
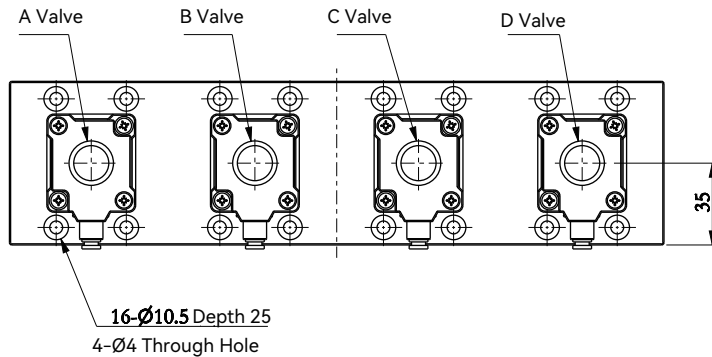
1. Operating air pressure: 0.4–0.5MPa.
2. Valve ports are normally closed.
3. Working pressure at ports A,B,C,D: -0.1 to 0.5MPa.
4. Working pressure at port E: -0.1 to 0.4MPa.
5. Ports A,B,C,D can be opened/closed via the pilot valve to connect to port E.
6. Vacuum flow rate at ports A,B,C,D: 250L/min(-100kPa).



4-Ø4 Cylinder exhaust fitting
4-Ø4 Cylinder pilot fitting



2-RC1/2
Hex socket plug



RC1/2
Hex socket plug

Diaphragm Piston Valve

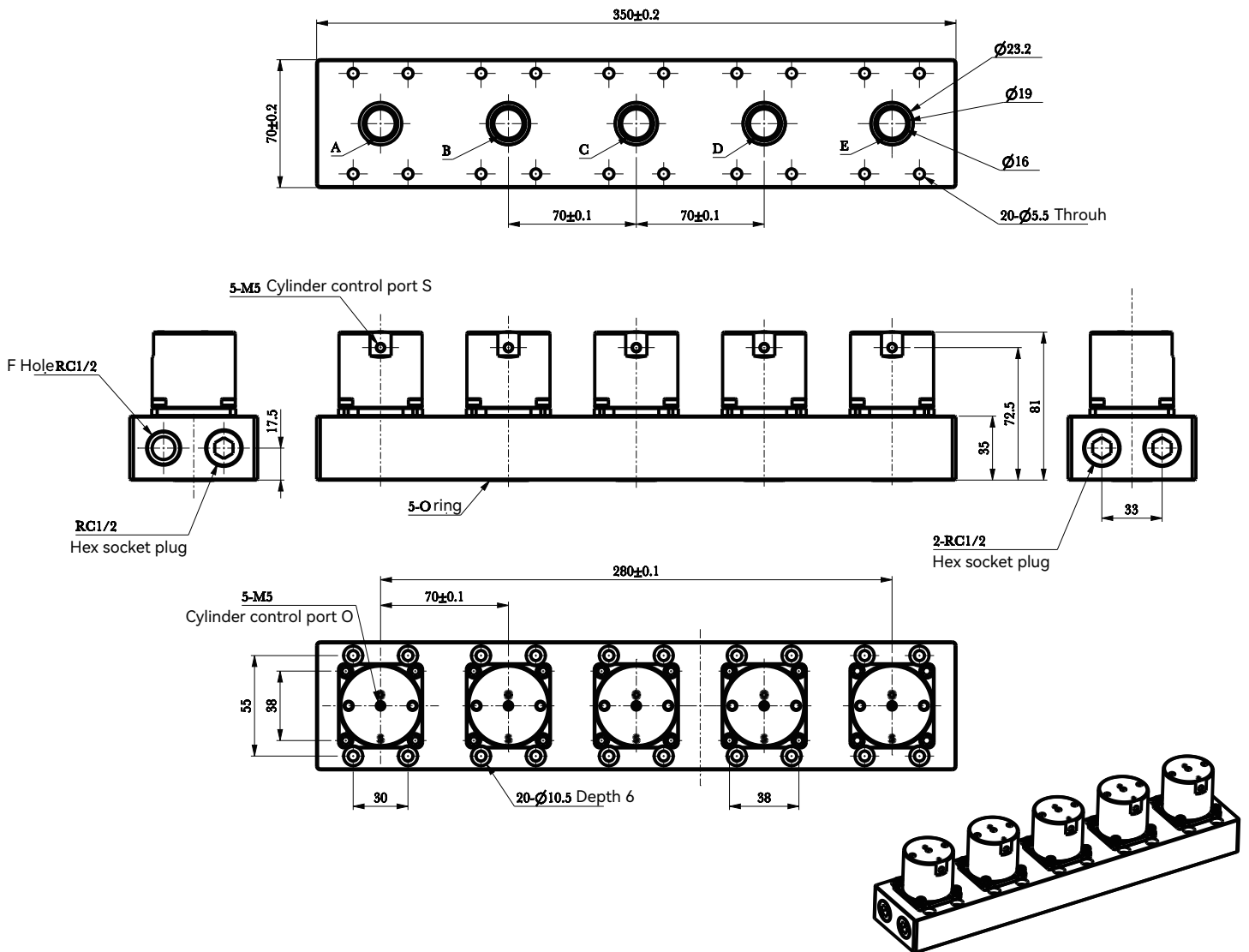
VNE Series

VNE Extended Series

► 15A-VNE3-4DL-0-5LT-51

Technical Requirements:

1. Operating air pressure for pilot: 0.5MPa.
2. Valve ports are double-acting (pilot operated).
3. Working pressure at ports A,B,C,D,E: -0.1 to 0.5MPa.
4. Ports A,B,C,D,E can be opened/closed via the pilot valve to connect to port F.



Diaphragm Piston Valve

VNE Series

VNE Extended Series

► 15A-VNE1-4DL-0-5LT-51

Technical Requirements:

- 1、 Pilot port operating air pressure: 0.3–0.7MPa.
- 2、 Valve ports are single-acting, normally closed.
- 3、 A Working pressure at ports A,B,C,D,E: -0.1 to 1MPa.;
- 4、 Working pressure at port F: -0.1 to 0.7MPa.
- 5、 Ports A,B,C,D,E can be opened/closed via the pilot valve to connect to port F.

