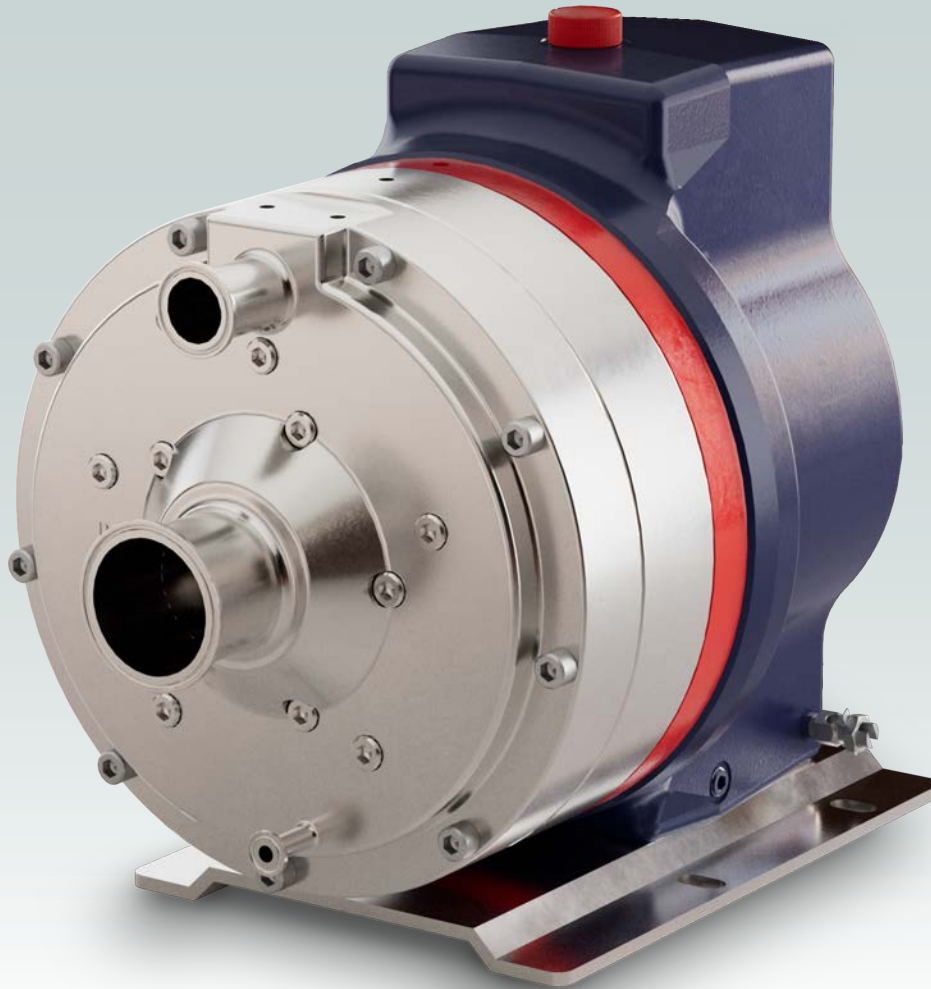


PH80 SERIES PHARMACEUTICAL

Maximum Flow rate: 246 l/min (65 US gpm)
Maximum Pressure: 40 bar (580 psi) for Metallic Pump Heads

WANNER™ PHARMA-PRO™
LEADING INNOVATION IN SEAL-LESS PUMP TECHNOLOGIES™



*PH80A Shaft-driven with
Stainless Steel pump head
with ASME BPE flanges*

Low pulse flow. Control and reliability for continuous processes.

- Low pulse flow; no pulsation dampeners needed in most applications
- Unique multiple diaphragm arrangement results in compact design, saving on installation space
- Extremely accurate wide adjustable flow range for ultimate controllability
- Low shear pumping action
- Reliably handles challenging liquids and slurries including abrasives, corrosives, non-lubricating, and liquids with micron-sized particles
- Patented ADPC (Advanced Diaphragm Position Control) technology protects diaphragms under closed or restricted inlet conditions
- ASME BPE flange connections as standard
- Wetted surfaces polished to ≤ 0.8 Ra
- Diaphragm options to FDA compliance
- ATEX certification
- TSE / BSE-free materials
- Multipurpose: CIP and main process pump
- Full material traceability

WANNER™

PH80A Pharma-Pro™ | Performance

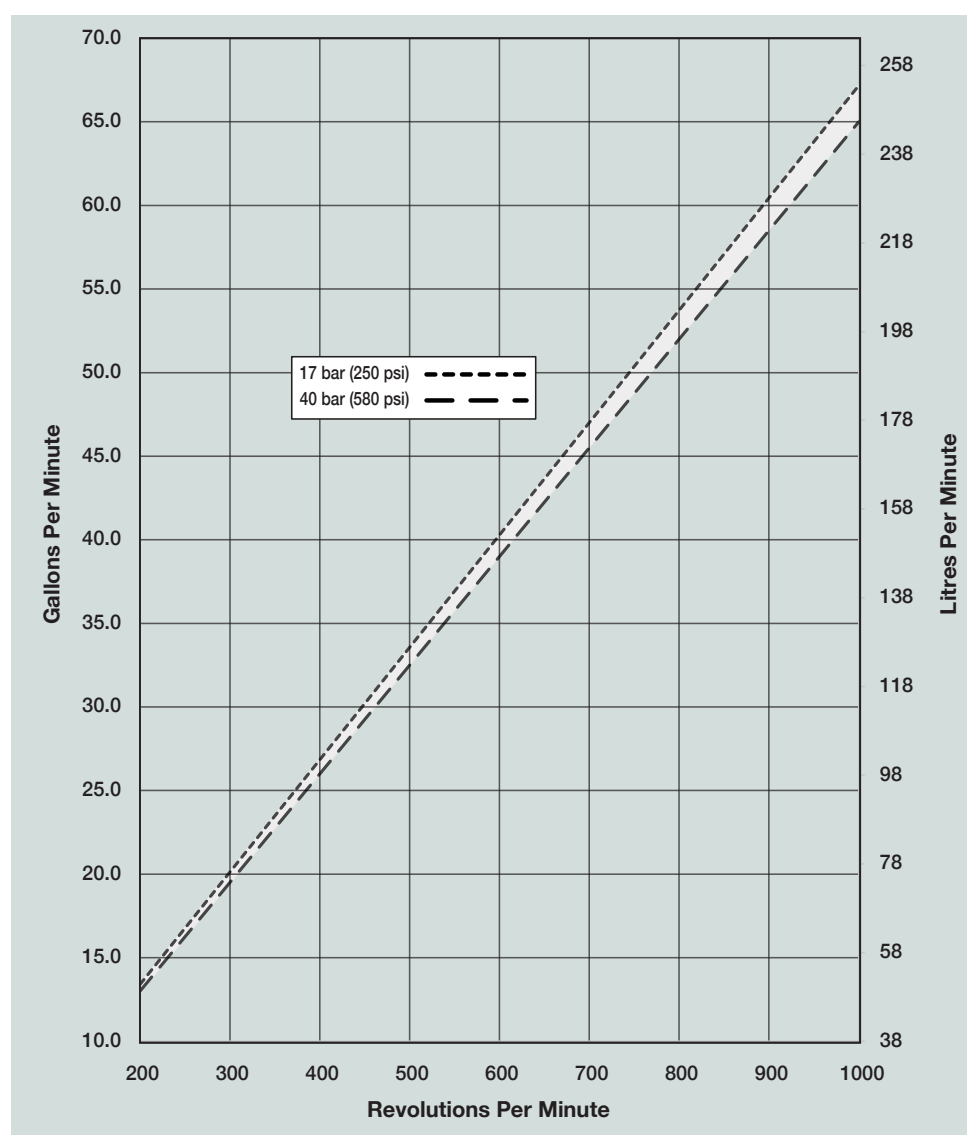
Bare Shaft Pump Options

Capacities

Model	Max. Input rpm	Max. Flow Capacities		Max. Inlet Pressure		Max. Discharge Pressure	
		@40 bar (580 psi)				Metallic Heads	
		l/min	US gpm	bar	psi	bar	psi
PH80AX	1000	246	65.0	17	250	40	580

Performance and specification ratings apply to PH80A configurations unless specifically noted otherwise.

Maximum Flow at Designated Pressure



Metering & Dosing

Performance characteristics of better than:

- ± 1% steady state accuracy
- ± 3% linearity
- ± 3% repeatability

please contact Wanner for further details.

Due to the Wanner Continuous Improvement Program, specifications and other data are subject to change.

PH80A Pharma-Pro™ | Specifications

Bare Shaft Pump Options

Diaphragms per Liquid End 5

Flow Capacities @ 40 bar (580 psi) 6-pole Motor @ 50 Hz

Model	rpm	l/min	US gpm
PH80AX	960	236.2	62.4

Flow Capacities @ 40 bar (580 psi) 8-pole Motor @ 50 Hz

Model	rpm	l/min	US gpm
PH80AX	730	179.6	47.45

Delivery @ 40 bar (580 psi)

Model	litres/rev	gal/rev
PH80AX	0.246	0.0650

Maximum Discharge Pressure

Metallic Heads: 40 bar (580 psi)

Maximum Inlet Pressure 17 bar (250 psi)

Maximum Operating Temperature

Metallic Heads: 90°C (194°F)
Consult Wanner for correct component selection for temperatures greater than 71°C (160°F).

Maximum Solids Size 800 microns

Inlet Port 3" ASME BPE

Discharge Port 1.5" ASME BPE

Shaft Diameter 50.8 mm (2 inch)

Shaft Rotation Bi-directional

Bearings Tapered roller bearings

Oil Capacity 10.4 litres (11 US quarts)

Weight 181 Kg (399 lbs)

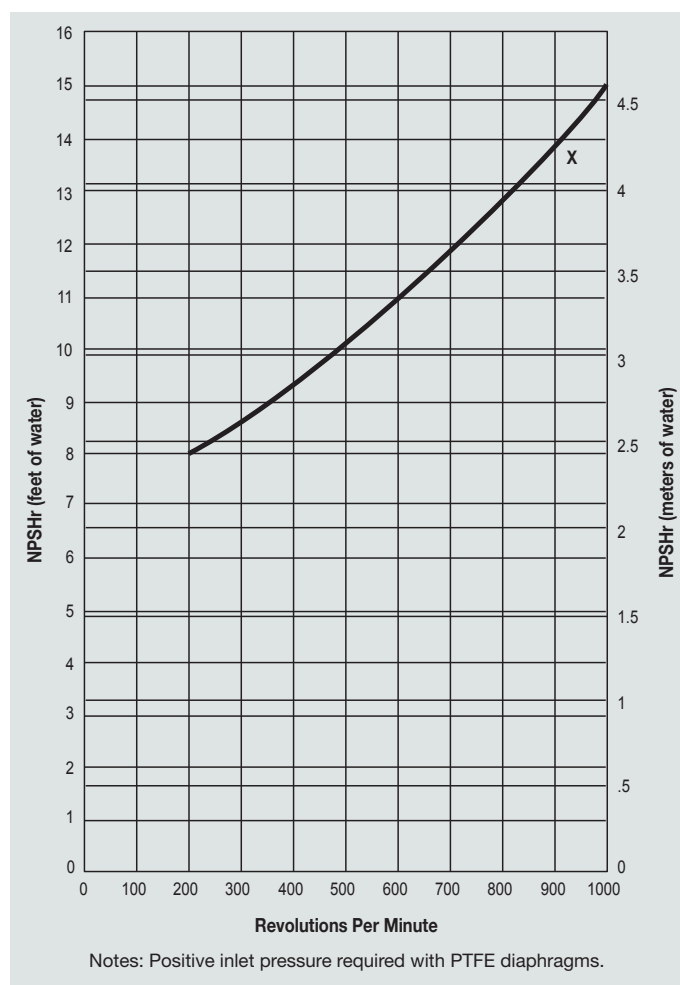
Calculating Required Power

$$\frac{100 \times \text{rpm}}{63,000} + \frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}^*$$

$$\frac{100 \times \text{rpm}}{84,428} + \frac{\text{l/min} \times \text{bar}}{511} = \text{electric motor kW}^*$$

When using a variable frequency drive (VFD) controller, calculate the hp or kW at minimum and maximum pump speed to ensure the correct hp or kW motor is selected. Note that motor manufacturers typically de-rate the service factor to 1.0 when operating with a VFD.

Net Positive Suction Head (NPSHr)



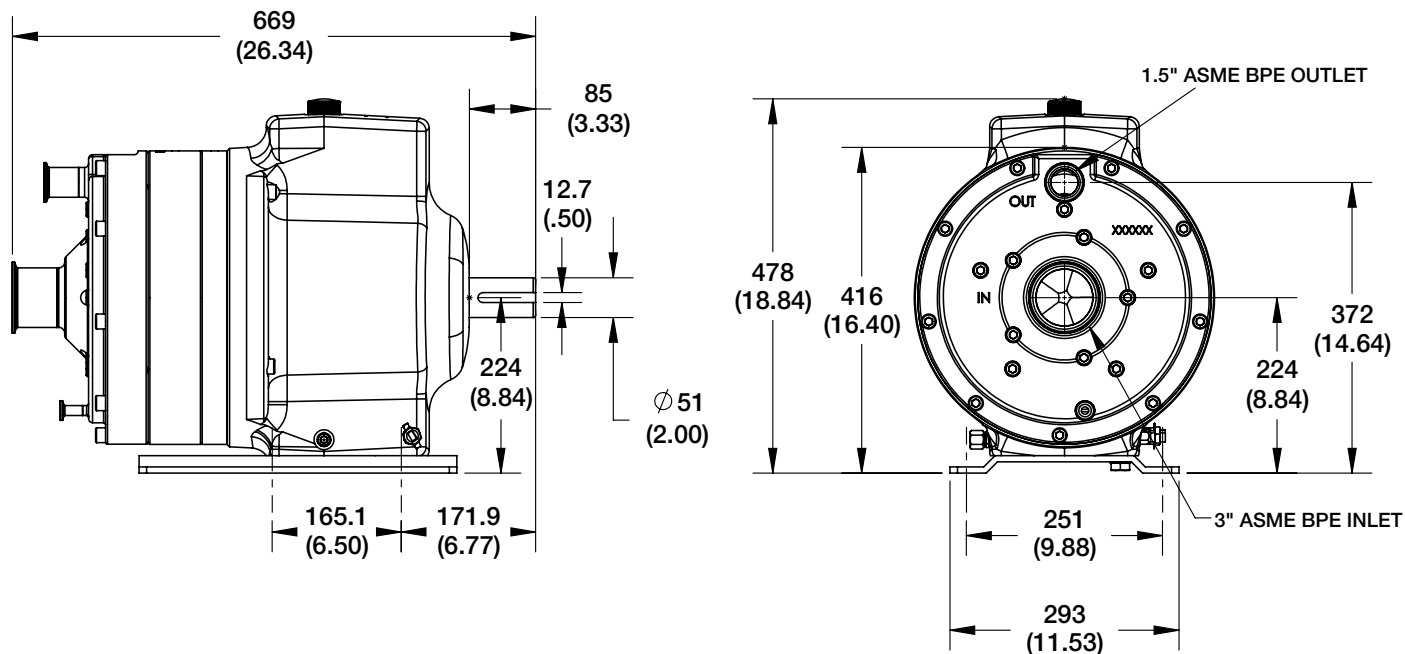
Suction Lift:

Each Pharma-Pro pump has different lift capability depending on model size, cam angle, speed, and fluid characteristics. To ensure that your specific lift characteristics are met, refer to the inlet calculations regarding friction and acceleration head losses in your Pharma-Pro Product Manual. Compare those calculations to the NPSHr curves above.

Due to the Wanner Continuous Improvement Program, specifications and other data are subject to change.

PH80A Models with ASME BPE Flanges mm (Inches)

Maximum Discharge Pressure: 40 bar (580 psi)



Note: Dimensions are for reference only. Contact Wanner for certified drawings.
Due to the Wanner Continuous Improvement Program, specifications and other data are subject to change.

Ordering Information

A complete PH80 Series Model Number contains 19 digits including 2 customer-specified design and materials options; example: PH80AEAS200ETCX0000

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
P	H	8	0	A	E		S	2	0		E	T	C	X	0	0	0	0

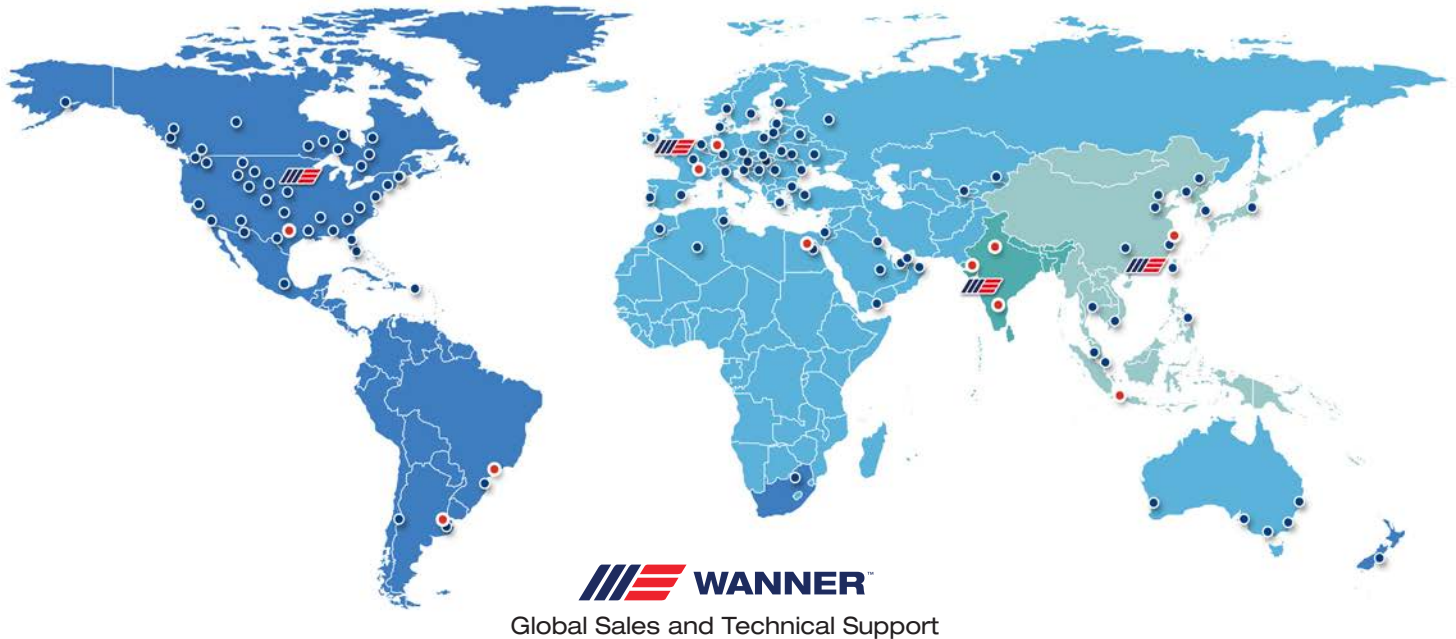
Digit	Order Code	Description
1-5	PH80A	Pump Configuration Shaft-driven (up to 236 l/min)
6	E	Hydraulic End Cam Max 236 l/min (62.3 US gpm) @ 1050 rpm
7		Pump Head Version – ¹ ADPC (Advanced Diaphragm Position Control System)
	A	ADPC ¹ Non-Hazardous – Safe Area
	B	ADPC ¹ Hazardous Area: ATEX CAT 2, Zone 1, IIC, T4
	C	ADPC ¹ Hazardous Area: ATEX CAT 3, Zone 2, IIC, T4
8-9		Pump Head Material & Connection Type* (Machined, 3.1 material certs, ASME BPE Flange, Maximum Operating Pressure 40 Bar)
	S2	316L stainless steel
10	0	Manifold Drain Options No drain
11		Diaphragm Rupture Detection
	0	No detection
	A	High / Low oil level bowl – not required with Digit 7 – B and C
12	E	Diaphragm / O-rings / Follower (All process wetted materials FDA compliant and TSE/BSE free) EPDM / PTFE / Hastelloy C276 – Must be used with option "C" Digit 14
13	T	Valve / Valve Seat / Valve Spring / Spring Retainer* Hastelloy C / Hastelloy C / Hastelloy C / Hastelloy C

Digit	Order Code	Description
14	C	Hydra-Oil EPDM-compatible oil, NSF H1 – Must be used with Digit 12 option "E"
15	X	Reduction Gearing Options PH80A – Bare shaft pump; no reduction gearbox required
16-17	00	Vertical Reduction Gearbox Ratio Options PH80A – No reduction gearbox
18-19	00	Vertical Reduction Gearbox with Vertical Mechanical Variator Options No mechanical variator

* Polished to 0.8 Ra

Due to the Wanner Continuous Improvement Program, specifications and other data are subject to change.

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