NDP-5 Series

Maximum Fluid Discharge of 10L/min
Port Size 1/4

Specifications

Port Dimensions
- Intake & discharge: Rc1/4
- Air inlet (incl. ball valve): Rc1/4
- Air exhaust (internal silencer): Rc3/8

Maximum Liquid Temperature
- Polypropylene (PPG) 60°C
- Kynar® (PVDF) 60°C
- Groundable Acetal (POM) 60°C
- Aluminum (AC4C-T6) 100°C
- Stainless Steel (SCS14) 100°C

Air Supply Pressure (All Models)
0.2–0.7MPa

Discharge Volume Per Cycle
20mL

Maximum Cycles Per Minute: 400

Maximum Dry Suction Lift: 1.5M

Pump Air Motor
- Ryton® air motor standard

Model Number Nomenclature
- Polypropylene (PPG) NDP-5FPT
- Kynar® (PVDF) NDP-5FVT
- Groundable Acetal (POM) NDP-5FDT
- Aluminum (AC4C-T6) NDP-5FAT
- Stainless Steel (SCS14) NDP-5FST

Performance Curve

AutoCAD® drawings are available at yamadacorp.co.jp/global
DP-10 Series / DP-15 Series

**Maximum Fluid Discharge of 20L/min**
**Port Size 3/8**

**DP-10 Aluminum**
Dimensions: 186mm W x 241mm H
Net Wt.: 3.5 kg
Shipping Wt.: 6.0 kg

**DP-10 Stainless Steel**
Dimensions: 186mm W x 241mm H
Net Wt.: 5.2 kg
Shipping Wt.: 6.0 kg

**AutoCAD® drawings are available at yamadacorp.co.jp/global**

**Maximum Fluid Discharge of 50L/min**
**Port Size 1/2**

**DP-15 Polypropylene**
Dimensions: 246mm W x 297mm H
Net Wt.: 4.0 kg
Shipping Wt.: 5.4 kg

**DP-15 Groundable Acetal**
Dimensions: 246mm W x 297mm H
Net Wt.: 4.0 kg
Shipping Wt.: 5.4 kg
# DP-10/15 Series Specifications

## DP-10 Port Dimensions
**Intake & discharge connection:**
- Polypropylene (PPG) \( Rc3/8 \)
- Aluminum (ADC12) \( Rc3/8 \)
- Stainless Steel (SCS14) \( Rc3/8 \)

## DP-15 Port Dimensions
**Intake & discharge connection:**
- Polypropylene (PPG) \( Rc3/8 \)
- Groundable Acetal (POM) \( Rc3/8 \)

## Air Inlet / Exhaust
- Air inlet (incl. ball valve): \( Rc1/4 \)
- Air exhaust (incl. silencer): \( Rc3/8 \)

## Maximum Liquid Temperature*
<table>
<thead>
<tr>
<th>Diaphragm Material</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene (CR)</td>
<td>70°C</td>
</tr>
<tr>
<td>Buna N (NBR)</td>
<td>70°C</td>
</tr>
<tr>
<td>Hytrel* (TPEE)</td>
<td>80°C</td>
</tr>
<tr>
<td>Santoprene* (TPO)</td>
<td>100°C</td>
</tr>
<tr>
<td>Teflon* (PTFE)</td>
<td>100°C</td>
</tr>
</tbody>
</table>

*The maximum liquid temperature for metal and Kynar*-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene and Groundable Acetal pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.

## Air Supply Pressure (All Models)
\( 0.2–0.7 \)MPa

## Discharge Volume Per Cycle
- DP-10: 50mL
- DP-15: 55mL

## Maximum Cycles Per Minute
- All diaphragms: 300

## Maximum Size Solid
- \( 1/32" \) (1 mm)

## Maximum Dry Suction Lift
- All diaphragms: 3m

## Aluminum Air Motor – Standard
- Optional: Epoxy-coated, Teflon*-coated, or Electroless Nickel Plate
- Optional Split Manifold – contact Yamada

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# DP-10 Series Performance Curve

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# DP-15 Series Performance Curve

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## Model Number Nomenclature

- **Series:**
  - DP-10 pump or DP-15 pump

- **Valve Type:**
  - B = Ball
  - F = Flat*

- **Diaphragm Material:**
  - C = Neoprene (CR)
  - N = Buna N (NBR)
  - S = Santoprene* (TPO)
  - T = Teflon* (PTFE)
  - H = Hytrel* (TPEE)

- **Body Material:**
  - P = Polypropylene
  - D = Groundable Acetal
  - A = Aluminum
  - S = Stainless Steel

* Flat valves available for DP-15 pumps only.
NDP-15 Series

Maximum Fluid Discharge of 50L/min
Port Size 1/2

Polypropylene
Dimensions: 220mm W x 297mm H
Net Wt.: 3.5 kg
Shipping Wt.: 4.0 kg

Polypropylene with Center Port Option
Dimensions: 220mm W x 297mm H
Net Wt.: 3.5 kg
Shipping Wt.: 4.0 kg

Groundable Acetal
Dimensions: 220mm W x 297mm H
Net Wt.: 3.5 kg
Shipping Wt.: 4.5 kg

Aluminum
Dimensions: 220mm W x 271mm H
Net Wt.: 4.1 kg
Shipping Wt.: 5.0 kg

Stainless Steel
Dimensions: 211mm W x 247 mm H
Net Wt.: 6.3 kg
Shipping Wt.: 7.0 kg

Kynar® (PVDF)
Dimensions: 220mm W x 297mm H
Net Wt.: 4.3 kg
Shipping Wt.: 5.0 kg

Split Manifold Pump
Model NDP-15FPT-Z

AutoCAD® drawings are available at yamadacorp.co.jp/global
NDP-15 Series Specifications

Port Dimensions

<table>
<thead>
<tr>
<th>Intake &amp; discharge connection:</th>
<th>Rc1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene (PPG)</td>
<td></td>
</tr>
<tr>
<td>Kynar® (PVDF)</td>
<td></td>
</tr>
<tr>
<td>Groundable Acetal (POM)</td>
<td></td>
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<tr>
<td>Aluminum (ADC12)</td>
<td></td>
</tr>
<tr>
<td>Stainless Steel (SCS14)</td>
<td></td>
</tr>
<tr>
<td>Air inlet (includes ball valve)</td>
<td>Rc1/4</td>
</tr>
<tr>
<td>Air exhaust (internal silencer):</td>
<td>Rc3/8</td>
</tr>
</tbody>
</table>

- Polypropylene pumps may be fitted with ball or flat check valves. Ball-type check valves are recommended for flooded suction applications. Flat-type check valves are recommended for suction lift applications.
- Kynar® and Groundable Acetal pumps are fitted with flat check valves only.
- Aluminum and Stainless Steel pumps are fitted with ball check valves only.

Maximum Liquid Temperature*

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<td>100°C</td>
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*The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene and Groundable Acetal pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.

Air Supply Pressure (All Models)

0.2–0.7MPa

Discharge Volume Per Cycle

70mL

Maximum Cycles Per Minute

All diaphragms: 400

Maximum Size Solid: 1/32" (1 mm)

Maximum Dry Suction Lift

Flat-type check valve: 2.4M
Ball-type check valve: 1.5M

Pump Air Motor: Ryton® air motor standard

Rubber Diaphragm Performance Curve

PTFE Diaphragm Performance Curve

Model Number Nomenclature

<table>
<thead>
<tr>
<th>Series:</th>
<th>NDP-15 Pump</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Valve Type:</th>
<th>B = Ball</th>
</tr>
</thead>
<tbody>
<tr>
<td>F = Flat*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Body Material:</th>
<th>P = Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>V = Kynar® (PVDF)</td>
<td></td>
</tr>
<tr>
<td>D = Groundable Acetal</td>
<td></td>
</tr>
<tr>
<td>A = Aluminum</td>
<td></td>
</tr>
<tr>
<td>S = Stainless Steel</td>
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<tbody>
<tr>
<td>N = Buna N (NBR)</td>
<td></td>
</tr>
<tr>
<td>S = Santoprene® (TPO)</td>
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<td>T = Teflon® (PTFE)</td>
<td></td>
</tr>
<tr>
<td>H = Hytrel® (TPEE)</td>
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</tbody>
</table>

* Flat valves are available for plastic pumps only.
NDP-20 Series

Maximum Fluid Discharge of 100L/min
Port Size 3/4

AutoCAD® drawings are available at yamadacorp.co.jp/global
NDP-20 Series Specifications

Port Dimensions
*Intake & discharge connection:
- Polypropylene (PPG) Rc3/4
- Aluminum (ADC12) Rc3/4
- Stainless Steel (316) Rc3/4
- Air inlet (incl. ball valve): Rc1/4
- Air exhaust (incl. silencer): Rc3/4

ANSI Flange also available — consult Yamada.

Maximum Liquid Temperature*

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<td>100°C</td>
</tr>
<tr>
<td>Santoprene* (TPO)</td>
<td>100°C</td>
</tr>
<tr>
<td>Viton* fluoroelastomer (FKM)</td>
<td>100°C</td>
</tr>
<tr>
<td>Teflon* (PTFE)</td>
<td>100°C</td>
</tr>
</tbody>
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*The maximum liquid temperature for metal and Kynar*-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.

Air Supply Pressure (All Models)
0.2–0.7MPa

Discharge Volume Per Cycle
- Rubber diaphragm: 350mL
- PTFE diaphragm: 240mL

Maximum Cycles Per Minute
- Rubber diaphragm: 195
- PTFE diaphragm: 195

Maximum Size Solid
1/16" (2.0 mm)

Maximum Dry Suction Lift
Rubber-fitted pump capability: 5.5m

Air Motors
Aluminum air motors are standard on metal pumps; glass-filled polypropylene air motors are standard on plastic pumps.

Optional air motors: Epoxy-coated, Teflon*-coated, Electroless Nickel Plate, aluminum and glass-filled polypropylene.

Optional Split Manifold – contact Yamada

Rubber Diaphragm Performance Curve

PTFE Diaphragm Performance Curve

Model Number Nomenclature
NDP-P20B x x

<table>
<thead>
<tr>
<th>Series:</th>
<th>Plastic Pump w/Ball Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDP-20</td>
<td>P = Polypropylene</td>
</tr>
<tr>
<td>Plastic</td>
<td>A = Aluminum</td>
</tr>
<tr>
<td>Air Motor:</td>
<td>S = Stainless Steel</td>
</tr>
</tbody>
</table>

Diaphragm Material:
- C = Neoprene (CR)
- N = Buna N (NBR)
- E = Nordel™ (EPDM)
- S = Santoprene* (TPO)
- T = Teflon* (PTFE)
- V = Viton* (FKM)
- H = Hytrel* (TPEE)
NDP-25 Series

Maximum Fluid Discharge of 160L/min
Port Size 1

Polypropylene – JIS Flange
Dimensions: 366mm W x 442mm H
Net Wt.: 11.0 kg
Shipping Wt.: 14.0 kg

Polypropylene – Rc
Dimensions: 367mm W x 429mm H
Net Wt.: 11.0 kg
Shipping Wt.: 14.0 kg

Kynar® (PVDF) – JIS Flange
Dimensions: 364mm W x 440 mm H
Net Wt.: 13.5 kg
Shipping Wt.: 15.0 kg

Kynar® (PVDF) – Rc
Dimensions: 365mm W x 429mm H
Net Wt.: 13.5 kg
Shipping Wt.: 15.5 kg

Aluminum
Dimensions: 287mm W x 375mm H
Net Wt.: 13.0 kg
Shipping Wt.: 15.0 kg

Stainless Steel
Dimensions: 281mm W x 375mm H
Net Wt.: 20.0 kg
Shipping Wt.: 20.9 kg

Cast Iron
Dimensions: 286mm W x 375mm H
Net Wt.: 20.0 kg
Shipping Wt.: 22.0 kg

AutoCAD® drawings are available at yamadacorp.co.jp/global
NDP-25 Series Specifications

### Port Dimensions

**Intake & discharge connection:**
Polypropylene (PPG) \( \text{Rc1} \)
Kynar® (PVDF) \( \text{Rc1} \)
Aluminum (ADC12) \( \text{Rc1} \)
Stainless Steel (SCS14) \( \text{Rc1} \)
Cast Iron \( \text{Rc1} \)
Air inlet (incl. ball valve): \( \text{Rc3/8} \)
Air exhaust (incl. silencer): \( \text{Rc3/4} \)

*ANSI Flange also available — consult Yamada.*

### Maximum Liquid Temperature*

<table>
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</tr>
<tr>
<td>Viton® fluoroelastomer (FKM)</td>
<td>100°C</td>
</tr>
<tr>
<td>Teflon® (PTFE)</td>
<td>100°C</td>
</tr>
</tbody>
</table>

*The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.

### Air Supply Pressure (All Models)

0.2 – 0.7MPa

### Discharge Volume Per Cycle

- Rubber diaphragm: 600mL
- PTFE diaphragm: 500mL

### Maximum Cycles Per Minute

- Rubber diaphragm: 210
- PTFE diaphragm: 210

### Maximum Size Solid

3/16" (4.8 mm)

### Maximum Dry Suction Lift

Rubber-fitted pump capability: 5.5M

### Air Motors

Aluminum air motors are standard on metal pumps; glass-filled polypropylene air motors are standard on plastic and Kynar® pumps. Optional

### Optional Split Manifold

Contact Yamada

### Model Number Nomenclature

- **Series:** NDP-20 Pump w/Ball Valve
- **Plastic Pump:**
  - Air Motor:
    - P = Polypropylene
    - A = Aluminum
    - S = Stainless Steel
    - F = Cast Iron
    - V = Kynar®
- **Diaphragm Material:**
  - C = Neoprene (CR)
  - N = Buna N (NBR)
  - E = Nordel™ (EPDM)
  - S = Santoprene® (TPO)
  - T = Teflon® (PTFE)
  - V = Viton® (FKM)
  - H = Hytrel® (TPEE)

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To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.

**Rubber Diaphragm Performance Curve**

**PTFE Diaphragm Performance Curve**
NDP-40 Series

Maximum Fluid Discharge of 400L/min
Port Size 1-1/2

Polypropylene
Dimensions:
405mm W x 752mm H
Net Wt.: 27.0 kg
Shipping Wt.: 36.0 kg

Aluminum
Dimensions:
412mm W x 710mm H
Net Wt.: 29.0 kg
Shipping Wt.: 38.0 kg

Stainless Steel
Dimensions:
411mm W x 705mm H
Net Wt.: 40.0 kg
Shipping Wt.: 49.0 kg

Cast Iron - Rc
Dimensions:
411mm W x 704mm H
Net Wt.: 47.0 kg
Shipping Wt.: 56.0 kg

Kynar® (PVDF)
Dimensions: 398mm W x 749mm H
Net Wt.: 32.0 kg
Shipping Wt.: 36.0 kg

AutoCAD® drawings are available at yamadacorp.co.jp/global

JIS/DIN Flange on Stainless Steel pumps.
NDP-40 Series Specifications

Port Dimensions

**Intake & discharge connection:**
- Polypropylene (PPG) Flange JIS 10K40A/DN40PN10
- Kynar® (PVDF) Flange JIS 10K40A/DN40PN10
- Aluminum (ADC12) Flange JIS 10K40A/DN40PN10
- Stainless Steel (SUS14) Flange JIS 10K40A/DN40PN10
- Cast Iron: Rc1-1/2
- Air inlet (incl. ball valve): Rc1/2
- Air exhaust (incl. silencer): Rc1

**Diaphragm Material Temperature**
- Neoprene (CR) 70°C
- Buna N (NBR) 70°C
- EPDM 80°C
- Hytrel® (TPEE) 100°C
- Santoprene® (TPO) 100°C
- Viton® fluoroelastomer (FKM) 100°C
- Teflon® (PTFE) 100°C

*The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.

**Air Supply Pressure (All Models)**
0.2–0.7 MPa

**Discharge Volume Per Cycle**
- Rubber diaphragm: 2800 mL
- PTFE diaphragm: 1400 mL

**Maximum Cycles Per Minute**
- Rubber diaphragm: 148
- PTFE diaphragm: 270

**Maximum Size Solid**
9/32" (7 mm)

**Maximum Dry Suction Lift**
Rubber-fitted pump capability: 5.5M

**Aluminum Air Motor – Standard**
Optional: Epoxy-coated, Teflon®-coated, or Electroless Nickel Plate

**Model Number Nomenclature**

- **Series:** NDP-40
- **Valve Type:** B = Ball
- **Body Material:**
  - P = Polypropylene
  - A = Aluminum
  - S = Stainless Steel (SS)
  - F = Cast Iron
  - V = Kynar®
- **Diaphragm Material:**
  - C = Neoprene (CR)
  - N = Buna N (NBR)
  - E = Santoprene® (TPO)
  - T = Teflon® (PTFE)
- **SUS Port Option:** Rc or FLG

**Rubber Diaphragm Performance Curve**

**PTFE Diaphragm Performance Curve**

To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.
NDP-50 Series

Maximum Fluid Discharge of 600L/min
Port Size 2

**Cast Iron**
- Dimensions: 450mm W x 776mm H
- Net Wt.: 65.0 kg
- Shipping Wt.: 77.0 kg

**Stainless Steel**
- Dimensions: 450mm W x 782mm H
- Net Wt.: 60.0 kg
- Shipping Wt.: 72.0 kg

**Aluminum**
- Dimensions: 452mm W x 780mm H
- Net Wt.: 37.0 kg
- Shipping Wt.: 49.0 kg

**Polypropylene**
- Dimensions: 472mm W x 821mm H
- Net Wt.: 35.0 kg
- Shipping Wt.: 46.0 kg

**Kynar® (PVDF)**
- Dimensions: 462mm W x 819mm H
- Net Wt.: 41.0 kg
- Shipping Wt.: 53.0 kg

JIS/ANSI/DIN Flange on Stainless Steel models.
**NDP-50 Series Specifications**

**Port Dimensions**

*Intake & discharge connection:*
- Polypropylene (PPG) Flange JIS10K50A/ANSI150 2B/ DN50PN10
- Kynar® (PVDF) Flange JIS10K50A/ANSI150 2B/ DN50PN10
- Aluminum (ADC12) Flange JIS10K50A/ANSI150 2B/ DN50PN10
- Stainless Steel (SCS14) Flange JIS10K50A/ANSI150 2B/ DN50PN10
- Cast Iron Rc2
- Air inlet (incl. ball valve): Rc3/4
- Air exhaust (incl. silencer): Rc1

**Maximum Liquid Temperature***

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<tr>
<td>Viton® fluoroelastomer (FKM)</td>
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<tr>
<td>Teflon® (PTFE)</td>
<td>100°C</td>
</tr>
</tbody>
</table>

*The maximum liquid temperature for metal and Kynar®-fitted pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.*

**Air Supply Pressure (All Models)**

0.2–0.7MPa

**Discharge Volume Per Cycle**

- Rubber diaphragm: 4300mL
- PTFE diaphragm: 2100mL

**Maximum Cycles Per Minute**

- Rubber diaphragm: 146
- PTFE diaphragm: 220

**Maximum Size Solid**

5/16" (8 mm)

**Maximum Dry Suction Lift**

Rubber-fitted pump capability: 5.8M

**Aluminum Air Motor – Standard**

Optional: Epoxy-coated, Teflon®-coated, or Electroless Nickel Plate

AutoCAD® drawings are available at yamadacorp.co.jp/global
NDP-80 Series

Maximum Fluid Discharge of 800L/min
Port Size 3

**Stainless Steel**
- Dimensions: 521mm W x 984mm H
- Net Wt.: 102.0 kg
- Shipping Wt.: 117.0 kg

**Cast Iron – Rc**
- Dimensions: 521mm W x 984mm H
- Net Wt.: 112.0 kg
- Shipping Wt.: 127.0 kg

**Polypropylene**
- Dimensions: 580mm W x 1044mm H
- Net Wt.: 64.0 kg
- Shipping Wt.: 79.0 kg

**Aluminum**
- Dimensions: 522mm W x 998mm H
- Net Wt.: 65.0 kg
- Shipping Wt.: 74.0 kg
NDP-80 Series Specifications

Port Dimensions

*Intake & discharge connection:*
- Polypropylene (PPG) Flange JIS10K80A/ANSI150 3B/DN80PN10
- Aluminum (ADC12) Flange JIS10K80A/ANSI150 3B/DN80PN10
- Stainless Steel (SCS14) Flange JIS10K80A/ANSI150 3B/DN80PN10

Cast Iron: Rc3
Air inlet (incl. ball valve): Rc3/4
Air exhaust (incl. silencer): Rc1

Maximum Liquid Temperature*

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<td>100°C</td>
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</tbody>
</table>

*The maximum liquid temperature for metal pumps is determined by the elastomer (diaphragm material). Polypropylene pumps have a maximum liquid temperature of 60°C regardless of diaphragm material.

Air Supply Pressure (All Models)
0.2–0.7 MPa

Discharge Volume Per Cycle
- Rubber diaphragm: 8500mL
- PTFE diaphragm: 3800mL

Maximum Cycles Per Minute
- Rubber diaphragm: 95
- PTFE diaphragm: 160

Maximum Size Solid
13/32" (10 mm)

Maximum Dry Suction Lift
Rubber-fitted pump capability: 5.8M

Aluminum Air Motor – Standard
Optional: Epoxy-coated, Teflon®-coated, or Electroless Nickel Plate

Notes: Hytrel®-fitted pumps include Buna N check balls & wetted o-rings. Santoprene®-fitted pumps include EPDM check balls & wetted o-rings.

AutoCAD® drawings are available at yamadacorp.co.jp/global

Rubber Diaphragm Performance Curve

To calculate performance for Santoprene® and Hytrel®-fitted pumps, use Rubber Diaphragm Curve.

PTFE Diaphragm Performance Curve

Model Number Nomenclature

- **Series:** NDP-80 Pump
- **Valve Type:** B = Ball
- **SUS Port Option:** Rc or FLG
- **Diaphragm Material:**
  - C = Neoprene (CR)
  - N = Buna N (NBR)
  - E = Nordel™ (EPDM)
  - S = Santoprene® (TPO)
  - T = Teflon® (PTFE)
  - V = Viton® (FKM)
  - H = Hytrel® (TPEE)

- **Body Material:**
  - P = Polypropylene
  - A = Aluminum
  - S = Stainless Steel (SS)
  - F = Cast Iron

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Flap Valve Diaphragm Pump

Flapper Pump for Solids Handling

The New Yamada Flap Valve Pump was designed and engineered to address the problems normally associated with flap valve pumps. I.e. Normally due to severe working conditions, there is often a need to remove a pump from service for repairs, cleaning or parts changeovers.

Based on Yamada field proven NDP series foundation, this pump has all of the features and benefits associated with every Yamada pump.

Ingenious Flap Valve design allows for passage of large solids up to 50 mm

Easy access to valve chambers allows easy maintenance when you need it most without the need to remove the pump from service.

Vented diaphragm chambers serve to alleviate problems associated with trapped air/gas.

Mechanical Switch Series

Available in 1-1/2", 2" and 3" port sizes, these pumps are built on the liquid platform of a standard NDP Series pump, but with a **mechanically-actuated air motor**.

Air power is conserved by actuating the air valve using a mechanical linkage instead of relying on air pressure. Air power is reduced versus a standard air-actuated valve, providing higher pump efficiency.
F-Series

Extensively field proven, Yamada F-Series clean room manufactured pumps are specifically designed for the safe and efficient transfer of ultra high-purity process chemistries. They provide maximum corrosion resistance, ultra high-purity levels and low particle generation.

- Pumps include 100% machined virgin PTFE diaphragms, liquid chambers and manifolds.
- F-Series pumps are available in six sizes
- Fluid connections: JIS Flange, or Rc
- Maximum Flow rate: 95L/min
- Air control: internal shuttle valve or external timer-based control
- Air pressure range: 0.2–0.7MPa
- Temperatures up to: 100°C

For additional information, please request the Yamada High-Purity PTFE Pumps catalog or visit yamadacorp.co.jp/global

NDP-20 to 80E Series
(Electronic Sensor Switching System)

This range of pumps is designed to operate using an External Electronic Pump Driver coupled to a Proximity Sensor built into the pump. They provide the operator with unrivaled operational performance, reliability and cost effectiveness. This system removes any chance of pump stoppages caused from blockages or failures of a standard Internal Air Switching System. Moreover due to the proximity sensors inside the pump, it operates in a de-stroke situation. This will greatly increase the life of the pumps diaphragms, as well as other working parts. These pumps also create high operational stability especially at slow pumping speeds.

- Operating system: Using a proximity sensor installed into the pump and reciprocated with an external solenoid valve. Operation is controlled through an Instrument Sequencer, or Signal Transmit Controller.
- Accessories include a Stroke Counter and a Diaphragm Rupture Sensor.
- Take care as these pumps are not standard stock items and must be specially ordered.

*As these pumps operate using an electrical control system, they are not suited to flammable applications.
Drum Pumps

Yamada AODD Pumps have distinct design advantages, making them versatile and cost effective drum pumps. Models are available in Polypropylene, PVDF (Kynar®), Aluminum, and Stainless Steel, which includes a 2” bung adapter and suction tube.

Drum pumps are available in 3/8”, 1/2”, and 3/4” port sizes (3/8” metal only & 1/2” plastic only) with flow rates up to 100L/min.

Note: Some Yamada plastic drum pumps incorporate side liquid ports and utilize a 90° elbow on the top of the drum. Refer to DP-10 & NDP-20 technical information for additional performance data. Use applicable NDP nomenclature adding a “D” at the end of the model number. Other sizes and materials are available, consult Yamada.

Port Dimensions

Intake & discharge connection:

- **Aluminum (ADC12)**
  - Rc3/8 or Rc3/4
  - Includes Aluminum Male Rc Bung adapter and suction pipe

- **Stainless Steel (316)**
  - Rc3/8 or Rc3/4
  - Includes Stainless Steel Male Rc Bung adapter and suction pipe

- **Polypropylene (PPG)**
  - Rc1/2 or Rc3/4
  - Includes PVC suction pipe, elbow, & Bung adapter (PPG also avail.)
  - Note: Yamada recommends utilizing flat-type check valves for the NDP-15 series polypropylene pumps.

- **Kynar® (PVDF)**
  - Rc1/2
  - Includes PVDF suction pipe, elbow, and Bung adapter

Drum inlet connection: 2” Bung

Powder Pumps

Yamada powder pumps are designed to move bulk powders more effectively throughout your process vs. other unsafe and labor intensive means. These heavy duty pumps will consistently transfer fine-grained, low-bulk density dry powders in a dust-free operation.

Port sizes: 1-1/2”, 2”, or 3”

Construction: Aluminum, Cast Iron, or Stainless Steel

Availability: Three series of pumps are offered, dependent upon requirements.

Also refer to the Powder Pump flyer and Pumpable Powders data sheet.
Rubber Compounds

Neoprene (CR)
Excellent for non-corrosive abrasive applications.
Identification: Dull Black with No Dot
Temperature Range: 0 to 70°C

Buna-N (NBR)
Excellent for petroleum based fluids.
Identification: Black with a Red or Pink Dot
Temperature Range: 0 to 70°C

Nordel™ (EPDM)
Excellent for low temperatures, caustics and some acids.
FDA Compliant Material (must be specified).
Identification: Black with Green Dot
Temperature Range: 0 to 80°C

Viton® (FKM)
Excellent for aggressive fluids and high temperature applications.
Identification: Black with Silver or Blue Dot
Temperature Range: 0 to 100°C

Thermoplastic Compounds

Hytrel® (TPEE)
Excellent general-purpose diaphragm for non-corrosive abrasive applications and high-flex life.
FDA compliant material.
Identification: Tan/Cream material with No Dot
Temperature Range: 0 to 80°C

Santoprene® (TPO)
Excellent for acids or caustics with a very high flex life.
Identification: Black Thermoplastic
Temperature Range: 0 to 100°C

Teflon® (PTFE)
Excellent choice for pumping highly aggressive fluids, including solvents.
Identification: White diaphragm with No Dot
Temperature Range: 0 to 100°C

Please note that excessive inlet pressure or excessive suction lift can shorten diaphragm life. Please consult Yamada for further information.

Accessories

Companion Flange:
Various flanges equipped with a short pipe are available for use in a line. Flanges made of SUS304 or resin (PP) according to the various standards such as JIS, DIN, ANSI and JPI.

Pump Bracket:
A common base pump (mounting rack) is to be manufactured on orders. (Standard specifications: SUS304)
Basic Model Variations

- Eight different sizes of pumps
- Six different types of pump bodies “wetted parts”
- Seven different types of diaphragm

This gives a total of 150 or more basic models in the Yamada Air Operated Double Diaphragm Pump range.

In addition, Yamada also manufactures the high purity DP-F series of diaphragm pumps which are used specifically for industries like semiconductor manufacturing.

This graph gives a general indication of the applications available by using different pump models.

Model Indicator

- When choosing a Yamada AODD Pump, use the below model indicator to select pump size (Diameter of fluid ports) main body material (Wetted Parts) and the type of Diaphragm.

- If using a pump with fluid temperatures of 70°C or higher, the switching mechanism and other parts may have to be changed. Contact your closest distributor or Yamada Corporation for distributor.

![Model Indicator Diagram]

* N indication is not provided for the 10 series and F series.

![Temperature Range Table]

![Diaphragm Material Table]