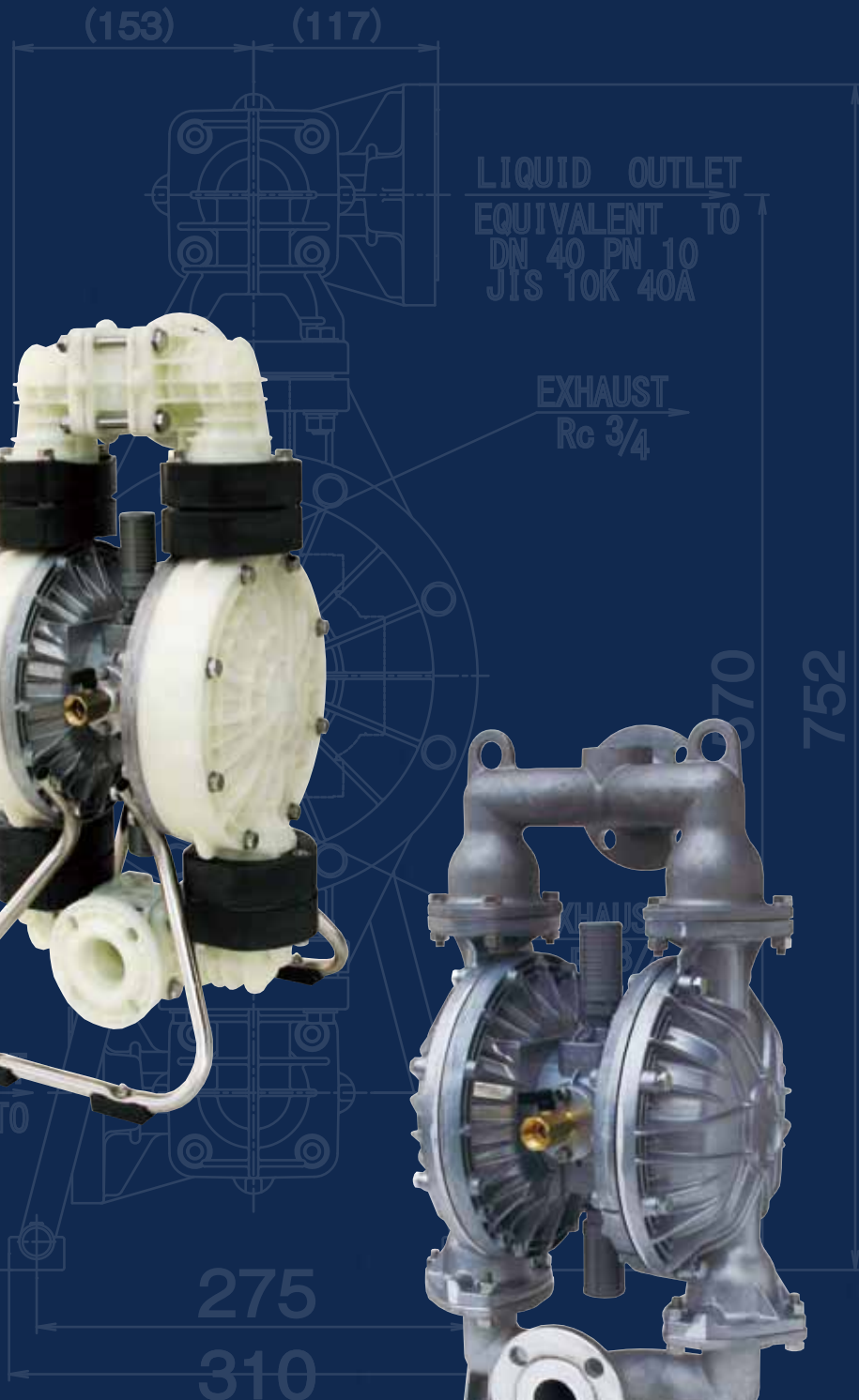


Mechanical Switch Series

NDP-H40BA·BS·BP NDP-H50BA·BS·BP NDP-H80BA·BS·BP

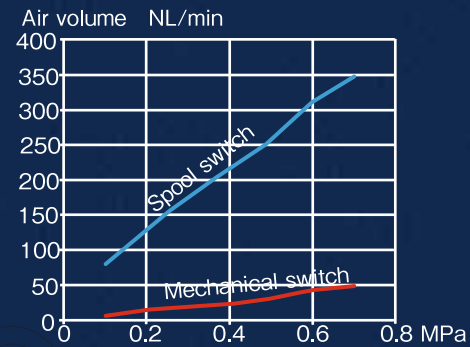


AIR-POWERED
DOUBLE DIAPHRAGM
PUMPS

NDP-H40.50.80 Series

**Low drive air loss,
energy saving and
high discharge pressure**

Compare with Spool switch,
drive air loss is less than 1/10 at dead-headed or standby.



**Wider operation
pressure range**

Variable flow rates

The pumps will run anywhere within their operating range by simply adjusting the liquid discharge settings.

*Note: When there is possibility that liquid expands by temperature change in the pipe and increase of inner pressure of pipe, safety valve must be installed.



**Self priming
and can Run Dry**

Design of pumps allow for good suction lift even with fluids contain air. Maximum suction lift is 5.5m. The pumps can run dry without damage.

*Note: Do not run dry PTFE diaphragm models to ensure adequate lifetime of diaphragm.

*Note: It depends on pump size and material of diaphragm. Please contact Yamada for detail.

*Note: Periodical torque management is necessary for plastic casing model. Please contact Yamada for detail.



**Explosion prevention
measures are
unnecessary**

Because the pumps are operated by compressed air, they will not overheat and are intrinsically explosion proof.

**No mechanical
seals**

Because there are no mechanical seal or gland seal, there is no risk of leakage by the abrasion. Flange-type bolted liquid chambers and manifolds eliminate leakage from it.

Stable stroke at the slow operation

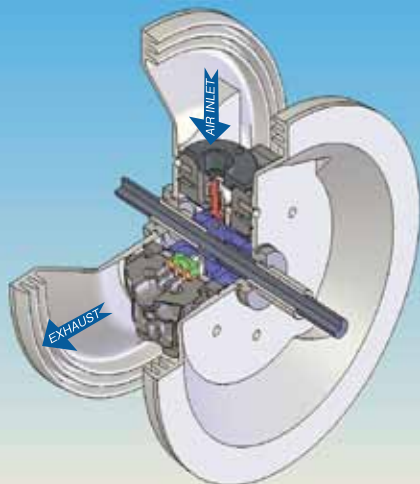
New mechanical switch allows stable stroke even with the unstable air supply. The pumps can operate with low pressure air. It is effective to transfer shear sensitive material.

Ease of adjusting discharge pressure

Discharge pressure can be adjusted easily by air supply pressure.

High discharge pressure

Maximum discharge pressure is 0,85MPa (metal casing model). Minimized inner loss maximizes actual use of supply pressure.



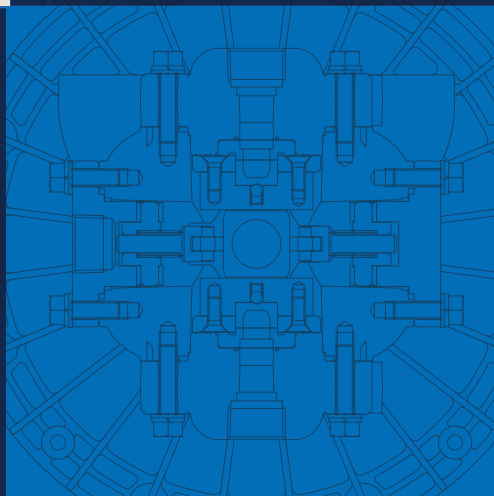
Can handle slurry and high viscosity liquid

The pumps can handle most chemicals including highly corrosive fluids like acids, alkaline or solvents. Also, high viscosity fluids and fluids containing solids can be transferred. Maximum viscosity is about 8,000 cp. It depends on suction condition.

*Note: Viscosity limit depends on model. Please contact to Yamada for detail.

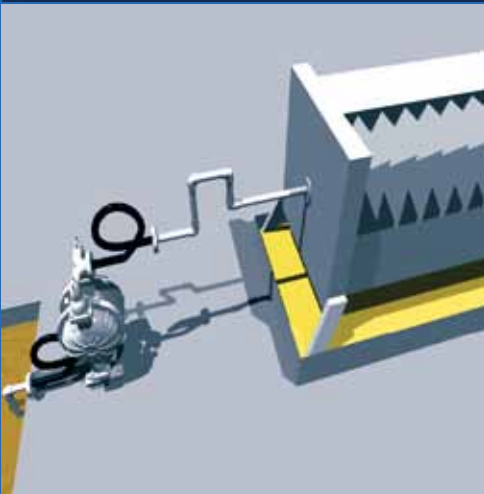


Suitable for circulation and filter press application in general industry, chemical industry, ceramic plant, etc.



Easily maintained & complete after-sales service

With simple and reliable design, the pumps do not require daily maintenance. Consumable parts including diaphragms and valves are easily to change. The pumps are guaranteed by high quality standard. Spare parts supply and after-sale service are always readily available with YAMADA world wide network.



With built-in anti-explosion specifications, this device is for the transfer and circulation of liquids at such places as general industries, chemical manufacturers, and ceramics plants. This product is optimal for such machinery as filter presses.

NDP-H40Series

Specifications: Pump size, 1-1/2 (40A); Maximum liquid discharge, approximately 370 L/min; operating noise, 98 dB.

| | | | | | | | |
|----------------------|--------------|-----------------------------|----------------------------|---------------------------------------------------------------------|--|--------|----------------------------------------------------------------------------------|
| Nominal port size | 1-1/2" (40A) | | Air supply pressure range | 0.1 - 0.85 MPa 0.7 MPa for plastic | | Weight | NDP-H40BA□ : 26kg NDP-H40BS□ : 37kg NDP-H40BF□ : 44kg NDP-H40BP□ : 24kg |
| Connection to liquid | Inlet | JIS flange *Equal to 10K40A | Maximum discharge pressure | 0.85 MPa 0.7 MPa for plastic | | | |
| | Outlet | JIS flange *Equal to 10K40A | Discharge volume / cycle | Rubber diaphragm type: 2.3 L Fluoroplastic diaphragm type: 0.9 L | | | |
| Air connection | Inlet | Rc1/2 (w/ air cork) | Limit of slurry | 7 mm or less | | | |
| | Exhaust | Rc3/4 (w/ muffler) | | | | | |

*The cast iron (FC250) NDP-H40BF□ series uses screws to connect materials. The size is Rc 1-1/2.

| Material of the main body (wetted part) | Material of a diaphragm | | | | | | |
|-----------------------------------------|-------------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | C: Neoprene (CR) | N: Nitrile (BUNA) Rubber (NBR) | E: Nordel (EPDM) | V: Viton (FKM) | T: Teflon (PTFE) | H: Hytrel (TPEE) | S: Santoprene (TPO) |
| A: Aluminum alloy (ADC12/AC4C-T6) | NDP-H40BAC 854331 | NDP-H40BAN 854332 | NDP-H40BAE 854333 | NDP-H40BAV 854334 | NDP-H40BAT 854335 | NDP-H40BAH 854336 | NDP-H40BAS 854337 |
| S: Stainless steel (SCS 14) | NDP-H40BSC 854347 | NDP-H40BSN 854348 | NDP-H40BSE 854349 | NDP-H40BSV 854350 | NDP-H40BST 854351 | NDP-H40BSH 854352 | NDP-H40BSS 854353 |
| F: Cast iron (FC250) | NDP-H40BFC 854370 | NDP-H40BFN 854371 | NDP-H40BFE 854372 | NDP-H40BFV 854373 | NDP-H40BFT 854374 | NDP-H40BFH 854375 | NDP-H40BFS 854376 |

NDP-H40BAH/T854338 NDP-H40BSH/T854354 NDP-H40BFH/T854377

| Material of the main body (wetted part) | Material of a diaphragm | | | | | | |
|-----------------------------------------|-------------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | C: Neoprene (CR) | N: Nitrile (BUNA) Rubber (NBR) | E: Nordel (EPDM) | V: Viton (FKM) | T: Teflon (PTFE) | H: Hytrel (TPEE) | S: Santoprene (TPO) |
| P: Polypropylene (PPG) | NDP-H40BPC 854386 | NDP-H40BPN 854387 | NDP-H40BPE 854388 | NDP-H40BPV 854389 | NDP-H40BPT 854390 | NDP-H40BPH 854391 | NDP-H40BPS 854392 |

NDP-H40BPH/T854393

NDP-H50Series

Specifications: Pump size, 2" (50A); Maximum liquid discharge, approximately 460 L/min.

| | | | | | | | |
|----------------------|----------|-----------------------------|----------------------------|---------------------------------------------------------------------|--|--------|----------------------------------------------------------------------------------|
| Nominal port size | 2" (50A) | | Air supply pressure range | 0.1 - 0.85 MPa 0.7 MPa for plastic | | Weight | NDP-H50BA□ : 34kg NDP-H50BS□ : 57kg NDP-H50BF□ : 62kg NDP-H50BP□ : 32kg |
| Connection to liquid | Inlet | JIS flange *Equal to 10K50A | Maximum discharge pressure | 0.85 MPa 0.7 MPa for plastic | | | |
| | Outlet | JIS flange *Equal to 10K50A | Discharge volume / cycle | Rubber diaphragm type: 3.5 L Fluoroplastic diaphragm type: 1.3 L | | | |
| Air connection | Inlet | Rc3/4 (w/ air cork) | Limit of slurry | 8 mm or less | | | |
| | Exhaust | Rc3/4 (w/ muffler) | | | | | |

*The cast iron (FC250) NDP-H50BF□ series uses screws to connect materials. The size is Rc 2.

| Material of the main body (wetted part) | Material of a diaphragm | | | | | | |
|-----------------------------------------|-------------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | C: Neoprene (CR) | N: Nitrile (BUNA) Rubber (NBR) | E: Nordel (EPDM) | V: Viton (FKM) | T: Teflon (PTFE) | H: Hytrel (TPEE) | S: Santoprene (TPO) |
| A: Aluminum alloy (ADC12/AC4C-T6) | NDP-H50BAC 854402 | NDP-H50BAN 854403 | NDP-H50BAE 854404 | NDP-H50BAV 854405 | NDP-H50BAT 854406 | NDP-H50BAH 854407 | NDP-H50BAS 854408 |
| S: Stainless steel (SCS 14) | NDP-H50BSC 854418 | NDP-H50BSN 854419 | NDP-H50BSE 854420 | NDP-H50BSV 854421 | NDP-H50BST 854422 | NDP-H50BSH 854423 | NDP-H50BSS 854424 |
| F: Cast iron (FC250) | NDP-H50BFC 854441 | NDP-H50BFN 854442 | NDP-H50BFE 854443 | NDP-H50BFV 854444 | NDP-H50BFT 854445 | NDP-H50BFH 854446 | NDP-H50BFS 854447 |

NDP-H50BAH/T854409 NDP-H50BSH/T854425 NDP-H50BFH/T854448

| Material of the main body (wetted part) | Material of a diaphragm | | | | | | |
|-----------------------------------------|-------------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | C: Neoprene (CR) | N: Nitrile (BUNA) Rubber (NBR) | E: Nordel (EPDM) | V: Viton (FKM) | T: Teflon (PTFE) | H: Hytrel (TPEE) | S: Santoprene (TPO) |
| P: Polypropylene (PPG) | NDP-H50BPC 854457 | NDP-H50BPN 854458 | NDP-H50BPE 854459 | NDP-H50BPV 854460 | NDP-H50BPT 854461 | NDP-H50BPH 854462 | NDP-H50BPS 854463 |

NDP-H50BPH/T854464

NDP-H80Series

Specifications: Pump size, 3" (80A); Maximum liquid discharge, approximately 600 L/min.

| | | | | | | | |
|----------------------|----------|-----------------------------|----------------------------|---------------------------------------------------------------------|--|--------|-----------------------------------------------------------------------------------|
| Nominal port size | 3" (80A) | | Air supply pressure range | 0.1 - 0.85 MPa 0.7 MPa for plastic | | Weight | NDP-H80BA□ : 62kg NDP-H80BS□ : 99kg NDP-H80BF□ : 109kg NDP-H80BP□ : 61kg |
| Connection to liquid | Inlet | JIS flange *Equal to 10K80A | Maximum discharge pressure | 0.85 MPa 0.7 MPa for plastic | | | |
| | Outlet | JIS flange *Equal to 10K80A | Discharge volume / cycle | Rubber diaphragm type: 6.4 L Fluoroplastic diaphragm type: 3.1 L | | | |
| Air connection | Inlet | Rc3/4 (w/ air cork) | Limit of slurry | 10 mm or less | | | |
| | Exhaust | Rc3/4 (w/ muffler) | | | | | |

*The cast iron (FC250) NDP-H80BF□ series uses screws to connect materials. The size is Rc 3.

| Material of the main body (wetted part) | Material of a diaphragm | | | | | | |
|-----------------------------------------|-------------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | C: Neoprene (CR) | N: Nitrile (BUNA) Rubber (NBR) | E: Nordel (EPDM) | V: Viton (FKM) | T: Teflon (PTFE) | H: Hytrel (TPEE) | S: Santoprene (TPO) |
| A: Aluminum alloy (ADC12/AC4C-T6) | NDP-H80BAC 854483 | NDP-H80BAN 854484 | NDP-H80BAE 854485 | NDP-H80BAV 854486 | NDP-H80BAT 854487 | NDP-H80BAH 854488 | NDP-H80BAS 854489 |
| S: Stainless steel (SCS 14) | NDP-H80BSC 854499 | NDP-H80BSN 854500 | NDP-H80BSE 854501 | NDP-H80BSV 854502 | NDP-H80BST 854503 | NDP-H80BSH 854504 | NDP-H80BSS 854505 |
| F: Cast iron (FC250) | NDP-H80BFC 854522 | NDP-H80BFN 854523 | NDP-H80BFE 854524 | NDP-H80BFV 854525 | NDP-H80BFT 854526 | NDP-H80BFH 854527 | NDP-H80BFS 854528 |

NDP-H80BAH/T854490 NDP-H80BSH/T854506 NDP-H80BFH/T854529

| Material of the main body (wetted part) | Material of a diaphragm | | | | | | |
|-----------------------------------------|-------------------------|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | C: Neoprene (CR) | N: Nitrile (BUNA) Rubber (NBR) | E: Nordel (EPDM) | V: Viton (FKM) | T: Teflon (PTFE) | H: Hytrel (TPEE) | S: Santoprene (TPO) |
| P: Polypropylene (PPG) | NDP-H80BPC 854538 | NDP-H80BPN 854539 | NDP-H80BPE 854540 | NDP-H80BPV 854541 | NDP-H80BPT 854542 | NDP-H80BPH 854543 | NDP-H80BPS 854544 |

NDP-H80BPH/T854545

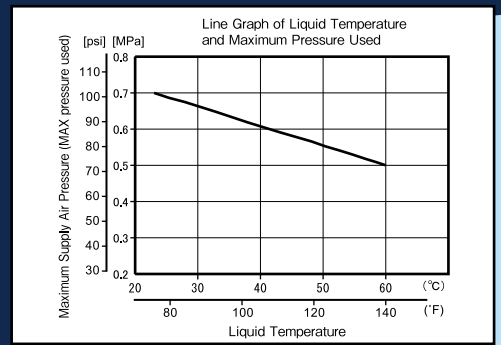
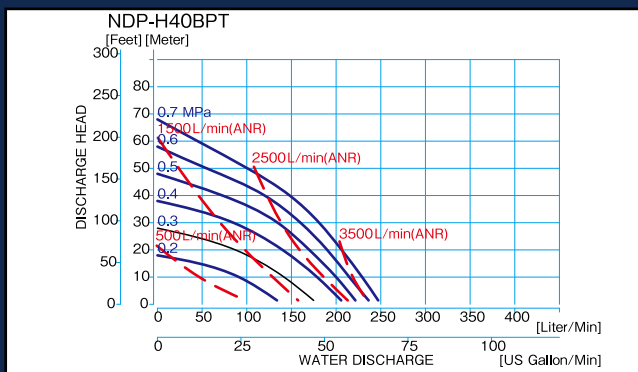
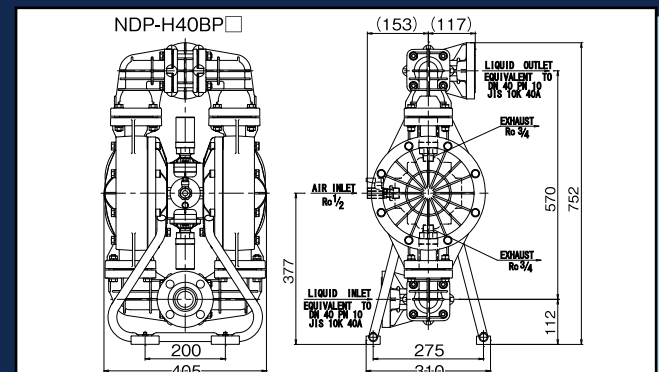
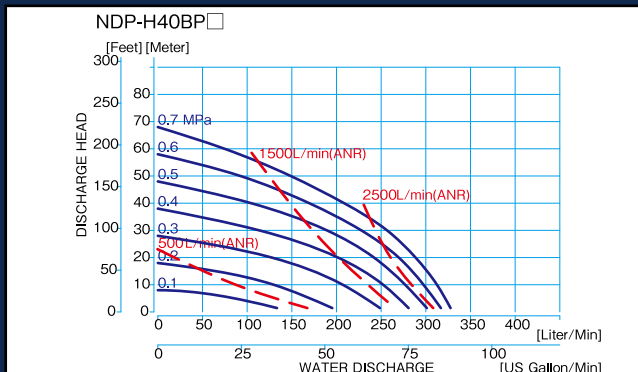
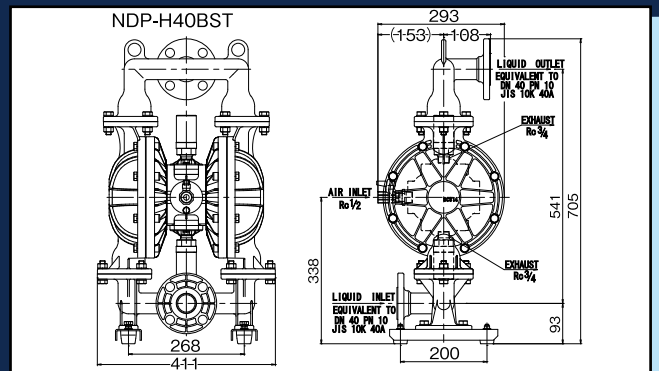
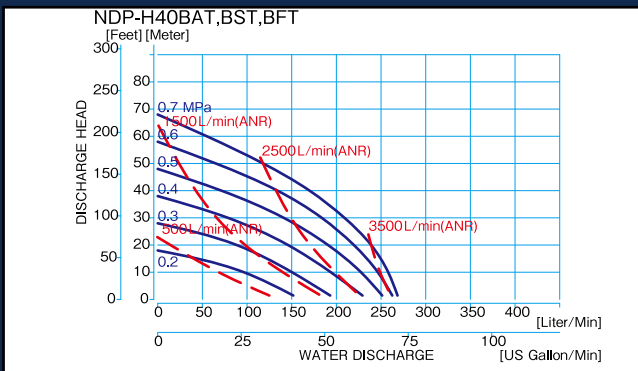
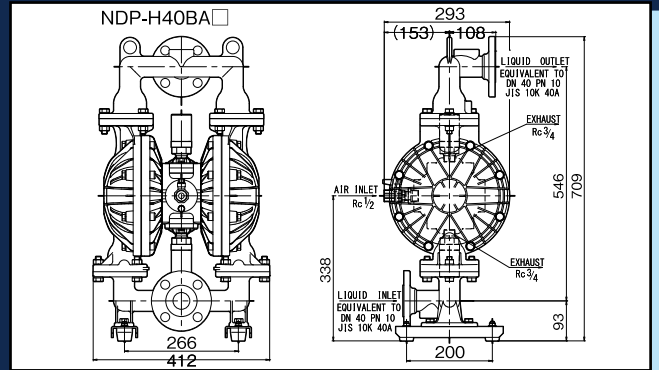
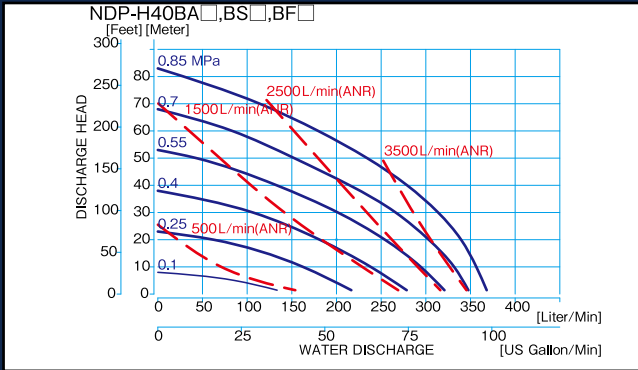
NDP-H40Series

Material of main parts

| Model name | NDP-H40BA□ | NDP-H40BS□ | NDP-H40BF□ | NDP-H40BP□ |
|-------------|---------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------|
| Ball valve | NDP-H40B□S...EPDM; Other: Same as diaphragm material | | | |
| Valve seat | NDP-H40BAT...A5056 Other: Same as diaphragm material | NDP-H40BST...SUS316 Other: Same as diaphragm material | NDP-H40BFT...SUS316 Other: Same as diaphragm material | PP TPEE |
| Valve guide | All machine types: Integrated type same as materials for main body. | | | |
| Center disk | A5056 | SUS316 | SS400 | PPG (SCS13) |

*Materials for SCS13 are insert materials.
 *Specifications for the original self-priming device are:
 NDP-H40B□T: 3 m; Other NDP-H40B□□ 5 m.

*Liquid temperature differs by diaphragm material:
 NBR/CR: 0 - 70°C
 TPEE/EPDM: 0 - 80°C
 FKM/TPO/PTFE: 0 - 100°C



The maximum pressure used for plastic type (BP□) wetted portions differs depending on the liquid temperature. Please make sure to check the graph above for the relationship between liquid temperature and maximum pressure used.

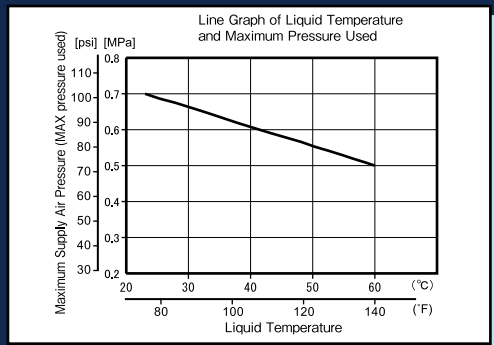
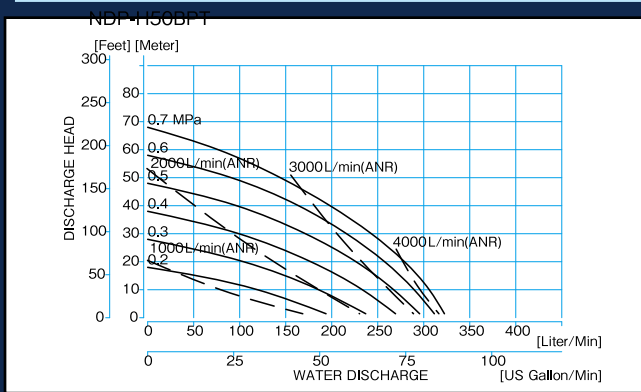
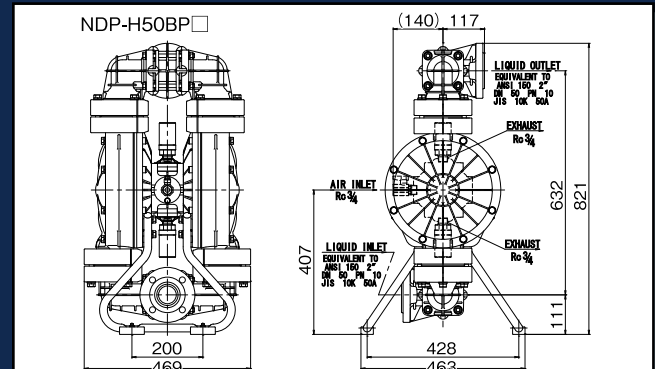
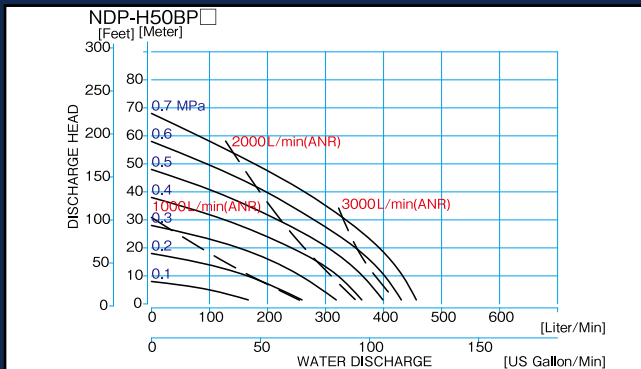
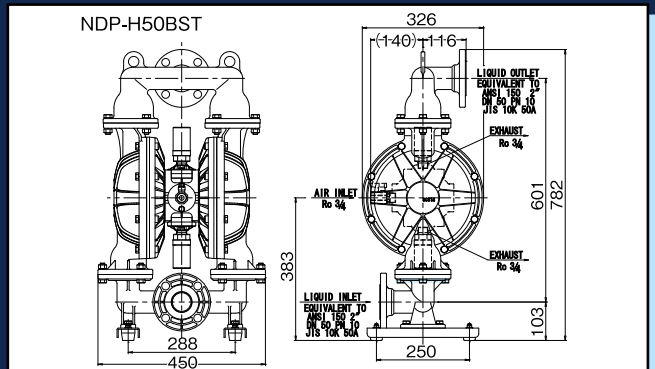
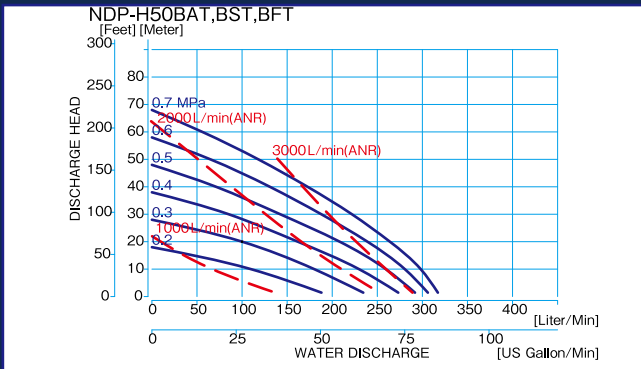
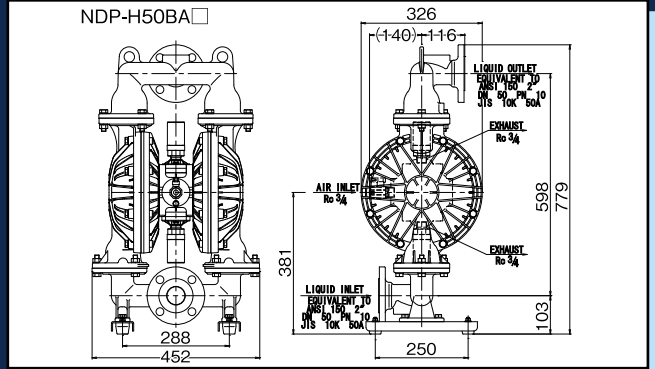
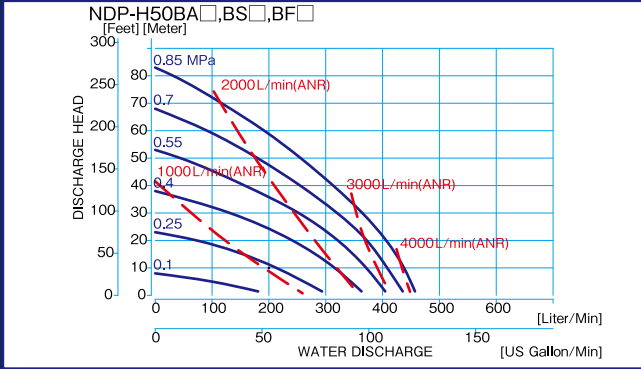
NDP-H50Series

Material of main parts

| Model name | NDP-H50BA□ | NDP-H50BS□ | NDP-H50BF□ | NDP-H50BP□ |
|-------------|---------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------|
| Ball valve | NDP-H50B□S...EPDM; Other: Same as diaphragm material | | | |
| Valve seat | NDP-H50BAT...A5056 Other: Same as diaphragm material | NDP-H50BST...SUS316 Other: Same as diaphragm material | NDP-H50BFT...SUS316 Other: Same as diaphragm material | TPEE PP |
| Valve guide | All machine types: Integrated type same as materials for main body. | | | PP |
| Center disk | A5056 | SUS316 | SS400 | PPG (SCS13) |

*Materials for SCS13 are insert materials.
*Specifications for the original self-priming device are:
NDP-H50B□T: 3 m; Other NDP-H50B□□ 5 m.

*Liquid temperature differs by diaphragm material:
NBR/CR: 0 - 70°C
TPEE/EPDM: 0 - 80°C
FKM/TPO/PTFE: 0 - 100°C



The maximum pressure used for plastic type (BP□) wetted portions differs depending on the liquid temperature. Please make sure to check the graph above for the relationship between liquid temperature and maximum pressure used.

NDP-H80Series

Material of main parts

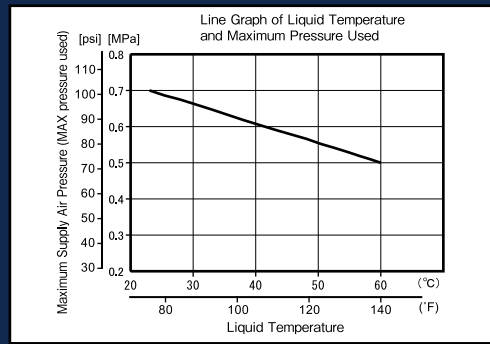
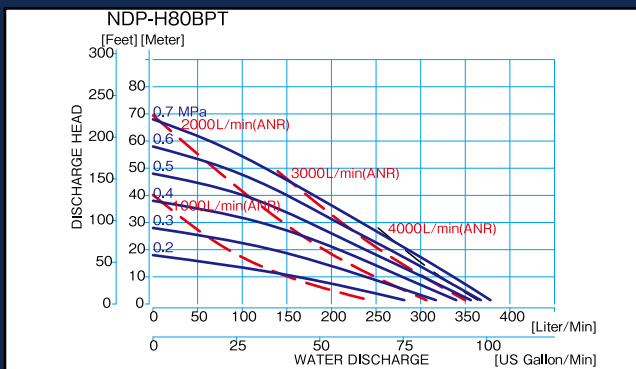
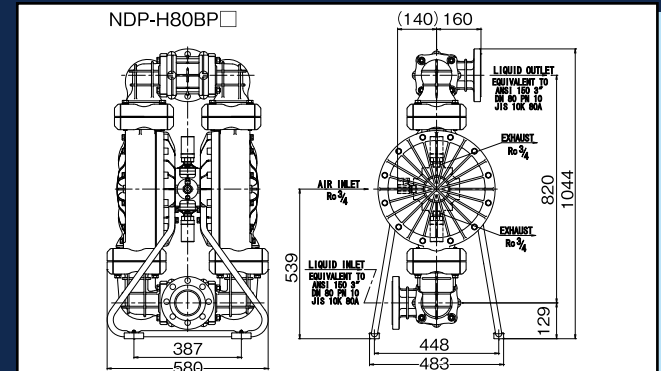
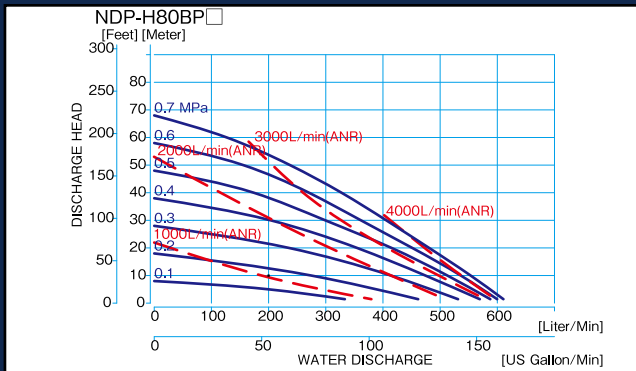
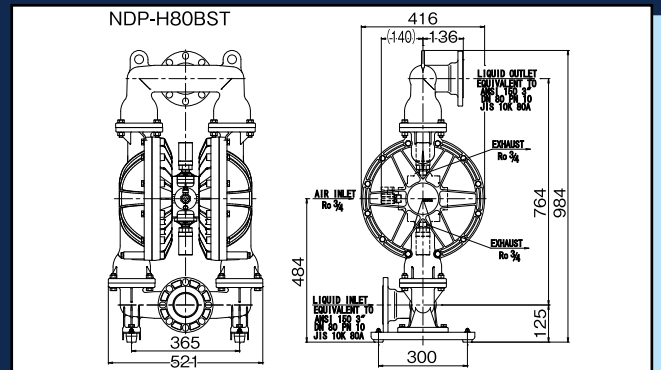
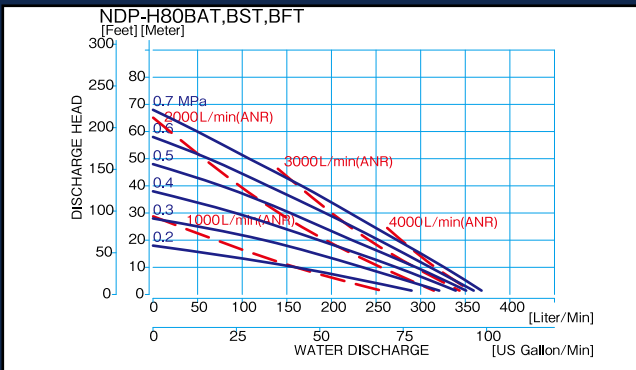
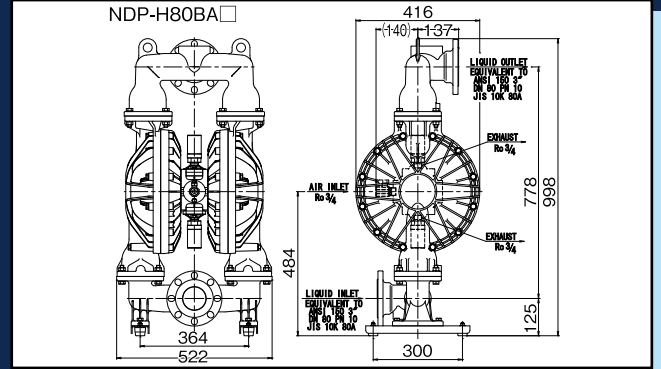
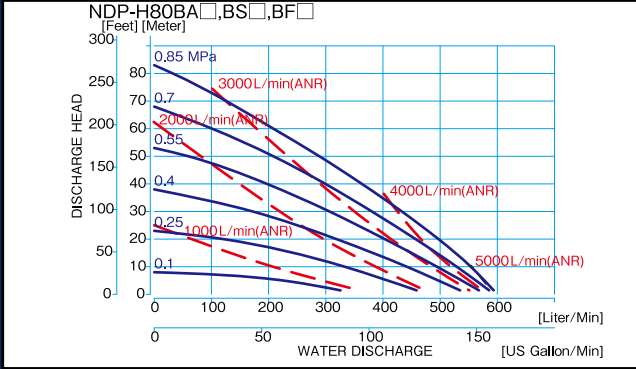
| Model name | NDP-H80BA□ | NDP-H80BS□ | NDP-H80BF□ | NDP-H80BP□ |
|-------------|---------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------|
| Ball valve | NDP-H80B□S...EPDM; Other: Same as diaphragm material | | | |
| Valve seat | NDP-H80BAT...A5056 Other: Same as diaphragm material | NDP-H80BST...SUS316 Other: Same as diaphragm material | NDP-H80BFT...SUS316 Other: Same as diaphragm material | TPEE PP |
| Valve guide | All machine types: Integrated type same as materials for main body. | | | |
| Center disk | A5056 | SUS316 | SS400 | PPG (SCS13) |

*Materials for SCS13 are insert materials.

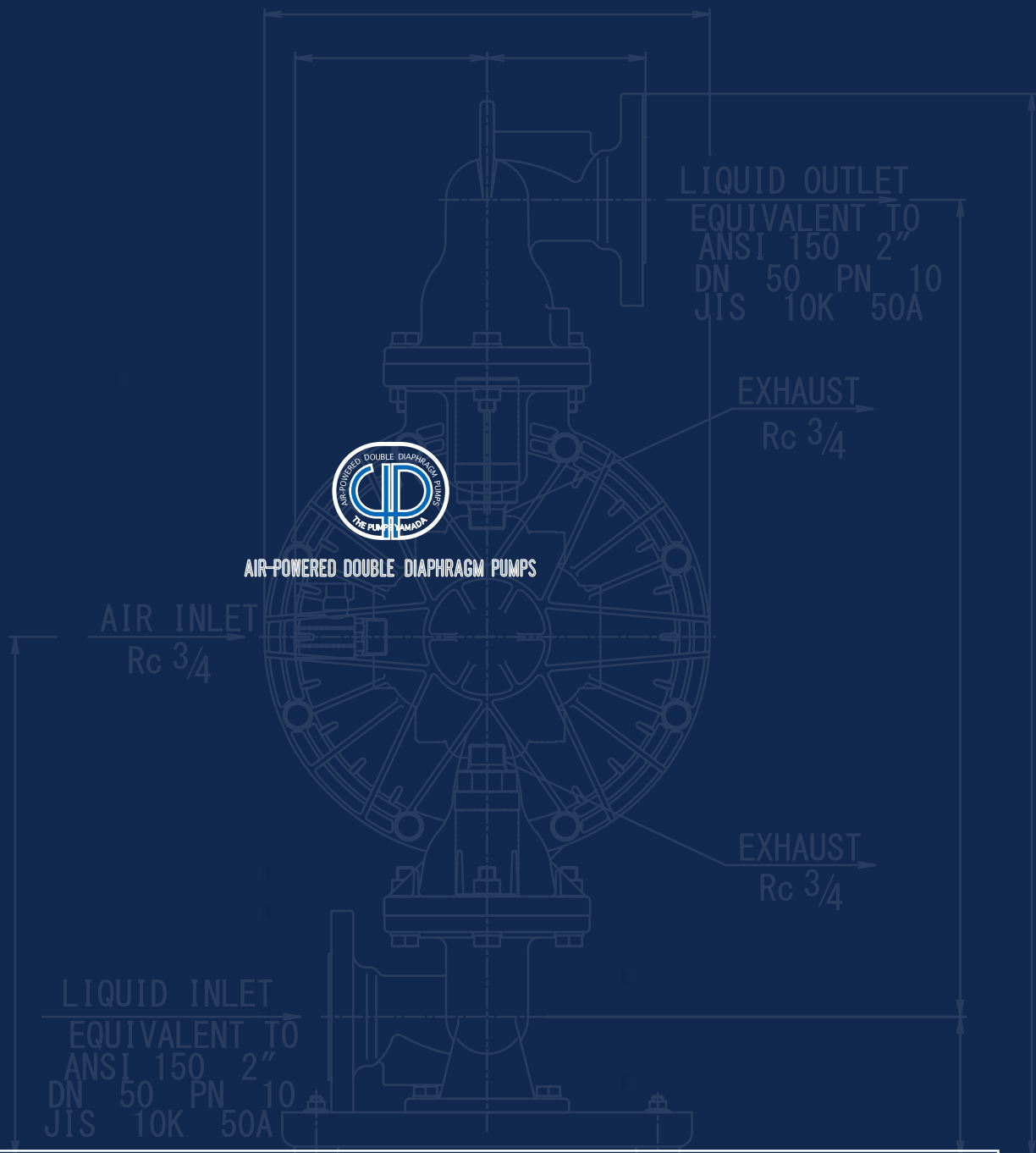
*Specifications for the original self-priming device are:
NDP-H80B□T: 3 m; Other NDP-H80B□□□ 5 m.

*Liquid temperature differs by diaphragm material:

NBR/CR: 0 - 70°C
TPEE/EPDM: 0 - 80°C
FKM/TPO/PTFE: 0 - 100°C



The maximum pressure used for plastic type (BP□) wetted portions differs depending on the liquid temperature. Please make sure to check the graph above for the relationship between liquid temperature and maximum pressure used.



**CAUTION WHEN
SELECTING A PUMP**

Yamada offers a large range of Air Operated Double Diaphragm Pumps to cater for many different kinds of materials and conditions. When selecting the most appropriate pump for a particular selection and installation please consult your local Yamada Pump Distributor or Yamada Corporation.

YOUR LOCAL DISTRIBUTOR:

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Web: www.yamadacorp.co.jp/global