

## GENERAL

**ALIADP** DPE series is a diaphragm seal product combining APT8000PE / ADP9000PE / ADP9000LPE transmitter, which designed for the high-viscosity/ granular/ high-temp./ high-corrosivity situation. DPE series diaphragm seal assembles Alia pressure/DP transmitter to form direct-mount / capillary-connections style.

## FEATURES

- ❑ The maximum temperature comes up to 280 °C
- ❑ Multiple connection modes - Flange style / Tri-Clamp style
- ❑ Multiple diaphragms/alternative connection material
- ❑ Vegetable oil can be used for fill fluid for food industry
- ❑ Extreme hot and cold temperature
- ❑ Stainless Steel with PPC coating capillary
- ❑ IDF Tri-Clamp or union screw connection for food industry
- ❑ Oil-free treatment & water-free treatment
- ❑ Fast and dynamic response
- ❑ Improved performance, increased accuracy and great stability

## STANDARD SPECIFICATION

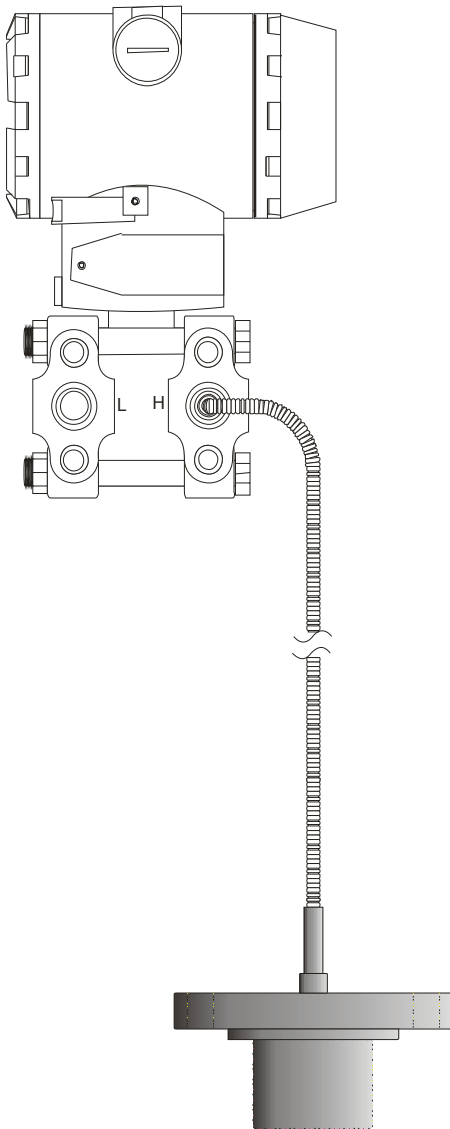
- Process Fluid : Liquid, Gas or Vapor
- Application : Liquid Level, Differential Pressure, Gauge Pressure, Absolute Pressure
- Material
  - Flange : Carbon steel
  - : Stainless Steel 304
  - : Stainless Steel 316
  - Diaphragms : Stainless Steel 316L
  - : Hastelloy B
  - : Hastelloy C
  - : Tantalum
  - : PTFE-coated Tantalum Diaphragm
  - Capillary : Stainless Steel with PVC coating
- Flange Size : 40mm, 50mm, 80mm, 100mm
- : 1-1/2", 2", 3", 4"
- Process Connection : Flange
- Flange Rating : JIS 10K / JIS 20K / JIS 40K
- : ANSI 150# / ANSI 300# / ANSI 600#
- : DIN PN10 / PN16 / PN25 / PN40
- : Tri Clamp (DIN32676 / ISO2852)
- Extension Length : 2", 3", 4"
- Accuracy : +/-0.075% of Span
- Stability : +/-0.15% of URL for 2 years

- Installation Style
  - Direct-mount : APT8000PE only
  - One-sided Capillary : APT8000PE / ADP9000PE / ADP9000LPE
  - Two-sided Capillaries : ADP9000PE only
- Capillary Length : 1.0 M ~ 10 M
- Max. Temperature
  - Direct-Mount : -20 to 80 °C
  - Remote Diaphragm : -40 to 280 °C
- Max. Pressure : 8.0 MPa
- Fill Fluid and Maximum Temperature
  - Silicone (Max. Temperature 130 °C)
  - HT Silicone (Max. Temperature 280 °C)
  - Fluorine (Max. Temperature 160 °C)
  - Vegetable Oil (Max. Temperature 130 °C)
- Ambient Temperature : +/-0.18% ~ +/-0.5% of span per 20 °C Effect
- Time Response : Less than 1.12 seconds
- Options
  - Water-free Treatment : Wetted parts are water-free treated in manufacturing
  - Oil-free Treatment : Wetted parts are oil-free treated in manufacturing
  - : Ambient Temperature Inspection

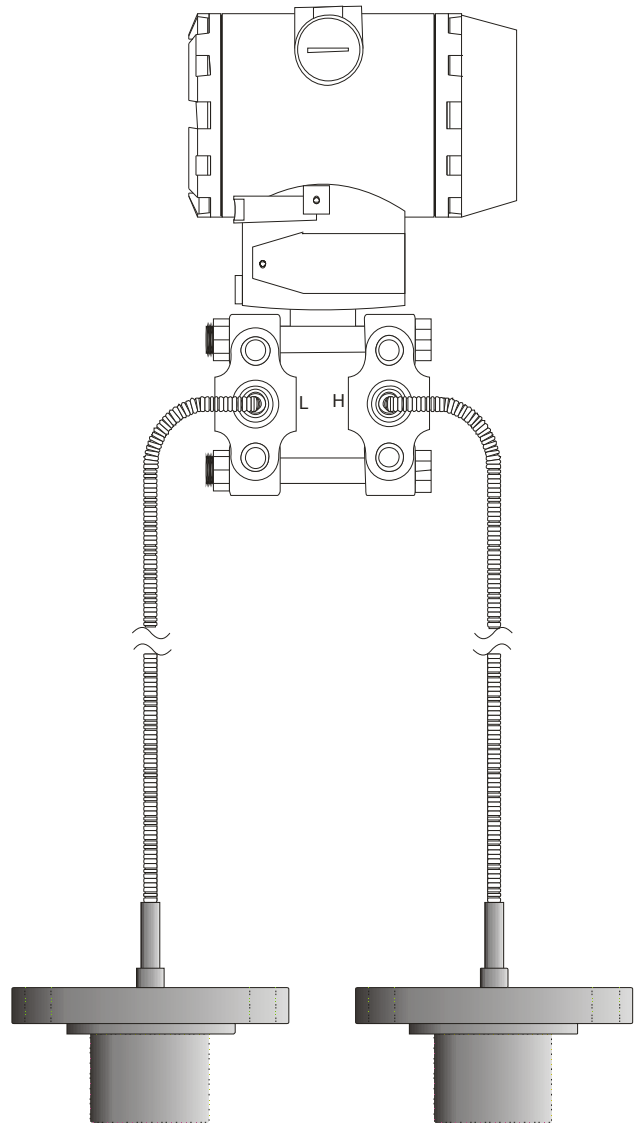


## MEASURING RANGE & MAX. STATIC PRESSURE

| Direct-Mount Diaphragm                                                               | Min. Range   | Max. Range     | Min. Range       | Max. Range        | Max. Static Pressure |
|--------------------------------------------------------------------------------------|--------------|----------------|------------------|-------------------|----------------------|
| Pressure Transmitter<br><b>APT8000PE</b> with <b>DPE</b> Series                      | 0 - 10 kPa   | 0 - 100 MPa    | 0 - 1019.7 mmH2O | 0 - 10197 MH2O    | 100 MPa              |
|                                                                                      | 0 - 100 mbar | 0 - 1000 bar   | 0 - 40.15 InH2O  | 0 - 401463 InH2O  |                      |
|                                                                                      | 0 - 1.45 psi | 0 - 14504 psi  | 0 - 0.1 Kg/cm2   | 0 - 1020 kg/cm2   |                      |
| Remote Diaphragm Seal                                                                | Min. Range   | Max. Range     | Min. Range       | Max. Range        | Max. Static Pressure |
| Pressure Transmitter<br><b>APT8000PE</b> with <b>DPE1</b> Series                     | 0 - 6.0 kPa  | 0 - 8.0 MPa    | 0 - 611.82 mmH2O | 0 - 815.76 MH2O   | 8.0 MPa              |
|                                                                                      | 0 - 60 mbar  | 0 - 80 bar     | 0 - 24.088 InH2O | 0 - 32117 InH2O   |                      |
|                                                                                      | 0 - 0.87 psi | 0 - 1160.3 psi | 0 - 0.061 Kg/cm2 | 0 - 81.578 Kg/cm2 |                      |
| Differential Pressure Transmitter<br><b>ADP9000PE</b> with <b>DPE1 / DPE2</b> Series | 0 - 6.0 kPa  | 0 - 8.0 MPa    | 0 - 611.82 mmH2O | 0 - 815.76 MH2O   | 8.0 MPa              |
|                                                                                      | 0 - 60 mbar  | 0 - 80 bar     | 0 - 24.088 InH2O | 0 - 32117 InH2O   |                      |
|                                                                                      | 0 - 0.87 psi | 0 - 1160.3 psi | 0 - 0.061 Kg/cm2 | 0 - 81.578 Kg/cm2 |                      |
| Level Transmitter<br><b>ADP9000LPE</b> with <b>DPE1</b> Series                       | 0 - 6.0 kPa  | 0 - 8.0 MPa    | 0 - 611.82 mmH2O | 0 - 815.76 MH2O   | 8.0 MPa              |
|                                                                                      | 0 - 60 mbar  | 0 - 80 bar     | 0 - 24.088 InH2O | 0 - 32117 InH2O   |                      |
|                                                                                      | 0 - 0.87 psi | 0 - 1160.3 psi | 0 - 0.061 Kg/cm2 | 0 - 81.578 Kg/cm2 |                      |

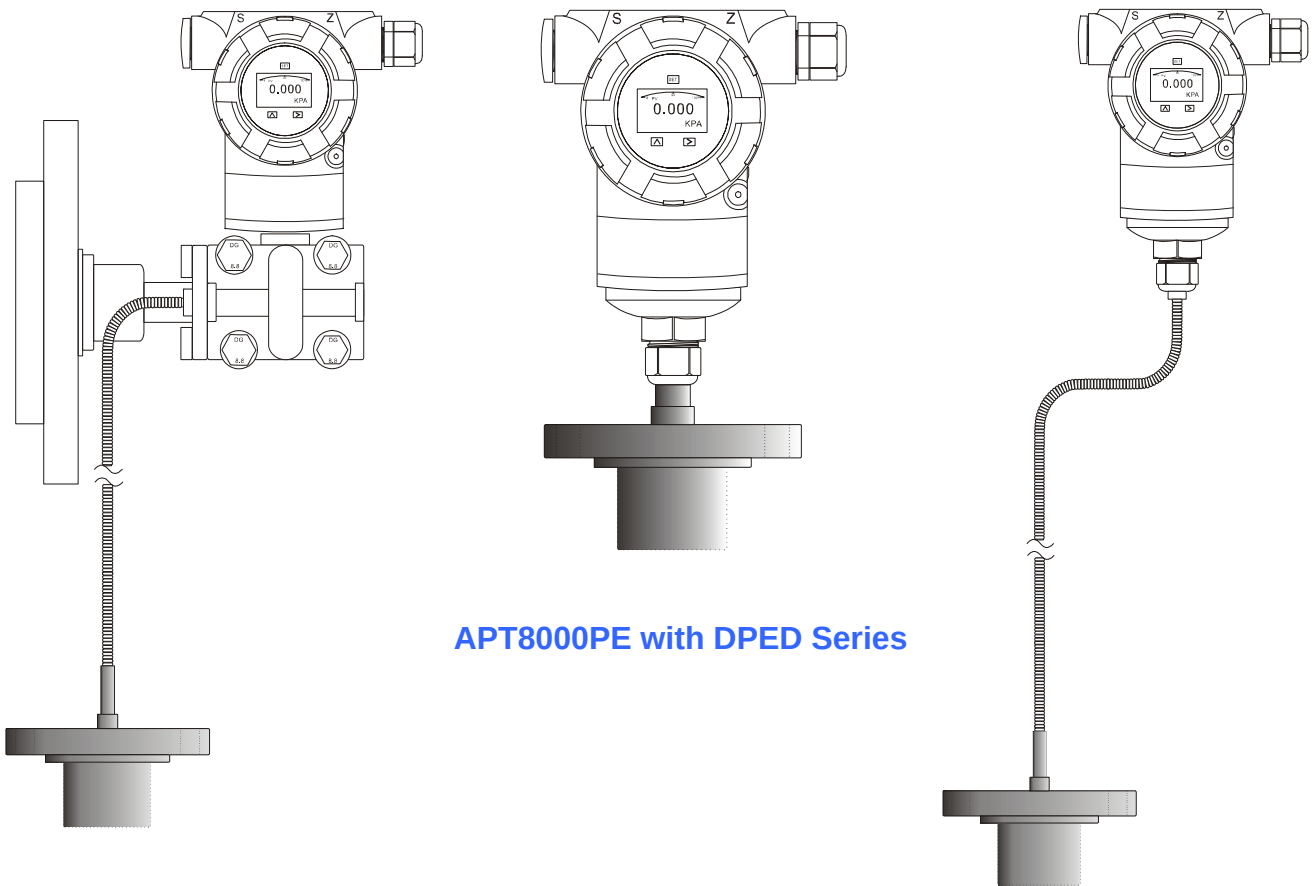


**ADP9000PE with DPE1 Series**



**ADP9000PE with DPE2 Series**

## DIMENSIONS



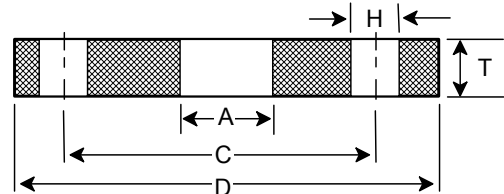
APT8000PE with DPED Series

ADP9000LPE with DPE1 Series

APT8000PE with DPE1 Series

## FLANGE TABLES

| Flange style     | Dimension of Flange |       |      | Bolt |    | Flange style | Dimension of Flange |     |    | Bolt |    |
|------------------|---------------------|-------|------|------|----|--------------|---------------------|-----|----|------|----|
|                  | C                   | D     | T    | H    | NO |              | C                   | D   | T  | H    | NO |
| 1-1/2" JIS 10K   | 105                 | 140   | 16   | 19   | 4  | DN40 PN10    | 110                 | 150 | 18 | 18   | 4  |
| 2" JIS 10K       | 120                 | 155   | 16   | 19   | 4  | DN50 PN10    | 125                 | 165 | 20 | 18   | 4  |
| 3" JIS 10K       | 150                 | 185   | 18   | 19   | 8  | DN80 PN10    | 160                 | 200 | 24 | 18   | 8  |
| 4" JIS 10K       | 175                 | 210   | 18   | 19   | 8  | DN100 PN 10  | 180                 | 220 | 20 | 18   | 8  |
| 1-1/2" JIS 20K   | 105                 | 140   | 16   | 19   | 4  | DN40 PN16    | 110                 | 150 | 18 | 18   | 4  |
| 2" JIS 20K       | 120                 | 155   | 16   | 19   | 4  | DN50 PN16    | 125                 | 165 | 20 | 18   | 4  |
| 3" JIS 20K       | 160                 | 200   | 20   | 23   | 8  | DN80 PN16    | 160                 | 200 | 24 | 18   | 8  |
| 4" JIS 20K       | 185                 | 225   | 22   | 23   | 8  | DN100 PN16   | 180                 | 220 | 24 | 18   | 8  |
| 1-1/2" JIS 40K   | 120                 | 160   | 24   | 23   | 4  | DN40 PN25    | 110                 | 150 | 18 | 18   | 4  |
| 2" JIS 40K       | 130                 | 165   | 26   | 19   | 8  | DN50 PN25    | 125                 | 165 | 20 | 18   | 4  |
| 3" JIS 40K       | 170                 | 210   | 32   | 23   | 8  | DN80 PN25    | 160                 | 200 | 24 | 18   | 8  |
| 4" JIS 40K       | 205                 | 250   | 36   | 25   | 8  | DN100 PN25   | 190                 | 235 | 24 | 22   | 8  |
| 1-1/2" ANSI 150# | 98.6                | 127   | 18   | 15.7 | 4  | DN40 PN40    | 110                 | 150 | 22 | 18   | 4  |
| 2" ANSI 150#     | 120.7               | 152.4 | 19   | 19.1 | 4  | DN50 PN40    | 125                 | 165 | 24 | 18   | 4  |
| 3" ANSI 150#     | 152.4               | 190.5 | 24   | 19.1 | 4  | DN80 PN40    | 160                 | 200 | 24 | 18   | 8  |
| 4" ANSI 150#     | 190.5               | 228.6 | 24   | 19.1 | 8  | DN100 PN40   | 190                 | 235 | 24 | 22   | 8  |
| 1-1/2" ANSI 300# | 114.3               | 155.4 | 24.6 | 22.4 | 4  |              |                     |     |    |      |    |
| 2" ANSI 300#     | 127                 | 165.1 | 26.4 | 19.1 | 8  |              |                     |     |    |      |    |
| 3" ANSI 300#     | 168.1               | 209.6 | 32.4 | 22.4 | 8  |              |                     |     |    |      |    |
| 4" ANSI 300#     | 200.2               | 254   | 35.8 | 22.4 | 8  |              |                     |     |    |      |    |



## Model SELECTION GUIDE

| DPE Series                 |       |   |   |   |   |   |    |    |    |                                                                     |
|----------------------------|-------|---|---|---|---|---|----|----|----|---------------------------------------------------------------------|
| Example: DPE2-A22B4-N05-W  |       |   |   |   |   |   |    |    |    |                                                                     |
| DPE Series                 | X-    | X | X | X | X | X | -X | XX | -X | Description                                                         |
| Installation Style         | D-    |   |   |   |   |   |    |    |    | Direct-mount (APT8000PE Only)                                       |
|                            | 1-    |   |   |   |   |   |    |    |    | One-sided Capillary Connects Remote Diaphragm Seal                  |
|                            | 2-    |   |   |   |   |   |    |    |    | Two-sided Capillaries Connect Remote Diaphragm Seal(ADP9000PE Only) |
| Process Connection         | 1     |   |   |   |   |   |    |    |    | PN10                                                                |
|                            | 2     |   |   |   |   |   |    |    |    | PN16                                                                |
|                            | 3     |   |   |   |   |   |    |    |    | PN25                                                                |
|                            | 4     |   |   |   |   |   |    |    |    | PN40                                                                |
|                            | A     |   |   |   |   |   |    |    |    | ANSI 150#                                                           |
|                            | B     |   |   |   |   |   |    |    |    | ANSI 300#                                                           |
|                            | J     |   |   |   |   |   |    |    |    | JIS 10K                                                             |
|                            | K     |   |   |   |   |   |    |    |    | JIS 20K                                                             |
|                            | L     |   |   |   |   |   |    |    |    | JIS 40K                                                             |
|                            | T     |   |   |   |   |   |    |    |    | Tri-clamp (DIN32676 / ISO2852)                                      |
|                            | Z     |   |   |   |   |   |    |    |    | Other                                                               |
| Flange Size                | 1     |   |   |   |   |   |    |    |    | 1-1/2" (Diaphragm Diameter If Extended: 38mm)                       |
|                            | 2     |   |   |   |   |   |    |    |    | 2" (Diaphragm Diameter If Extended: 48mm)                           |
|                            | 3     |   |   |   |   |   |    |    |    | 3" (Diaphragm Diameter If Extended: 66mm)                           |
|                            | 4     |   |   |   |   |   |    |    |    | 4" (Diaphragm Diameter If Extended: 89mm)                           |
| Diaphragm Extension Length | 0     |   |   |   |   |   |    |    |    | Flush Diaphragm                                                     |
|                            | 2     |   |   |   |   |   |    |    |    | 2" (50mm)                                                           |
|                            | 4     |   |   |   |   |   |    |    |    | 4" (100mm)                                                          |
|                            | 6     |   |   |   |   |   |    |    |    | 6" (150mm)                                                          |
| Diaphragm Material         | N     |   |   |   |   |   |    |    |    | Stainless Steel 316L                                                |
|                            | B     |   |   |   |   |   |    |    |    | Hastelloy B                                                         |
|                            | C     |   |   |   |   |   |    |    |    | Hastelloy C                                                         |
|                            | T     |   |   |   |   |   |    |    |    | Tantalum                                                            |
|                            | P     |   |   |   |   |   |    |    |    | PTFE-coated Tantalum Diaphragm (PTFE Thickness:40µm)                |
|                            | Z     |   |   |   |   |   |    |    |    | Other                                                               |
| Flange Material            | N     |   |   |   |   |   |    |    |    | Carbon Steel                                                        |
|                            | 4     |   |   |   |   |   |    |    |    | Stainless Steel 304                                                 |
|                            | 6     |   |   |   |   |   |    |    |    | Stainless Steel 316                                                 |
|                            | Z     |   |   |   |   |   |    |    |    | Other                                                               |
| Fill Fluid                 | -N    |   |   |   |   |   |    |    |    | Silicone (Max. Temperature 130 °C)                                  |
|                            | -S    |   |   |   |   |   |    |    |    | HT Silicone (Max. Temperature 280 °C)                               |
|                            | -F    |   |   |   |   |   |    |    |    | Fluorine (Max. Temperature 160 °C)                                  |
|                            | -V    |   |   |   |   |   |    |    |    | Vegetable Oil (Max. Temperature 130 °C)                             |
| Capillary Length           | NN    |   |   |   |   |   |    |    |    | Direct-Mount                                                        |
|                            | 01-10 |   |   |   |   |   |    |    |    | 1 M ~ 10 M                                                          |
| Option                     | - N   |   |   |   |   |   |    |    |    | None                                                                |
|                            | - W   |   |   |   |   |   |    |    |    | Oil-free and Water-free Treatment                                   |
|                            | - AM  |   |   |   |   |   |    |    |    | Ambient Temperature Inspection                                      |