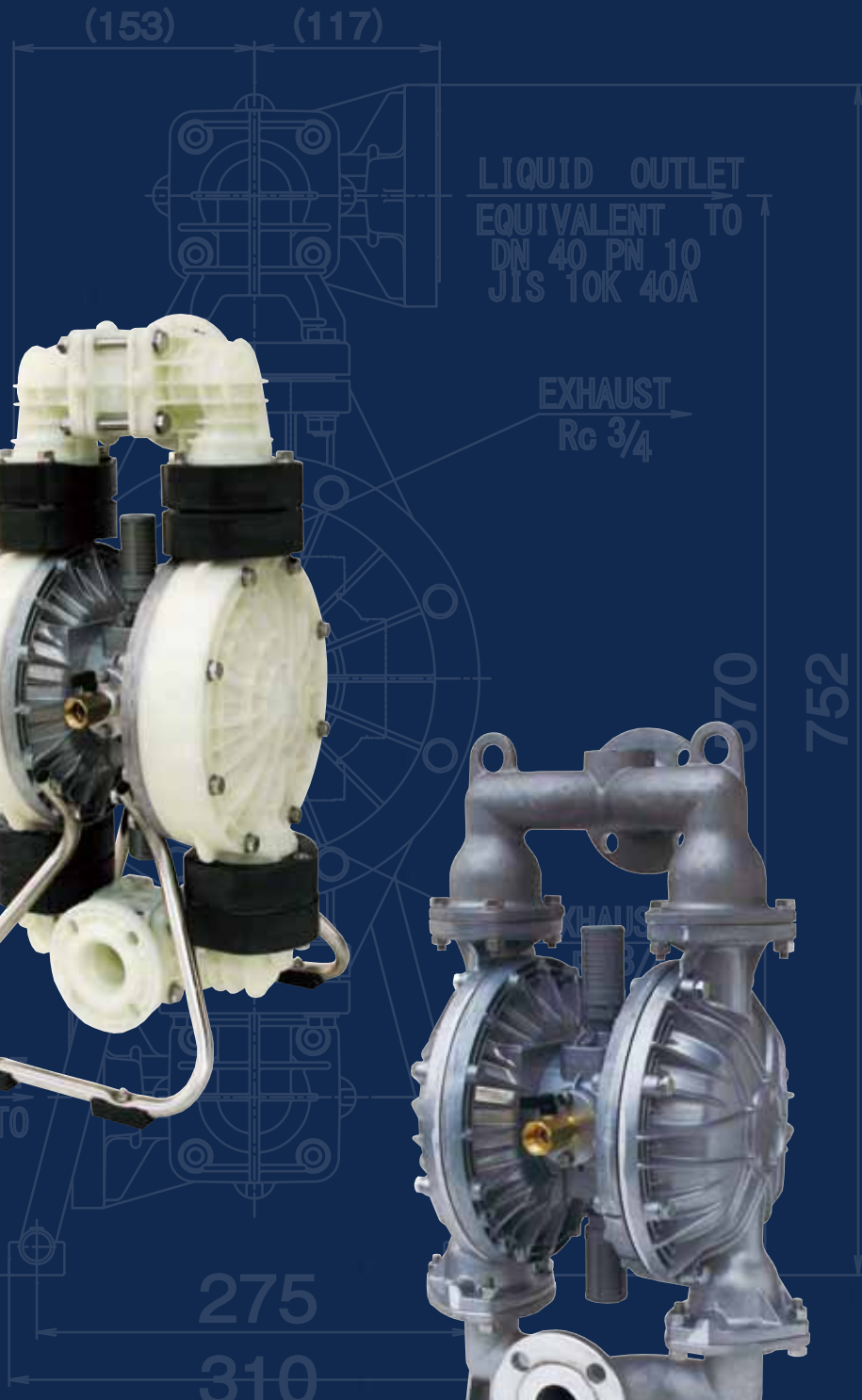


Mechanical Switch Series

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

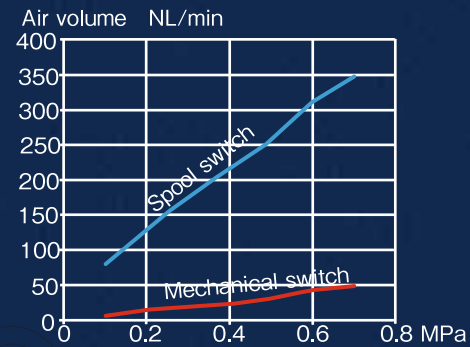


AIR-POWERED
DOUBLE DIAPHRAGM
PUMPS

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

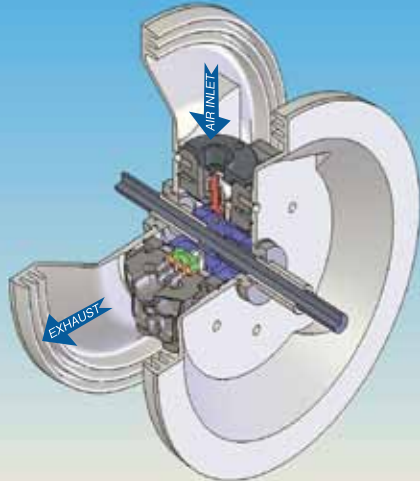
New mechanical switch allows stable stroke even with the unstable air supply. The pumps can operate with low pressure air. It is effective to transfer shear sensitive material.

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.



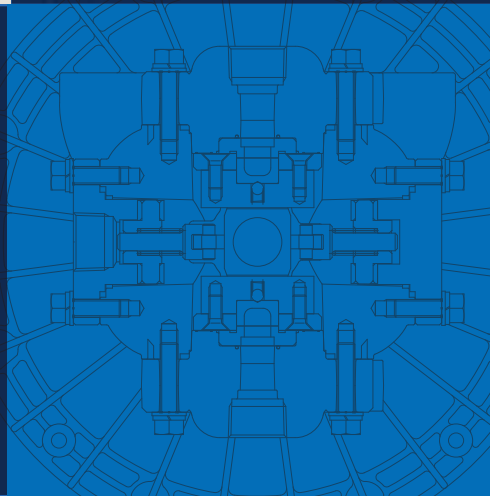
Can handle slurry and high viscosity liquid

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.

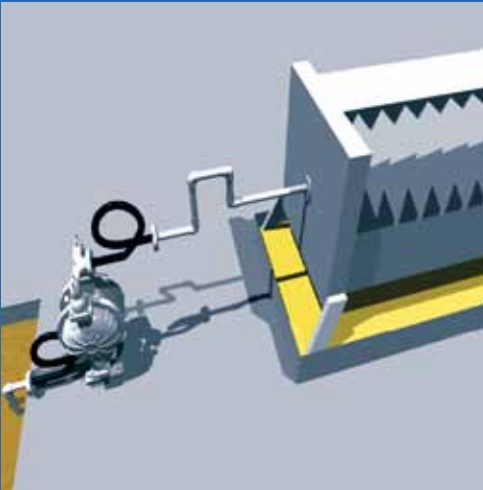


Suitable for circulation and filter press application in general industry, chemical industry, ceramic plant, etc.



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

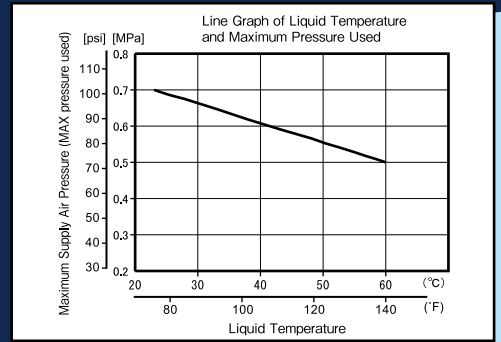
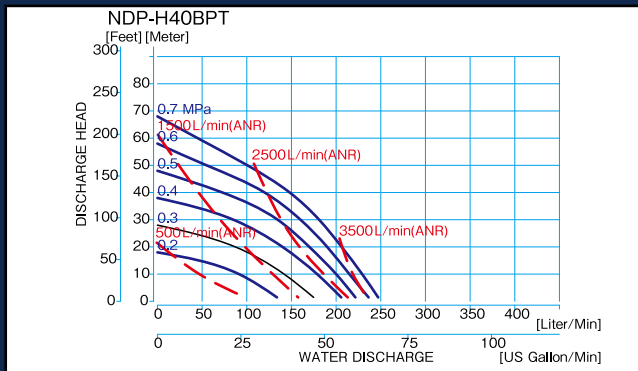
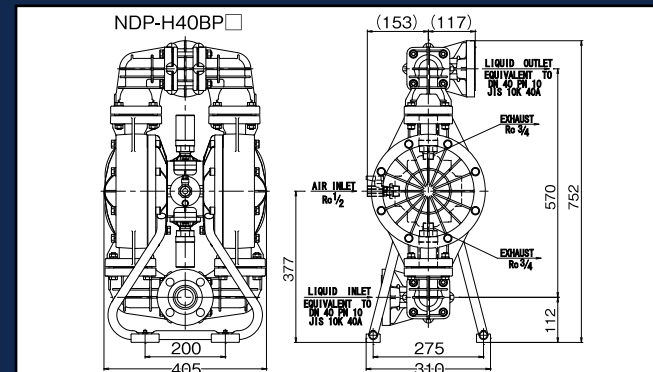
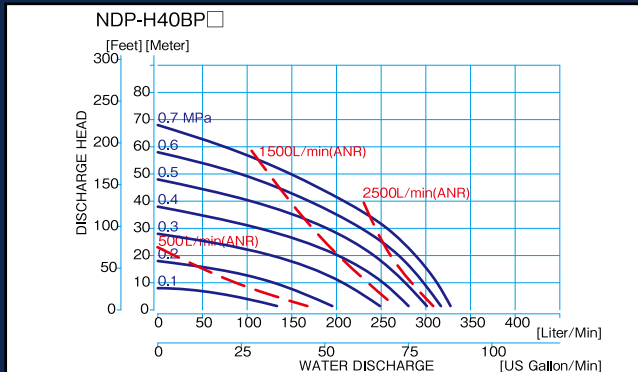
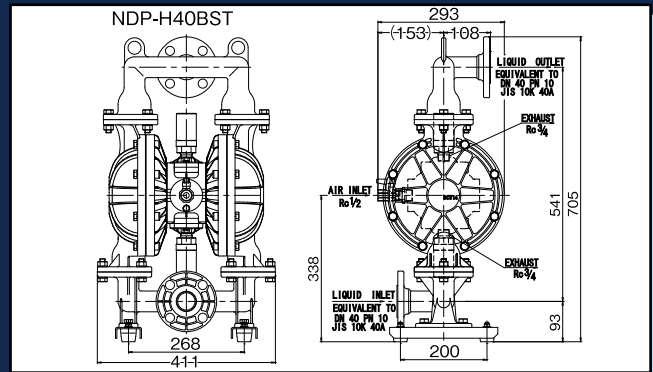
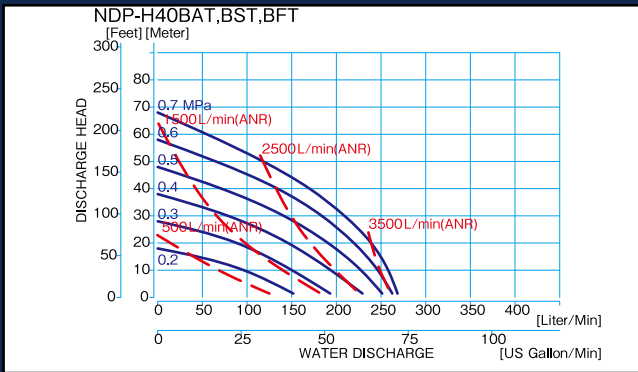
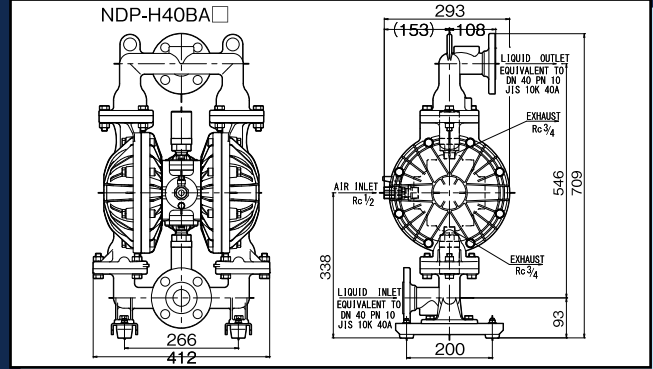
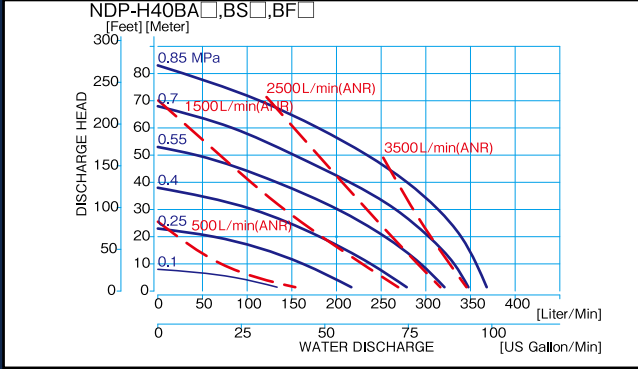
NDP-H40Series

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.

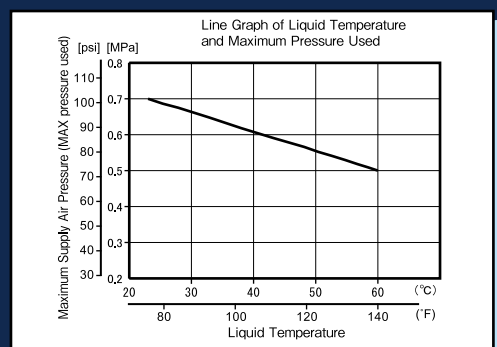
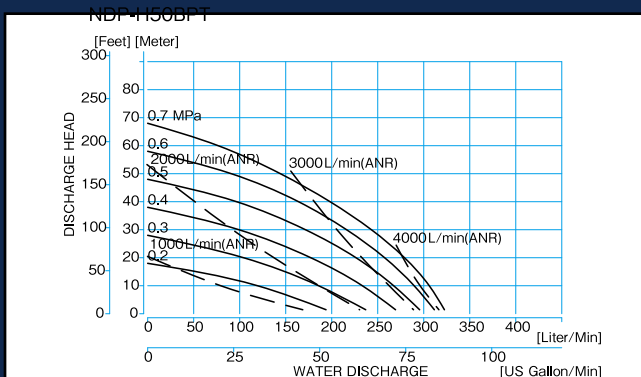
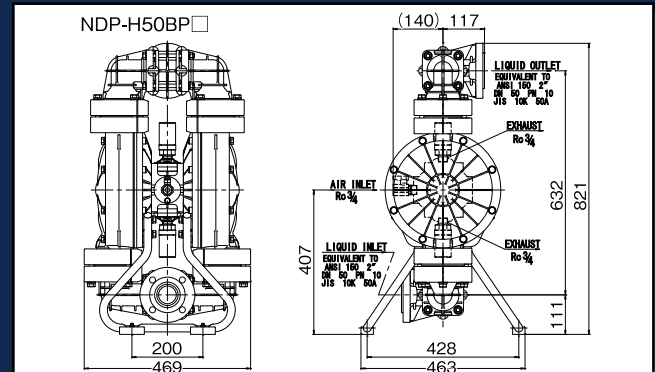
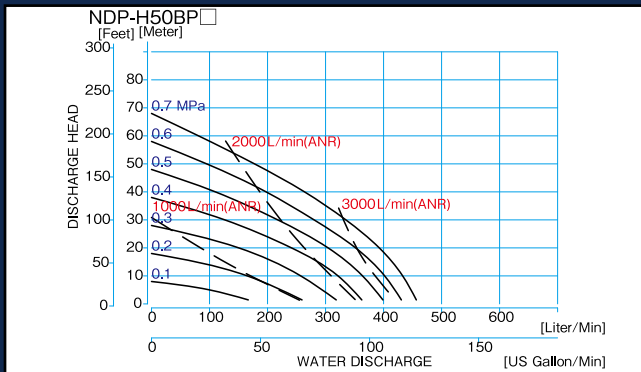
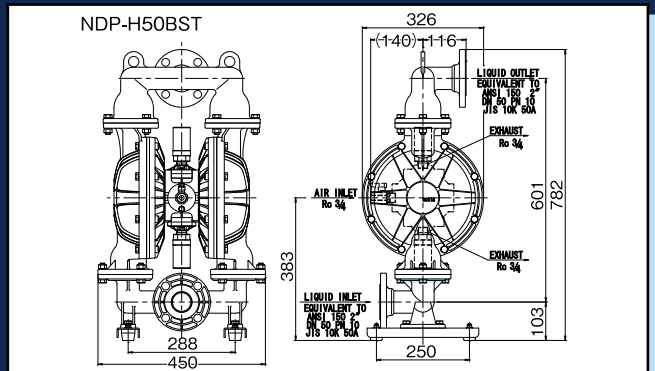
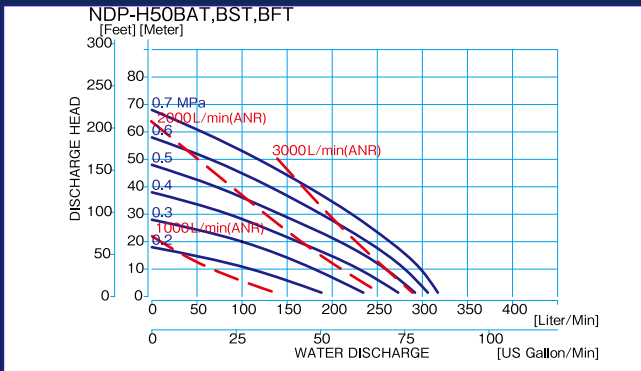
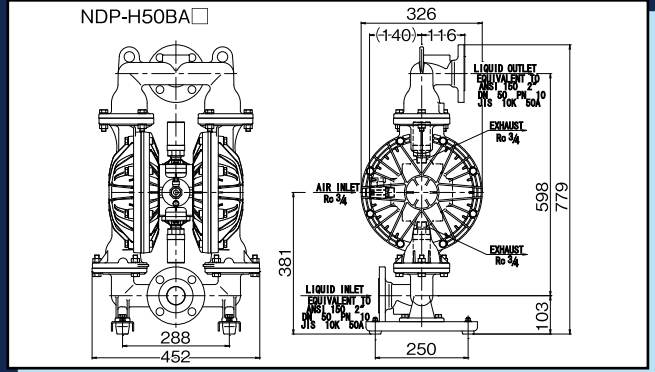
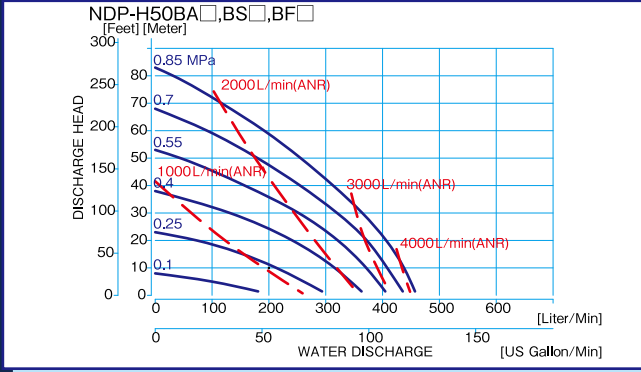
NDP-H50Series

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

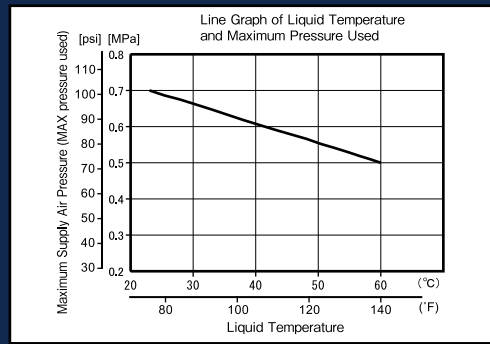
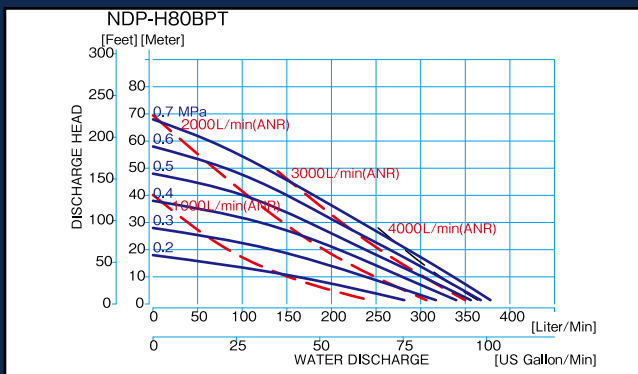
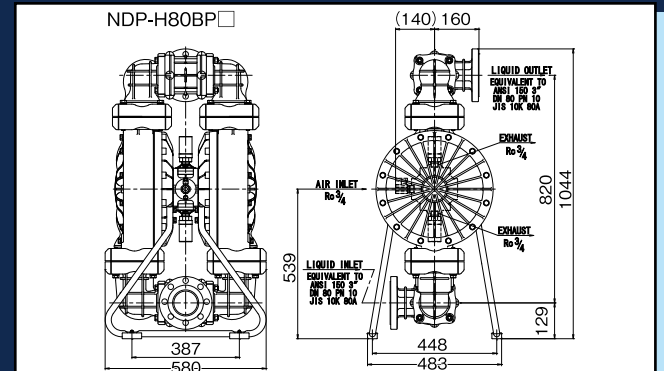
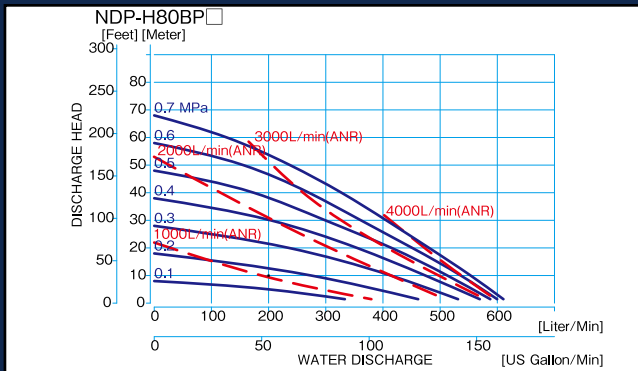
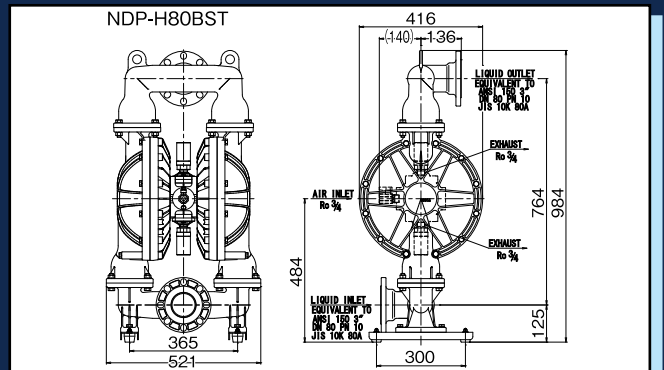
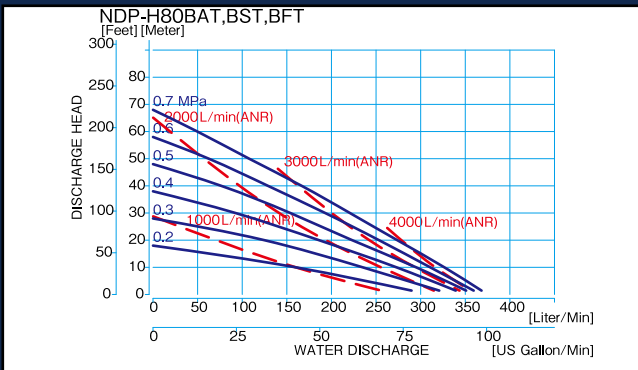
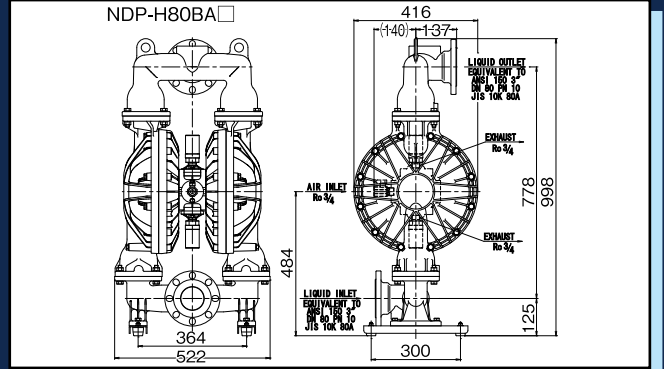
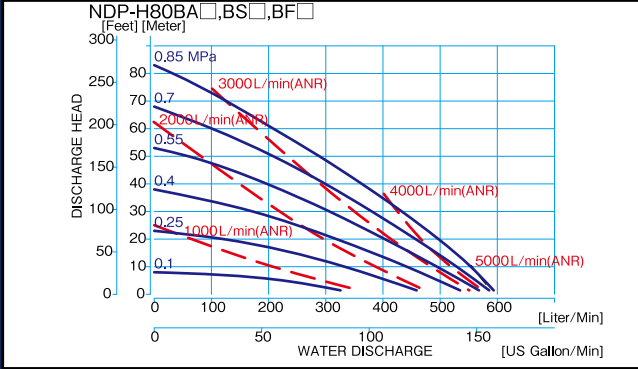
Model name	NDP-H80BA□	NDP-H80BS□	NDP-H80BF□	NDP-H80BP□
Ball valve	NDP-H80B□S...EPDM; Other: Same as diaphragm material			
Valve seat	NDP-H80BAT...A5056 Other: Same as diaphragm material	NDP-H80BST...SUS316 Other: Same as diaphragm material	NDP-H80BFT...SUS316 Other: Same as diaphragm material	TPEE PP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

