

HPX-S

Side Port Air-Operated Double Diaphragm Pumps

Air-operated double diaphragm pumps with side suction and discharge for straight-through, in-line pipework. Sizes 1/4" to 3" in polypropylene, PVDF, aluminium, cast iron and stainless steel – self-priming, dry-run safe, configured to order.



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HydraPumps

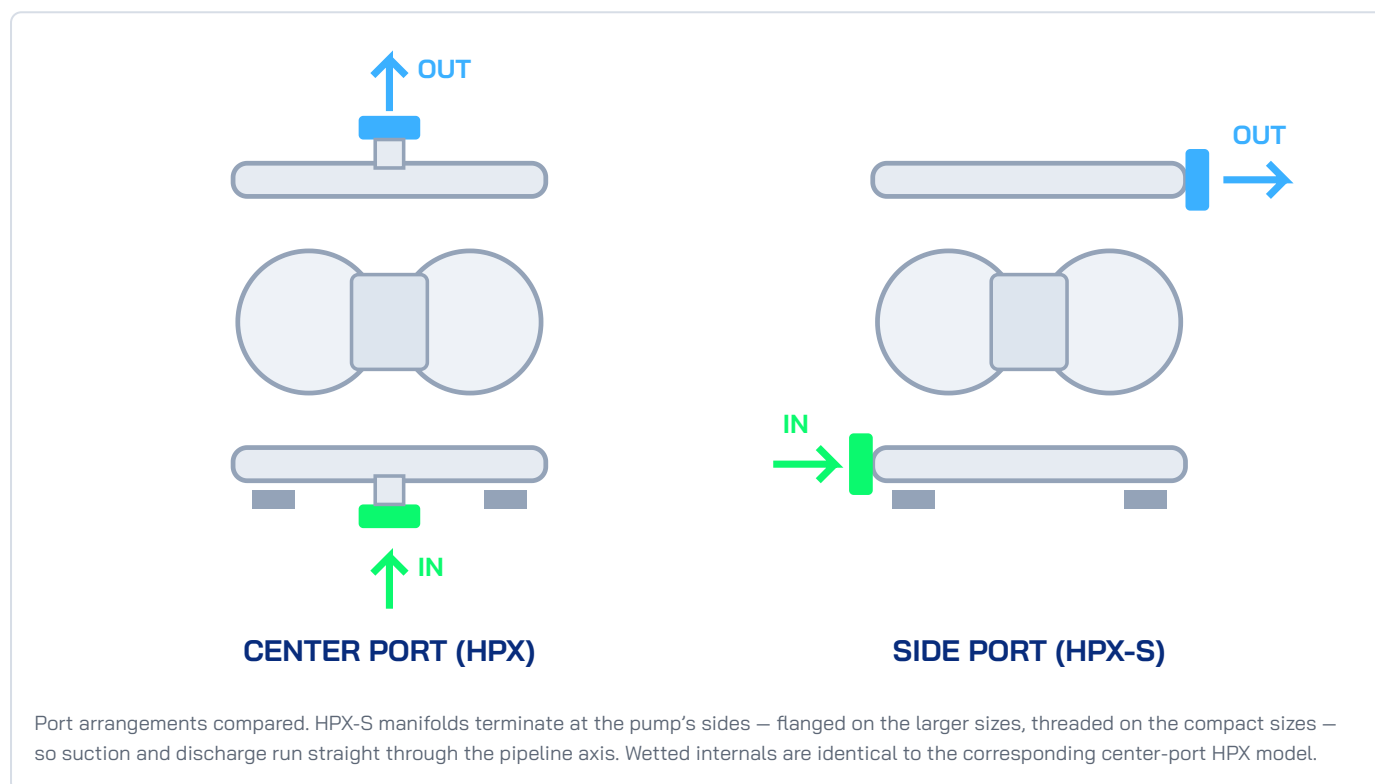
Power in every drop.

info@hydrapumps.com

The HPX-S series brings side-ported suction and discharge to the proven HPX air-operated double-diaphragm platform. Wetted internals, air valve and diaphragm assemblies are shared with the corresponding center-port HPX model — the difference is the manifold arrangement: HPX-S manifolds terminate in flanged (or threaded, on small sizes) connections on the pump's sides, so the pump drops straight into an in-line piping run.

WHY SIDE PORTING

Center-port AODD pumps discharge vertically, which forces two elbows into every in-line installation. Side porting puts suction and discharge on the pipeline axis: shorter, cleaner runs with lower friction loss, simpler skid and wall-mount layouts, easier alignment with strainers and pulsation dampeners, and straightforward replacement of in-line pump types without re-piping.



SERIES FEATURES

- Air-operated — no electric motor at the pump; often preferred where flammable or hazardous media are handled (certification requirements: consult factory)
- Runs dry without damage; self-priming with suction lift
- No dynamic seals; low-shear pumping action for viscous and solids-laden fluids
- Modular externally-serviceable air valve
- Bolted fluid-section construction with four-bolt manifold clamping
- Deadhead-safe: flow and head adjust by throttling the air supply

Availability note. HPX-S pumps are configured to order. Side-port manifold arrangements (flange standard, orientation, port hand) are engineered per order and confirmed on the order drawing.

HPXS **80** **PP** – **PP** / **TF** / **TF**
 SERIES SIZE 1 · BODY 2 · SEAT 3 · BALL 4 · DIAPHRAGM

Wetted segments always read in flow-path order: body / seat / ball / diaphragm. Size codes – 06 = 1/4" · 15 = 1/2" · 20 = 3/4" · 25 = 1" · 40 = 1.5" · 50 = 2" · 80 = 3".

1 · Pump body

PP	Polypropylene
KV	PVDF
AL	Aluminium
AC	Cast iron (nodular) – to order
SS	Stainless steel 304
LL	Stainless steel 316

2 · Valve seat

PP	Polypropylene
KV	PVDF
ST	Santoprene
AL	Aluminium
SS	Stainless steel 304
LL	Stainless steel 316

3 · Valve ball

TF	PTFE
ST	Santoprene
BN	Buna-N
SS	Stainless steel 304
LL	Stainless steel 316

4 · Diaphragm

TF	PTFE
ST	Santoprene
VT	FKM (Viton®)
BN	Buna-N
PU	Polyurethane

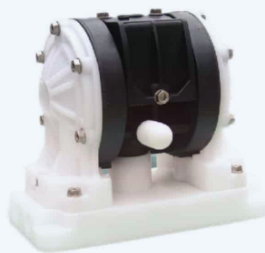
Generation letter. Every pump nameplate carries a build-generation letter. Always quote the full model code AND the generation letter when ordering spares – wet-end kits are generation-specific.

Codes are HydraPumps material codes. Not every combination is stocked – configured to order.

Wetted material	Minimum	Maximum
Polypropylene (PP)	+4 °C (+40 °F)	65 °C (150 °F)
PVDF (KV)	+4 °C (+40 °F)	93 °C (200 °F)
PTFE diaphragm (TF)	+4 °C (+40 °F)	107 °C (225 °F)
Santoprene (ST)	-40 °C (-40 °F)	107 °C (225 °F)
FKM / Viton® (VT)	-40 °C (-40 °F)	177 °C (350 °F)
Buna-N (BN)	-40 °C (-40 °F)	121 °C (250 °F)
Polyurethane (PU)	-40 °C (-40 °F)	93 °C (200 °F)

Temperature limits are based on mechanical stress only. Certain chemicals significantly reduce safe operating temperature – check chemical compatibility and temperature limits together, and size the pump so the whole duty cycle stays inside the wetted-material window. The most restrictive wetted component governs the pump.

Where the manufacturer's published figures differ between documents, the more conservative value is shown.



HPXS06

1/4" compact AODD pump — plastic

1/4" ports

19 L/min

7 bar

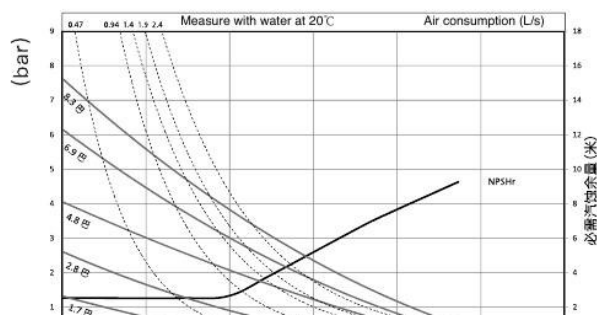
PP · KV

Technical parameters

Suction / discharge connection	1/4"
Maximum free flow	19 L/min (5 US gpm)
Maximum working / air pressure	7 bar (102 psi)
Air pressure range	1.8 – 7 bar
Maximum air consumption	0.25 m³/min
Maximum solids handling	1.5 mm
Air inlet size	1/4"
Body options	PP, KV (PVDF)
Diaphragm options	TF, ST, VT, BN, PU

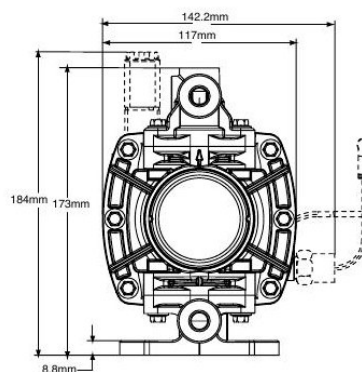
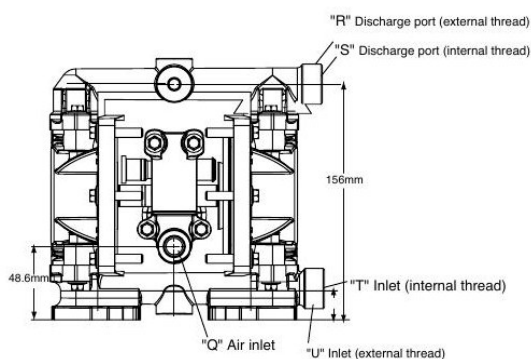
Non-metallic wetted construction (PP or PVDF body).

Performance Curves



Manufacturer performance curves, measured with water at 20 °C on the center-port configuration; side-port performance is equivalent at the pump duty point. Boxed values = air consumption at the marked duty points.

Installation Dimension Drawing



Base-platform reference dimensions (mm) — center-port trim, plastic construction shown. HPX-S side-port manifold arrangement, connection positions and certified installation dimensions are issued on the order GA drawing.



HPXS15/20

1/2" · 3/4" AODD pump — plastic & metal

1/2" & 3/4" ports

57 L/min

7 bar

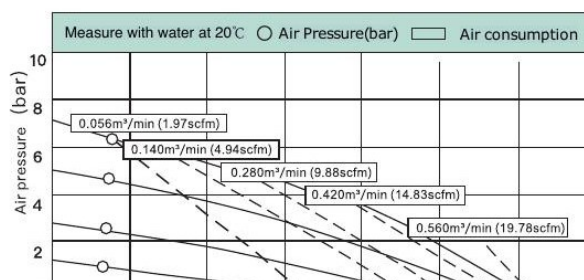
PP · KV · AL · AC · SS · LL

Technical parameters

Suction / discharge connection	1/2" or 3/4"
Maximum free flow	57 L/min (15 US gpm)
Maximum working / air pressure	7 bar (102 psi)
Air pressure range	1.8 – 7 bar
Maximum air consumption	0.67 m ³ /min
Maximum solids handling	2.5 mm
Air inlet size	1/4"
Body options	PP, KV, AL, AC, SS, LL
Diaphragm options	TF, ST, VT, BN, PU

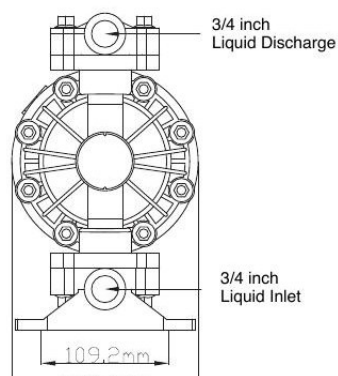
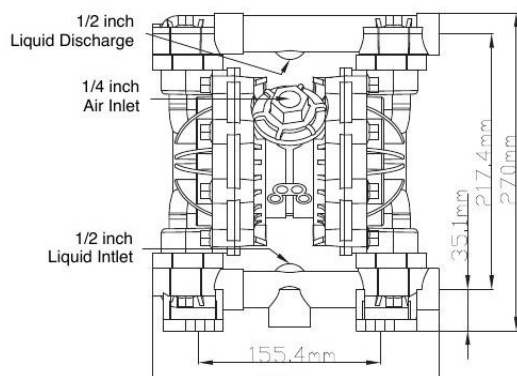
One power section serves both port sizes.

Performance Curves



Manufacturer performance curves, measured with water at 20 °C on the center-port configuration; side-port performance is equivalent at the pump duty point. Boxed values = air consumption at the marked duty points.

Installation Dimension Drawing



Base-platform reference dimensions (mm) — center-port trim, plastic construction shown. HPX-S side-port manifold arrangement, connection positions and certified installation dimensions are issued on the order GA drawing.



HPXS25

1" AODD pump — plastic & metal

1" ports

150 L/min

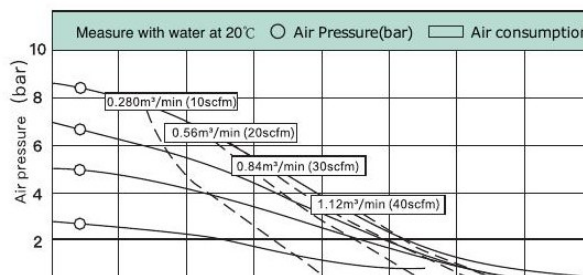
8.4 bar

PP · KV · AL · AC · SS · LL

Technical parameters

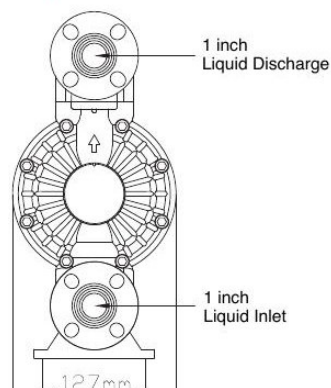
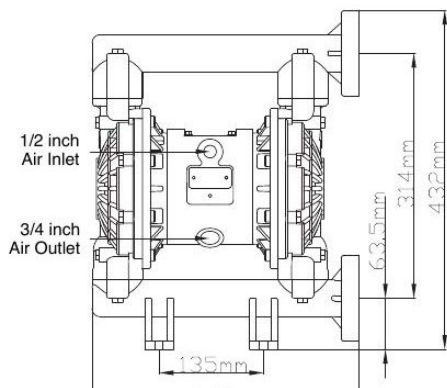
Suction / discharge connection	1"
Maximum free flow	150 L/min (40 US gpm)
Maximum working / air pressure	8.4 bar (122 psi)
Air pressure range	1.4 – 8.4 bar
Maximum air consumption	1.5 m³/min
Maximum solids handling	3.2 mm
Air inlet size	1/2"
Body options	PP, KV, AL, AC, SS, LL
Diaphragm options	TF, ST, VT, BN, PU

Performance Curves



Manufacturer performance curves, measured with water at 20 °C on the center-port configuration; side-port performance is equivalent at the pump duty point. Boxed values = air consumption at the marked duty points.

Installation Dimension Drawing



Base-platform reference dimensions (mm) — center-port trim, plastic construction shown. HPX-S side-port manifold arrangement, connection positions and certified installation dimensions are issued on the order GA drawing.



HPXS40

1.5" AODD pump – plastic & metal

1.5" ports

378 L/min

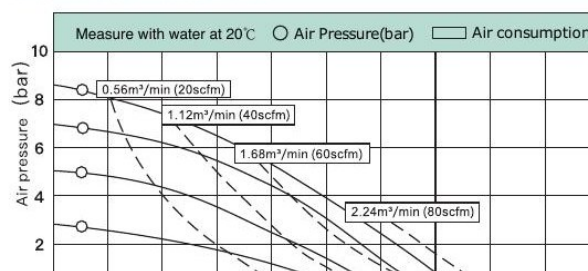
8.4 bar

PP · KV · AL · AC · SS · LL

Technical parameters

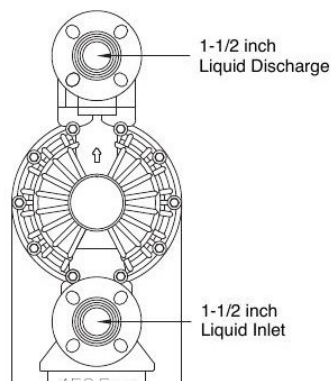
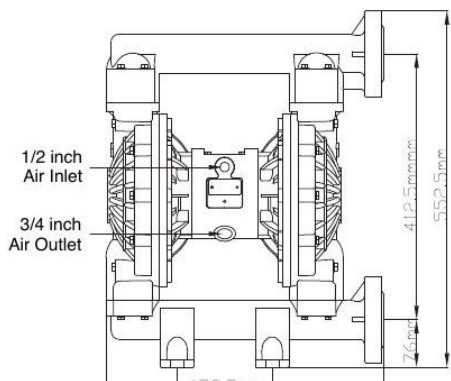
Suction / discharge connection	1.5"
Maximum free flow	378 L/min (100 US gpm)
Maximum working / air pressure	8.4 bar (122 psi)
Air pressure range	1.4 – 8.4 bar
Maximum air consumption	3.0 m³/min
Maximum solids handling	4.8 mm
Air inlet size	1/2"
Body options	PP, KV, AL, AC, SS, LL
Diaphragm options	TF, ST, VT, BN, PU

Performance Curves



Manufacturer performance curves, measured with water at 20 °C on the center-port configuration; side-port performance is equivalent at the pump duty point. Boxed values = air consumption at the marked duty points.

Installation Dimension Drawing



Base-platform reference dimensions (mm) – center-port trim, plastic construction shown. HPX-S side-port manifold arrangement, connection positions and certified installation dimensions are issued on the order GA drawing.



HPXS50

2" AODD pump — plastic & metal

2" ports

568 L/min

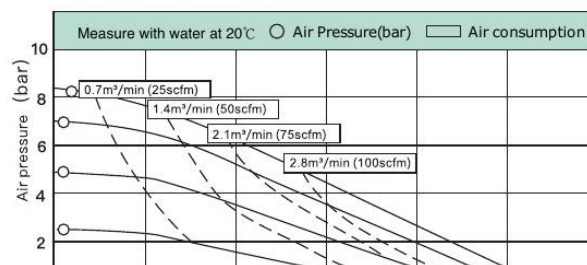
8.4 bar

PP · KV · AL · AC · SS · LL

Technical parameters

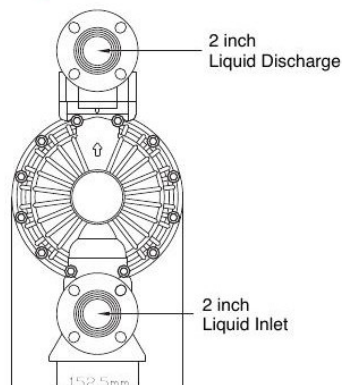
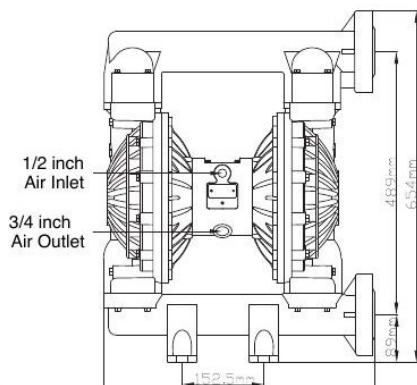
Suction / discharge connection	2"
Maximum free flow	568 L/min (150 US gpm)
Maximum working / air pressure	8.4 bar (122 psi)
Air pressure range	1.4 – 8.4 bar
Maximum air consumption	4.2 m³/min
Maximum solids handling	6.3 mm
Air inlet size	1/2"
Body options	PP, KV, AL, AC, SS, LL
Diaphragm options	TF, ST, VT, BN, PU

Performance Curves

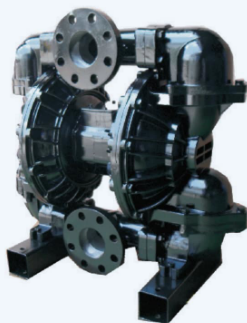


Manufacturer performance curves, measured with water at 20 °C on the center-port configuration; side-port performance is equivalent at the pump duty point. Boxed values = air consumption at the marked duty points.

Installation Dimension Drawing



Base-platform reference dimensions (mm) — center-port trim, plastic construction shown. HPX-S side-port manifold arrangement, connection positions and certified installation dimensions are issued on the order GA drawing.



HPXS80

3" high-capacity AODD pump — plastic & metal

3" flanged ports

1022 L/min

8.4 bar

PP · KV · AL · AC · SS · LL

Technical parameters

Suction / discharge connection 3" (DN80, flanged)

Maximum free flow 1022 L/min (270 US gpm)

Maximum working / air pressure 8.4 bar (122 psi)

Air pressure range 1.4 – 8.4 bar

Maximum air consumption 7.8 m³/min

Maximum solids handling 9.4 mm

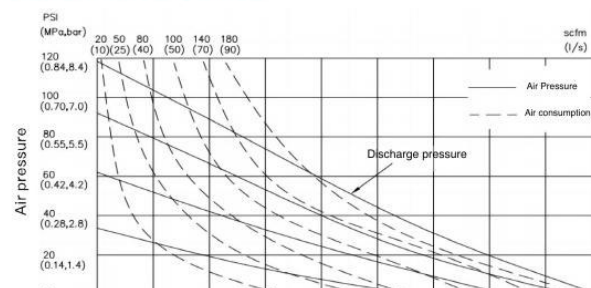
Suction lift (dry / wet) 4.5 m dry / 7 m wet (rubber-fitted) · 3 m dry / 5 m wet (PTFE-fitted)

Air inlet size 3/4"

Body options PP, KV, AL, AC, SS, LL

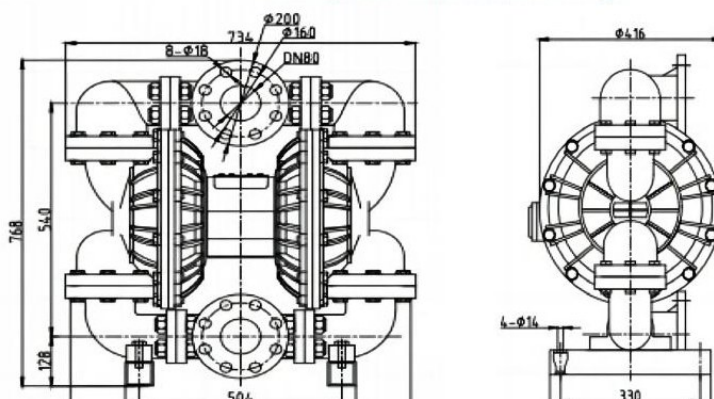
Diaphragm options TF, ST, VT, BN, PU

Performance Curves



Manufacturer performance curves, measured with water at 20 °C on the center-port configuration; side-port performance is equivalent at the pump duty point. Boxed values = air consumption at the marked duty points.

Installation Dimension Drawing



Base-platform reference dimensions (mm) — center-port trim, plastic construction shown. HPX-S side-port manifold arrangement, connection positions and certified installation dimensions are issued on the order GA drawing.

HOW TO ORDER

Specify the full model code – size, body, then seat / ball / diaphragm (flow-path order) – plus the side-port arrangement (flange standard and orientation) and the duty point (fluid, viscosity, solids, temperature, suction condition, required flow and head). Example: HPXS 80 PP - PP/TF/TF, DN80 PN10 side flanges, horizontal in-line.

Installation dimensions. Side-port installation dimensions depend on the configured manifold arrangement. Certified general-arrangement (GA) drawings are issued with order confirmation – do not design piping from generic dimensions.

SPARE PARTS & SERVICE

Wet-end service kits (diaphragms, balls, seats, seals) and air-valve kits are available for every size. Kits are generation-specific: quote the model code and the nameplate generation letter with every spares order.



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