

XPX8

Original™ Series **METAL** Pumps



Simplify your process

PRO-FLO[®]
PROGRESSIVE PUMP TECHNOLOGY

PRO-FLO[™]**X**
PROGRESSIVE PUMP TECHNOLOGY



WILDEN[®]

A **DOVER** COMPANY

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REPLACES WIL-10320-E-04

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CAUTIONS—READ FIRST!

-  **CAUTION:** Do not apply compressed air to the exhaust port — pump will not function.
-  **CAUTION:** Do not, under any circumstance loosen the set screw located at the adjuster dial of the Pro-Flo X™ pump. If the set screw is loose when the pump is pressurized, it could eject and cause injury to anyone in the area.
-  **CAUTION:** Do not over-lubricate air supply — excess lubrication will reduce pump performance. Pump is pre-lubed.
-  **TEMPERATURE LIMITS:**
- | | | |
|------------------------------------|--------------------|----------------|
| Neoprene | -17.7°C to 93.3°C | 0°F to 200°F |
| Buna-N | -12.2°C to 82.2°C | 10°F to 180°F |
| Nordel® | -51.1°C to 137.8°C | -60°F to 280°F |
| Viton® | -40°C to 176.7°C | -40°F to 350°F |
| Saniflex™ | -28.9°C to 104.4°C | -20°F to 220°F |
| Polytetrafluoroethylene (PTFE) | | |
| | 4.4°C to 104.4°C | 40°F to 220°F |
| Polyurethane | -12.2°C to 65.6°C | 10°F to 150°F |
| Tetra-Flex™ PTFE w/Neoprene Backed | | |
| | 4.4°C to 107.2°C | 40°F to 225°F |
| Tetra-Flex™ PTFE w/Nordel® Backed | | |
| | -10°C to 137°C | 14°F to 280°F |
- NOTE: Not all materials are available for all models. Refer to Section 2 for material options for your pump.
-  **CAUTION:** When choosing pump materials, be sure to check the temperature limits for all wetted components. Example: Viton® has a maximum limit of 176.7°C (350°F) but polypropylene has a maximum limit of only 79°C (175°F).
-  **CAUTION:** Maximum temperature limits are based upon mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperatures. Consult Chemical Resistance Guide (E4) for chemical compatibility and temperature limits.
-  **WARNING:** Prevention of static sparking — If static sparking occurs, fire or explosion could result. Pump, valves, and containers must be grounded to a proper grounding point when handling flammable fluids and whenever discharge of static electricity is a hazard.
-  **CAUTION:** Do not exceed 8.6 bar (125 psig) air supply pressure.
-  **CAUTION:** The process fluid and cleaning fluids must be chemically compatible with all wetted pump components. Consult Chemical Resistance Guide (E4).
-  **CAUTION:** Do not exceed 82°C (180°F) air inlet temperature for Pro-Flo X™ models.
-  **CAUTION:** Pumps should be thoroughly flushed before installing into process lines. FDA and USDA approved pumps should be cleaned and/or sanitized before being used.
-  **CAUTION:** Always wear safety glasses when operating pump. If diaphragm rupture occurs, material being pumped may be forced out air exhaust.
-  **CAUTION:** Before any maintenance or repair is attempted, the compressed air line to the pump should be disconnected and all air pressure allowed to bleed from pump. Disconnect all intake, discharge and air lines. Drain the pump by turning it upside down and allowing any fluid to flow into a suitable container.
-  **CAUTION:** Blow out air line for 10 to 20 seconds before attaching to pump to make sure all pipeline debris is clear. Use an in-line air filter. A 5µ (micron) air filter is recommended.
-  **NOTE:** When installing PTFE diaphragms, it is important to tighten outer pistons simultaneously (turning in opposite directions) to ensure tight fit. (See torque specifications in Section 7.)
-  **NOTE:** Cast Iron PTFE-fitted pumps come standard from the factory with expanded PTFE gaskets installed in the diaphragm bead of the liquid chamber. PTFE gaskets cannot be re-used. Consult PS-TG for installation instructions during reassembly.
-  **NOTE:** Before starting disassembly, mark a line from each liquid chamber to its corresponding air chamber. This line will assist in proper alignment during reassembly.
-  **CAUTION:** Pro-Flo® pumps cannot be used in submersible applications. Pro-Flo X™ is available in both submersible and non-submersible options. Do not use non-submersible Pro-Flo X™ models in submersible applications. Turbo-Flo® pumps can also be used in submersible applications.
-  **CAUTION:** Tighten all hardware prior to installation.

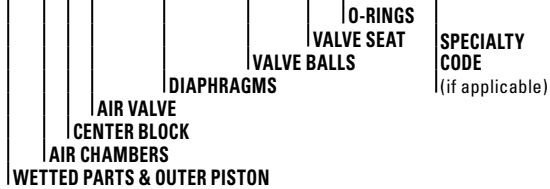
WILDEN PUMP DESIGNATION SYSTEM

XPX8 METAL

**51 mm (2") Pump
Maximum Flow Rate:
675 lpm (178 gpm)**

LEGEND

XPX8 / XXXXX / XXX / XX / XXX / XXXX



MATERIAL CODES

WETTED PARTS & OUTER PISTON
AA = ALUMINUM / ALUMINUM
SS = STAINLESS STEEL / STAINLESS STEEL
WW = CAST IRON / CAST IRON

AIR CHAMBERS
A = ALUMINUM
C = PTFE COATED
N = NICKEL-PLATED
S = STAINLESS STEEL

CENTER BLOCK
A = ALUMINUM
N = NICKEL-PLATED
S = STAINLESS STEEL

AIR VALVE
A = ALUMINUM
N = NICKEL-PLATED
S = STAINLESS STEEL

DIAPHRAGMS
XBS = CONDUCTIVE BUNA-N (Two Red Dots)
BNS = BUNA-N (Red Dot)
FSS = SANIFLEX™ [Hytrel® (Cream)]
EPS = EPDM (Blue Dot)
NES = NEOPRENE (Green Dot)
PUS = POLYURETHANE (Clear)
TEU = PTFE W/EPDM BACK-UP (White)
TNU = PTFE W/NEOPRENE BACK-UP (White)
TSU = PTFE W/SANIFLEX™ BACK-UP (White)
BNU = BUNA-N, ULTRA-FLEX™
EPU = EPDM, ULTRA-FLEX™
NEU = NEOPRENE, ULTRA-FLEX™
VTU = VITON®, ULTRA-FLEX™
VTS = VITON® (White Dot)
WFS = WIL-FLEX™ [Santoprene® (Orange Dot)]

VALVE BALL
BN = BUNA-N (Red Dot)
FS = SANIFLEX™ [Hytrel® (Cream)]
EP = NORDEL® (Blue Dot)
NE = NEOPRENE (Green Dot)
PU = POLYURETHANE (Clear)
TF = PTFE (White)
VT = VITON® (Silver or White Dot)
WF= WIL-FLEX™ [Santoprene (Orange Dot)]

VALVE SEAT
A = ALUMINUM
BN = BUNA-N (Red Dot)
FG = SANIFLEX™ [Hytrel® (Cream)]
H = ALLOY C
M = MILD STEEL
ND = NORDEL® (Blue Dot)
NE = NEOPRENE (Green Dot)
PU = POLYURETHANE (Clear)
S = STAINLESS STEEL
VT = VITON® (Silver or White Dot)
WF= WIL-FLEX™ [Santoprene (Orange Dot)]

VALVE SEAT O-RING
TF = PTFE

SPECIALTY CODES

- | | | |
|--|---|---|
| 0014 BSP | 0075 Saniflo FDA, Stallion balls and seats ONLY | 0120 Saniflo FDA, Wil-Gard 110V |
| 0023 Wing nuts | 0079 Tri-clamp fittings, wing nuts | 0330 Wing nuts, BSP |
| 0030 Screen based | 0080 Tri-clamp fittings ONLY | 0320 Single-Point Exhaust center block |
| 0036 Screen based, BSP | 0100 Wil-Gard 110V | 0324 Single-Point Exhaust center block, screen base |
| 0039 Screen based, polyurethane screen | 0102 Wil-Gard, sensor wires ONLY | 0327 Single-Point Exhaust center block, Stallion externals, balls & seats |
| 0044 Stallion, balls & seats ONLY | 0103 Wil-Gard 220V | |
| 0047 Stallion externals, balls and seats | 0108 Wil-Gard 220V, BSP | |
| 0070 Saniflo FDA | 0118 Stallion balls and seats ONLY, BSP | |

NOTE: MOST ELASTOMERIC MATERIALS USE COLORED DOTS FOR IDENTIFICATION.

NOTE: Not all models are available with all material options.

Nordel® and Viton® are registered trademarks of DuPont Dow Elastomers.
Halar® is a registered trademark of Solvay.

The Wilden diaphragm pump is an air-operated, positive displacement, self-priming pump. These drawings show flow pattern through the pump upon its initial stroke. It is assumed the pump has no fluid in it prior to its initial stroke.

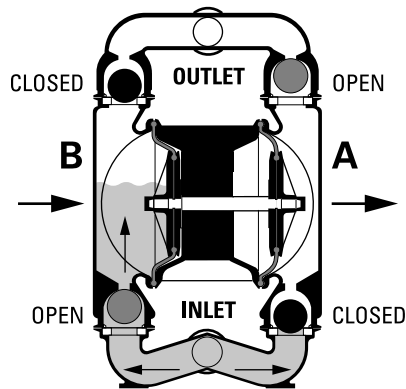


FIGURE 1 The air valve directs pressurized air to the back side of diaphragm A. The compressed air is applied directly to the liquid column separated by elastomeric diaphragms. The diaphragm acts as a separation membrane between the compressed air and liquid, balancing the load and removing mechanical stress from the diaphragm. The compressed air moves the diaphragm away from the center of the pump. The opposite diaphragm is pulled in by the shaft connected to the pressurized diaphragm. Diaphragm B is on its suction stroke; air behind the diaphragm has been forced out to atmosphere through the exhaust port of the pump. The movement of diaphragm B toward the center of the pump creates a vacuum within chamber B. Atmospheric pressure forces fluid into the inlet manifold forcing the inlet valve ball off its seat. Liquid is free to move past the inlet valve ball and fill the liquid chamber (see shaded area).

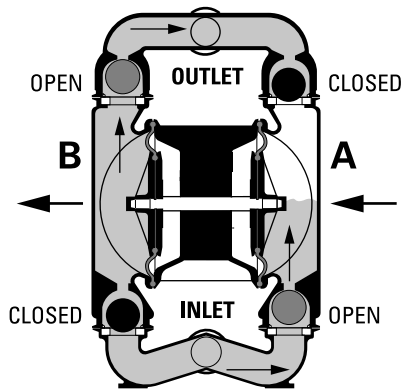


FIGURE 2 When the pressurized diaphragm, diaphragm A, reaches the limit of its discharge stroke, the air valve redirects pressurized air to the back side of diaphragm B. The pressurized air forces diaphragm B away from the center while pulling diaphragm A to the center. Diaphragm B is now on its suction stroke. Diaphragm B forces the inlet valve ball onto its seat due to the hydraulic forces developed in the liquid chamber and manifold of the pump. These same hydraulic forces lift the discharge valve ball off its seat, forcing fluid to flow through the pump discharge. The movement of diaphragm A toward the center of the pump creates a vacuum within liquid chamber A. Atmospheric pressure forces fluid into the inlet manifold of the pump. The inlet valve ball is forced off its seat allowing the fluid being pumped to fill the liquid chamber.

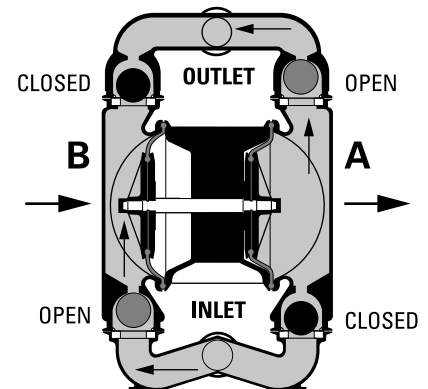
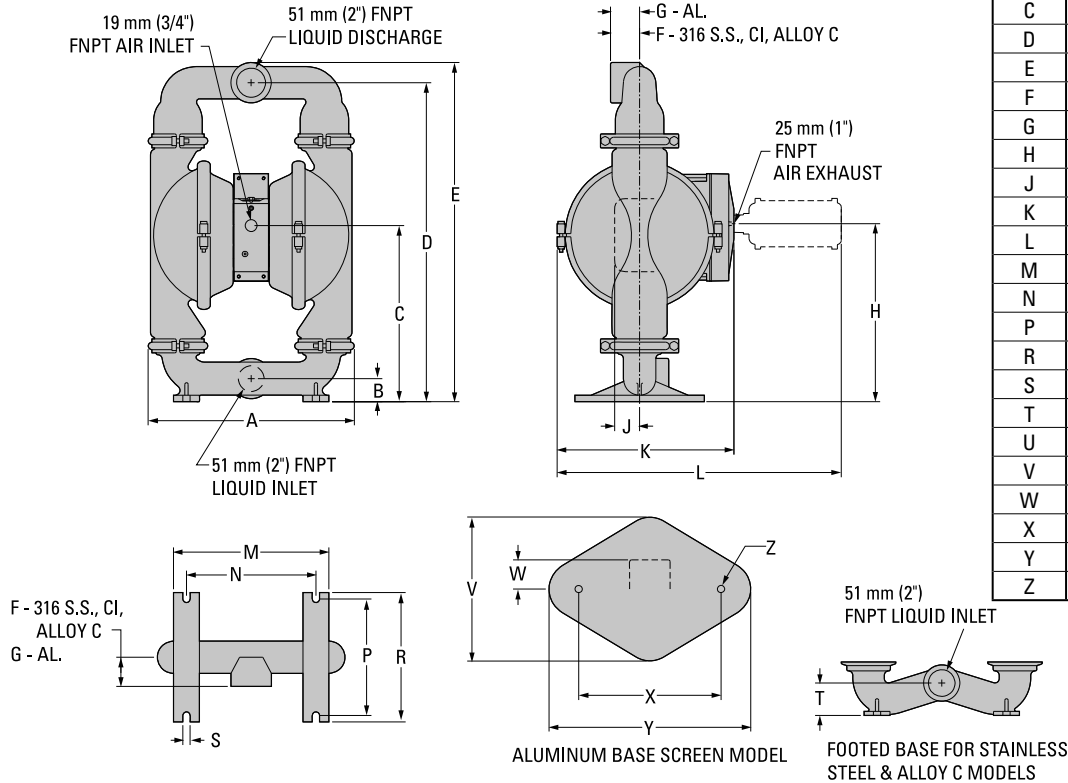


FIGURE 3 At completion of the stroke, the air valve again redirects air to the back side of diaphragm A, which starts diaphragm B on its exhaust stroke. As the pump reaches its original starting point, each diaphragm has gone through one exhaust and one discharge stroke. This constitutes one complete pumping cycle. The pump may take several cycles to completely prime depending on the conditions of the application.

DIMENSIONAL DRAWINGS

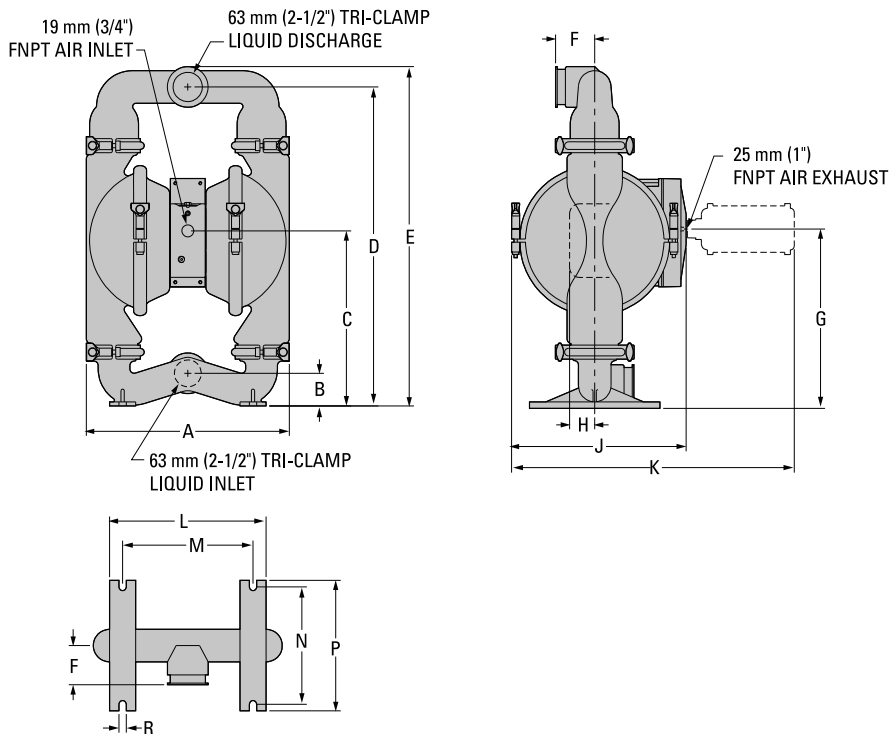
XPX8 Metal



DIMENSIONS

ITEM	METRIC (mm)	STANDARD (inch)
A	404	15.9
B	48	1.9
C	345	13.6
D	630	24.8
E	668	26.3
F	58	2.3
G	64	2.5
H	351	13.8
J	48	1.9
K	348	13.7
L	559	22.0
M	315	12.4
N	257	10.1
P	231	9.1
R	257	10.1
S	15	0.6
T	64	2.5
U	51	2.0
V	284	11.2
W	58	2.3
X	279	11.0
Y	396	15.6
Z	15 DIA.	0.6 DIA.

XPX8 Metal Saniflo^{FDA}



DIMENSIONS

ITEM	METRIC (mm)	STANDARD (inch)
A	409	16.1
B	64	2.5
C	340	13.4
D	625	24.6
E	665	26.2
F	76	3.0
G	351	13.8
H	48	1.9
J	340	13.4
K	551	21.7
L	305	12.0
M	254	10.0
N	229	9.0
P	254	10.0
R	15 DIA.	0.6 DIA.

XPX8

M E T A L

WILDEN
A DOVER COMPANY



PROFLO™
PROGRESSIVE PUMP TECHNOLOGY

XPX8 PERFORMANCE








Pro-Flo X™ Operating Principal

The Pro-Flo X™ air distribution system with the revolutionary Efficiency Management System (EMS) offers flexibility never before seen in the world of AODD pumps. The patent-pending EMS is simple and easy to use. With the turn of an integrated

control dial, the operator can select the optimal balance of flow and efficiency that best meets the application needs. Pro-Flo X™ provides higher

performance, lower operational costs and flexibility that exceeds previous industry standards.



				
<p>Turning the dial changes the relationship between air inlet and exhaust porting.</p>	<p>Each dial setting represents an entirely different flow curve</p>	<p>Pro-Flo X™ pumps are shipped from the factory on setting 4, which is the highest flow rate setting possible</p>	<p>Moving the dial from setting 4 causes a decrease in flow and an even greater decrease in air consumption.</p>	<p>When the air consumption decreases more than the flow rate, efficiency is improved and operating costs are reduced.</p>

Example 1

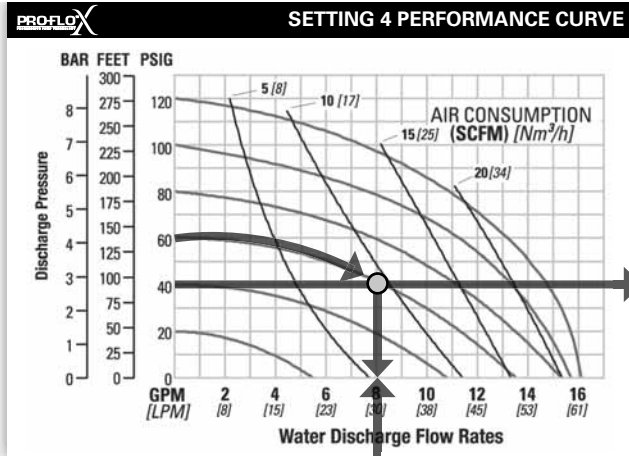


Figure 1

Example data point = **8.2** GPM

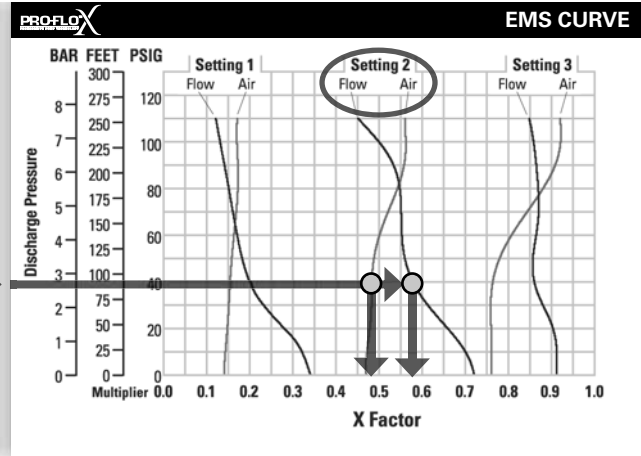


Figure 2

Example data point = **0.58** flow multiplier
0.48 air multiplier

This is an example showing how to determine flow rate and air consumption for your Pro-Flo X™ pump using the Efficiency Management System (EMS) curve and the performance curve. For this example we will be using 4.1 bar (60 psig) inlet air pressure and 2.8 bar (40 psig) discharge pressure and EMS setting 2.

Step 1: Identifying performance at setting 4. Locate the curve that represents the flow rate of the pump with 4.1 bar (60 psig) air inlet pressure. Mark the point where this curve crosses the horizontal line representing 2.8 bar (40 psig) discharge pressure. (Figure 1). After locating your performance point on the flow curve, draw a vertical line downward until reaching the bottom scale on the chart. Identify the flow rate (in this case, 8.2 gpm). Observe location of performance point relative to air consumption curves and approximate air consumption value (in this case, 9.8 scfm).

Step 2: Determining flow and air X Factors. Locate your discharge pressure (40 psig) on the vertical axis of the EMS curve (Figure 2). Follow along the 2.8 bar (40 psig) horizontal line until intersecting both flow and air curves for your desired EMS setting (in this case, setting 2). Mark the points where the EMS curves intersect the horizontal discharge pressure line. After locating your EMS points on the EMS

curve, draw vertical lines downward until reaching the bottom scale on the chart. This identifies the flow X Factor (in this case, 0.58) and air X Factor (in this case, 0.48).

Step 3: Calculating performance for specific EMS setting. Multiply the flow rate (8.2 gpm) obtained in Step 1 by the flow X Factor multiplier (0.58) in Step 2 to determine the flow rate at EMS setting 2. Multiply the air consumption (9.8 scfm) obtained in Step 1 by the air X Factor multiplier (0.48) in Step 2 to determine the air consumption at EMS setting 2 (Figure 3).

8.2 gpm	(flow rate for Setting 4)
.58	(Flow X Factor setting 2)
4.8 gpm	(Flow rate for setting 2)
9.8 scfm	(air consumption for setting 4)
.48	(Air X Factor setting 2)
4.7 scfm	(air consumption for setting 2)

Figure 3

The flow rate and air consumption at Setting 2 are found to be 18.2 lpm (4.8 gpm) and 7.9 Nm³/h (4.7 scfm) respectively.

Example 2.1

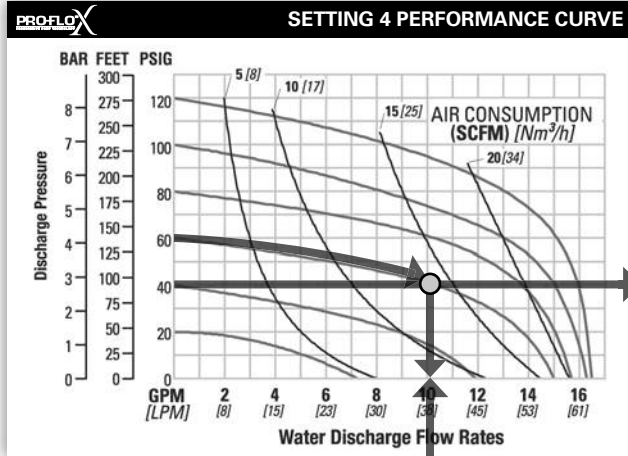


Figure 4

Example data point = **10.2** gpm

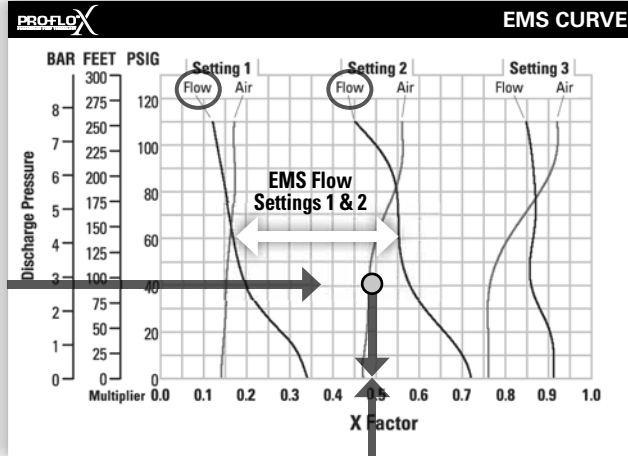


Figure 5

0.49 flow multiplier

This is an example showing how to determine the inlet air pressure and the EMS setting for your Pro-Flo X™ pump to optimize the pump for a specific application. For this example we will be using an application requirement of 18.9 lpm (5 gpm) flow rate against 2.8 bar (40 psig) discharge pressure. This example will illustrate how to calculate the air consumption that could be expected at this operational point.

DETERMINE EMS SETTING

Step 1: Establish inlet air pressure. Higher air pressures will typically allow the pump to run more efficiently, however, available plant air pressure can vary greatly. If an operating pressure of 6.9 bar (100 psig) is chosen when plant air frequently dips to 6.2 bar (90 psig) pump performance will vary. Choose an operating pressure that is within your compressed air system's capabilities. For this example we will choose 4.1 bar (60 psig).

Step 2: Determine performance point at setting 4. For this example an inlet air pressure of 4.1 bar (60 psig) inlet air pressure has been chosen. Locate the curve that represents the performance of the pump with 4.1 bar (60 psig) inlet air pressure. Mark the point where this curve crosses the horizontal line representing 2.8 bar (40 psig) discharge pressure. After locating this point on the flow curve, draw a vertical line downward until reaching the bottom scale on the chart and identify the flow rate.

In our example it is 38.6 lpm (10.2 gpm). This is the setting 4 flow rate. Observe the location of the performance point relative to air consumption curves and approximate air consumption value. In our example setting 4 air consumption is 24 Nm³/h (14 scfm). See figure 4.

Step 3: Determine flow X Factor. Divide the required flow rate 18.9 lpm (5 gpm) by the setting 4 flow rate 38.6 lpm (10.2 gpm) to determine the flow X Factor for the application.

$$5 \text{ gpm} / 10.2 \text{ gpm} = 0.49 \text{ (flow X Factor)}$$

Step 4: Determine EMS setting from the flow X Factor. Plot the point representing the flow X Factor (0.49) and the application discharge pressure 2.8 bar (40 psig) on the EMS curve. This is done by following the horizontal 2.8 bar (40 psig) psig discharge pressure line until it crosses the vertical 0.49 X Factor line. Typically, this point lies between two flow EMS setting curves (in this case, the point lies between the flow curves for EMS setting 1 and 2). Observe the location of the point relative to the two curves it lies between and approximate the EMS setting (figure 5). For more precise results you can mathematically interpolate between the two curves to determine the optimal EMS setting.

For this example the EMS setting is 1.8.

HOW TO USE THIS EMS CURVE

Example 2.2

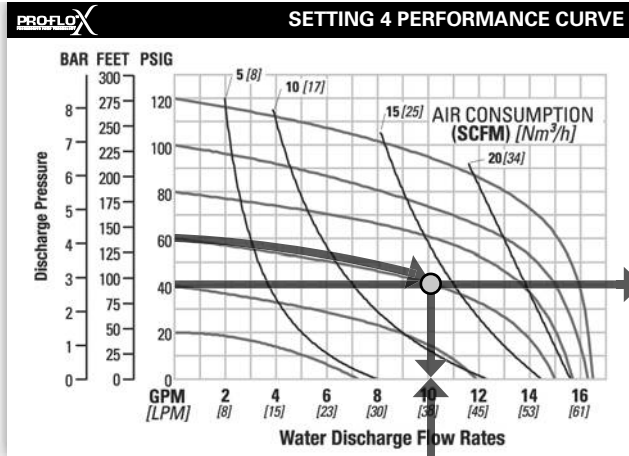


Figure 6

Example data point = **10.2** gpm

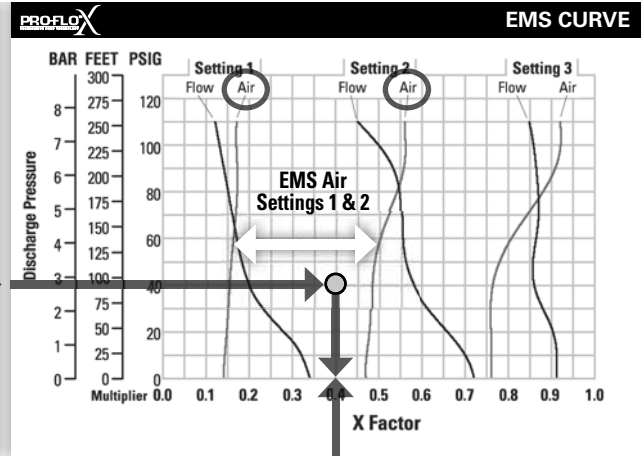


Figure 7

Example data point = **0.40** air multiplier

Determine air consumption at a specific EMS setting.

Step 1: Determine air X Factor. In order to determine the air X Factor, identify the two air EMS setting curves closest to the EMS setting established in example 2.1 (in this case, the point lies between the air curves for EMS setting 1 and 2). The point representing your EMS setting (1.8) must be approximated and plotted on the EMS curve along the horizontal line representing your discharge pressure (in this case, 40 psig). This air point is different than the flow point plotted in example 2.1. After estimating (or interpolating) this point on the curve, draw a vertical line downward until reaching the bottom scale on the chart and identify the air X Factor (figure 7).

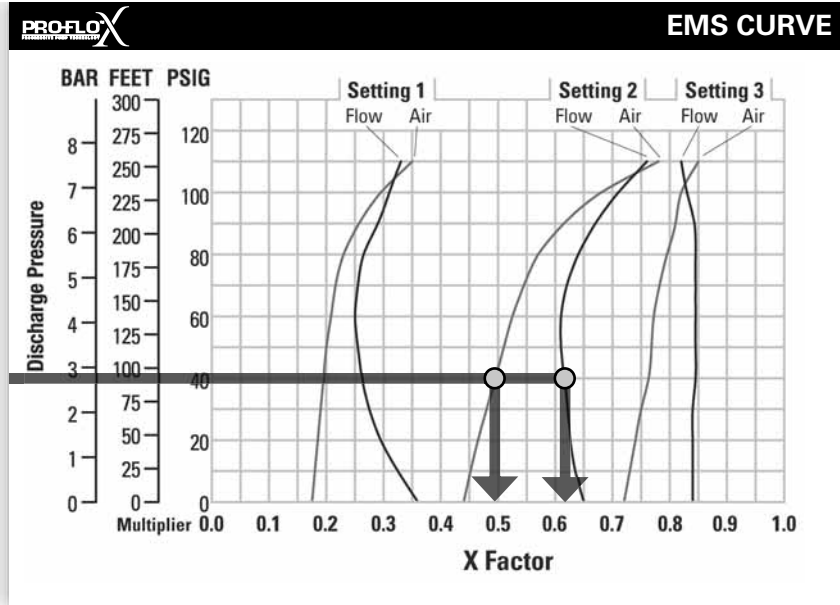
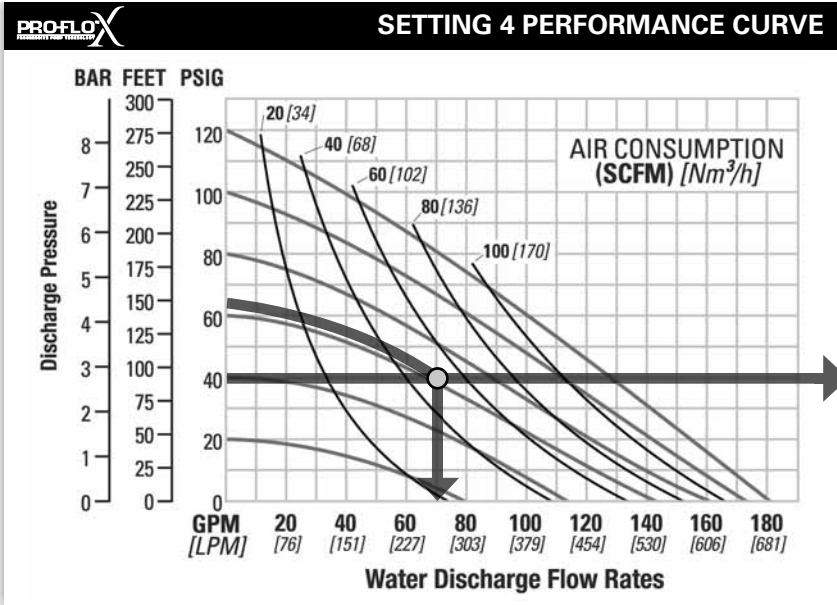
For this example the air X Factor is **0.40**

Step 2: Determine air consumption. Multiply your setting 4 air consumption (14 scfm) value by the air X Factor obtained above (0.40) to determine your actual air consumption.

$$14 \text{ scfm} \times 0.40 = 5.6 \text{ SCFM}$$

In summary, for an application requiring 18.9 lpm (5 gpm) against 2.8 bar (40 psig) discharge pressure, the pump inlet air pressure should be set to 4.1 bar (60 psig) and the EMS dial should be set to 1.8. The pump would then consume 9.5 Nm³/h (5.6 scfm) of compressed air.

XPX8 METAL RUBBER-FITTED



TECHNICAL DATA

Height.....	668 mm (26.3")
Width.....	404 mm (15.9")
Depth.....	340 mm (13.4")
Ship Weight.....	Aluminum 35 kg (78 lbs.)
	316 Stainless Steel 53 kg (117 lbs.)
	Cast Iron 49 kg (109 lbs.)
	Alloy C 54 kg (119 lbs.)
Air Inlet.....	19 mm (3/4")
Inlet.....	51 mm (2")
Outlet.....	51 mm (2")
Suction Lift.....	7.4 m Dry (24.4')
	9.3 m Wet (30.6')
Disp. Per Stroke.....	3.1 l (0.81 gal.) ¹
Max. Flow Rate.....	685 lpm (181 gpm)
Max. Size Solids.....	6.4 mm (1/4")

¹Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2 bar (30 psig) head pressure.

The Efficiency Management System (EMS) can be used to optimize the performance of your Wilden pump for specific applications. The pump is delivered with the EMS adjusted to setting 4, which allows maximum flow.

The Efficiency Management System (EMS) can be used to optimize the performance of your Wilden pump for specific applications. The pump is delivered with the EMS adjusted to setting 4, which allows maximum flow.

The EMS curve allows the pump user to determine flow and air consumption at each EMS setting. For any EMS setting and discharge pressure, the "X factor" is used as a multiplier with the original values from the setting 4 performance curve to calculate the actual flow and air consumption values for that specific EMS setting. Note: you can interpolate between the setting curves for operation at intermediate EMS settings.

EXAMPLE

A PX8 metal, Rubber-fitted pump operating at EMS setting 4, achieved a flow rate of 265 lpm (70 gpm) using 119 Nm³/h (52 scfm) of air when run at 4.3 bar (62 psig) air inlet pressure and 2.8 bar (40 psig) discharge pressure (See dot on performance curve).

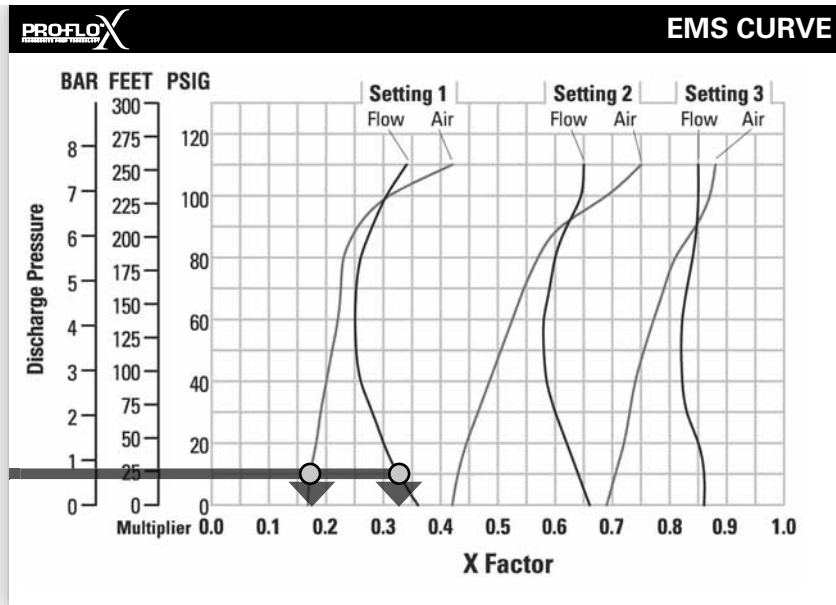
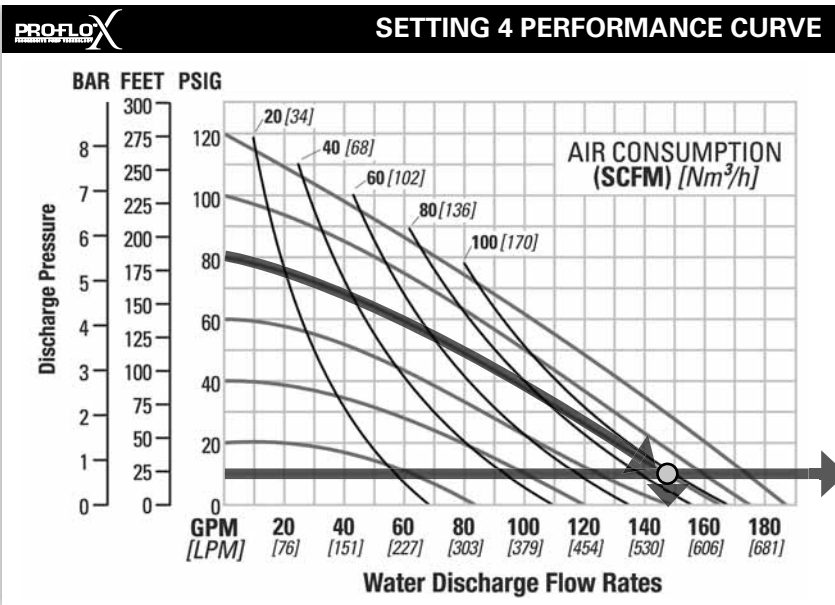
The end user did not require that much flow and wanted to reduce air consumption at his facility. He determined that EMS setting 2 would meet his needs. At 2.8 bar (40 psig) discharge pressure and EMS setting 2, the flow "X factor" is 0.62 and the air "X factor" is 0.49 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 164 lpm (43 gpm) and an air consumption of 43 Nm³/h (26 scfm). The flow rate was reduced by 38% while the air consumption was reduced by 51%, thus providing increased efficiency.

For a detailed example for how to set your EMS, see beginning of performance curve section.

Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.

XPX8 METAL TPE-FITTED



TECHNICAL DATA

Height	668 mm (26.3")
Width	404 mm (15.9")
Depth	340 mm (13.4")
Ship Weight	Aluminum 35 kg (78 lbs.)
	316 Stainless Steel 53 kg (117 lbs.)
	Cast Iron 49 kg (109 lbs.)
	Alloy C 54 kg (119 lbs.)
Air Inlet	19 mm (3/4")
Inlet	51 mm (2")
Outlet	51 mm (2")
Suction Lift	7.3 m Dry (23.8')
	9.2 m Wet (30.1')
Disp. Per Stroke	3.1 l (0.83 gal.) ¹
Max. Flow Rate	712 lpm (188 gpm)
Max. Size Solids	6.4 mm (1/4")

¹Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2 bar (30 psig) head pressure.

The Efficiency Management System (EMS) can be used to optimize the performance of your Wilden pump for specific applications. The pump is delivered with the EMS adjusted to setting 4, which allows maximum flow.

The EMS curve allows the pump user to determine flow and air consumption at each EMS setting. For any EMS setting and discharge pressure, the "X factor" is used as a multiplier with the original values from the setting 4 performance curve to calculate the actual flow and air consumption values for that specific EMS setting. Note: you can interpolate between the setting curves for operation at intermediate EMS settings.

EXAMPLE

A PX8 metal, TPE-fitted pump operating at EMS setting 4, achieved a flow rate of 556 lpm (147 gpm) using 163 Nm³/h (96 scfm) of air when run at 5.5 bar (80 psig) air inlet pressure and 0.7 bar (10 psig) discharge pressure (See dot on performance curve).

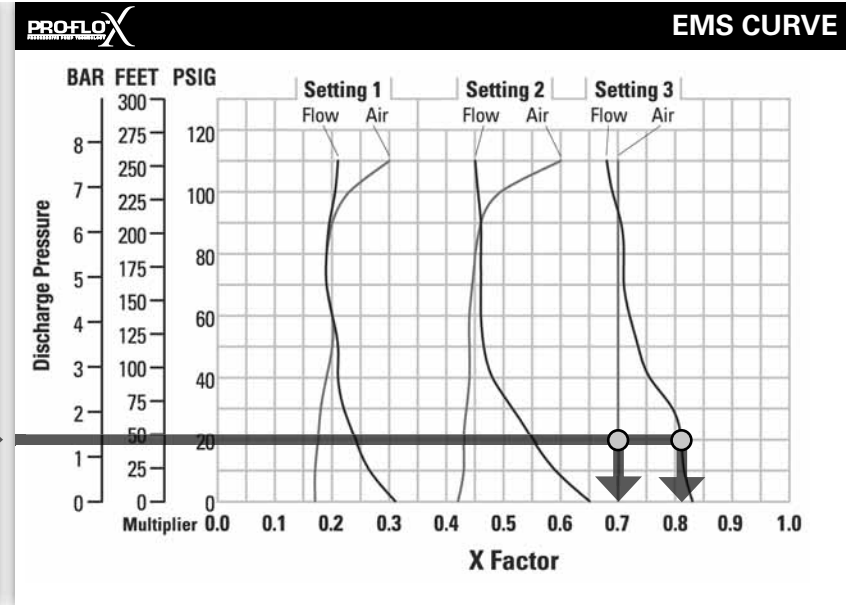
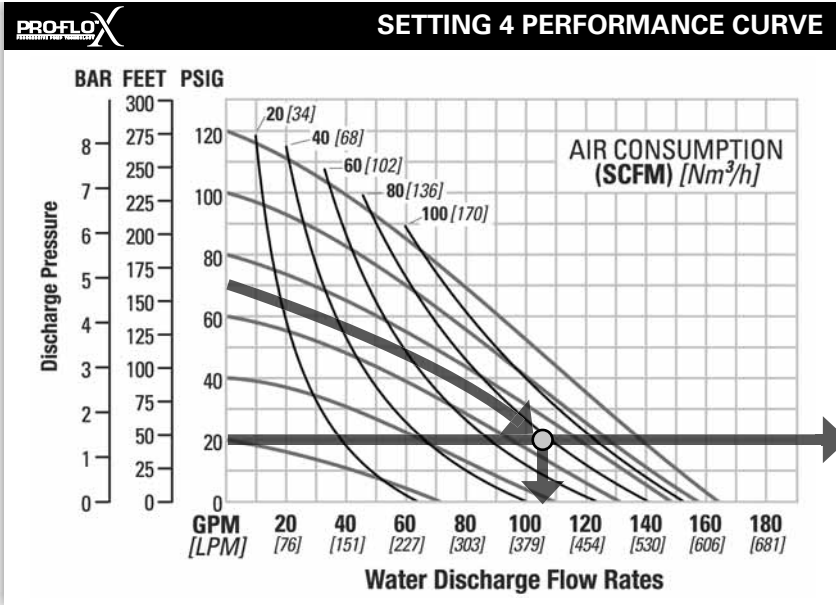
The end user did not require that much flow and wanted to reduce air consumption at his facility. He determined that EMS setting 1 would meet his needs. At 0.7 bar (10 psig) discharge pressure and EMS setting 1, the flow "X factor" is 0.33 and the air "X factor" is 0.17 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 1 flow rate of 184 lpm (49 gpm) and an air consumption of 28 Nm³/h (16 scfm). The flow rate was reduced by 67% while the air consumption was reduced by 83%, thus providing increased efficiency.

For a detailed example for how to set your EMS, see beginning of performance curve section.

Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.

XPX8 METAL PTFE-FITTED



TECHNICAL DATA

Height668 mm (26.3")
Width404 mm (15.9")
Depth340 mm (13.4")
Ship Weight	Aluminum 35 kg (78 lbs.)
	316 Stainless Steel 53 kg (117 lbs.)
	Cast Iron 49 kg (109 lbs.)
	Alloy C 54 kg (119 lbs.)
Air Inlet	19 mm (3/4")
Inlet	51 mm (2")
Outlet	51 mm (2")
Suction Lift	4.5 m Dry (14.8')
	8.7 m Wet (28.4')
Disp. Per Stroke	1.9 l (0.51 gal.) ¹
Max. Flow Rate617 lpm (163 gpm)
Max. Size Solids	6.4 mm (1/4")

¹Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2 bar (30 psig) head pressure.

The Efficiency Management System (EMS) can be used to optimize the performance of your Wilden pump for specific applications. The pump is delivered with the EMS adjusted to setting 4, which allows maximum flow.

The EMS curve allows the pump user to determine flow and air consumption at each EMS setting. For any EMS setting and discharge pressure, the "X factor" is used as a multiplier with the original values from the setting 4 performance curve to calculate the actual flow and air consumption values for that specific EMS setting. Note: you can interpolate between the setting curves for operation at intermediate EMS settings.

The end user did not require that much flow and wanted to reduce air consumption at his facility. He determined that EMS setting 3 would meet his needs. At 1.4 bar (20 psig) discharge pressure and EMS setting 3, the flow "X factor" is 0.82 and the air "X factor" is 0.70 (see dots on EMS curve).

EXAMPLE

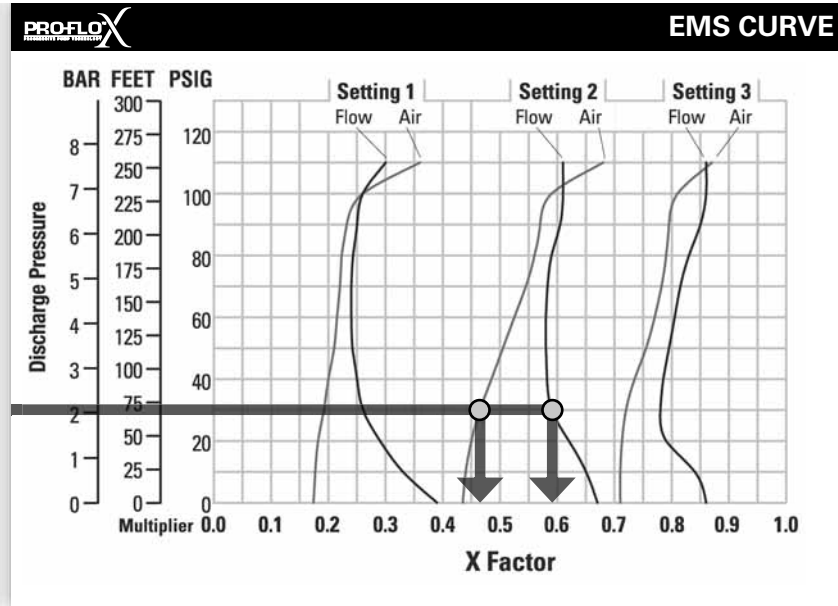
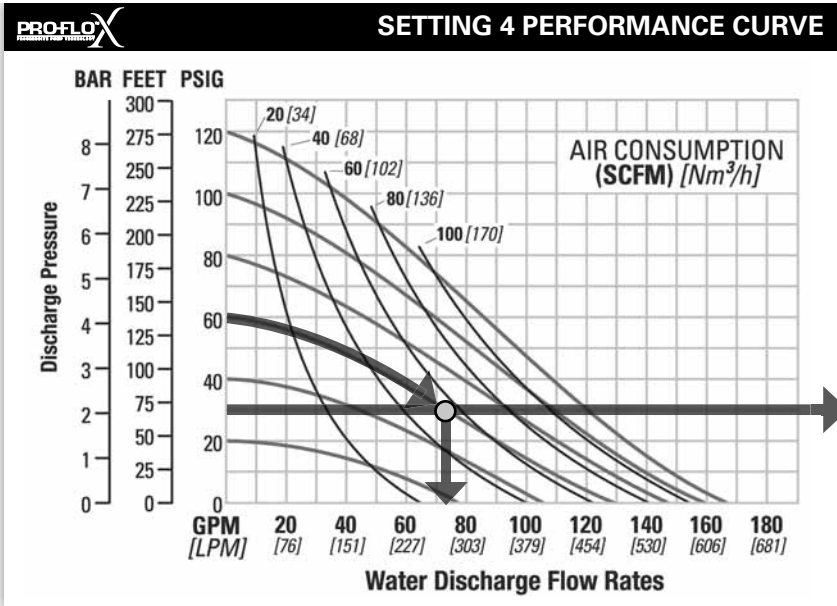
A PX8 metal, PTFE-fitted pump operating at EMS setting 4, achieved a flow rate of 401 lpm (106 gpm) using 133 Nm³/h (78 scfm) of air when run at 4.8 bar (70 psig) air inlet pressure and 1.4 bar (20 psig) discharge pressure (See dot on performance curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 3 flow rate of 329 lpm (87 gpm) and an air consumption of 93 Nm³/h (55 scfm). The flow rate was reduced by 18% while the air consumption was reduced by 30%, thus providing increased efficiency.

For a detailed example for how to set your EMS, see beginning of performance curve section.

Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.

XPX8 METAL ULTRA-FLEX™ FITTED



TECHNICAL DATA

Height	668 mm (26.3")
Width	404 mm (15.9")
Depth	340 mm (13.4")
Ship Weight	Aluminum 35 kg (78 lbs.)
	316 Stainless Steel 53 kg (117 lbs.)
	Cast Iron 49 kg (109 lbs.)
	Alloy C 54 kg (119 lbs.)
Air Inlet	19 mm (3/4")
Inlet	51 mm (2")
Outlet	51 mm (2")
Suction Lift	6.1 m Dry (19.9')
	9.2 m Wet (30.1')
Disp. Per Stroke	2.1 l (0.56 gal.)
Max. Flow Rate	632 lpm (167 gpm)
Max. Size Solids	6.4 mm (1/4")

¹Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2 bar (30 psig) head pressure.

The Efficiency Management System (EMS) can be used to optimize the performance of your Wilden pump for specific applications. The pump is delivered with the EMS adjusted to setting 4, which allows maximum flow.

The Efficiency Management System (EMS) can be used to optimize the performance of your Wilden pump for specific applications. The pump is delivered with the EMS adjusted to setting 4, which allows maximum flow.

The EMS curve allows the pump user to determine flow and air consumption at each EMS setting. For any EMS setting and discharge pressure, the "X factor" is used as a multiplier with the original values from the setting 4 performance curve to calculate the actual flow and air consumption values for that specific EMS setting. Note: you can interpolate between the setting curves for operation at intermediate EMS settings.

EXAMPLE

A PX8 metal, Ultra-Flex-fitted pump operating at EMS setting 4, achieved a flow rate of 276 lpm (73 gpm) using 93 Nm³/h (55 scfm) of air when run at 4.1 bar (60 psig) air inlet pressure and 2.1 bar (30 psig) discharge pressure (See dot on performance curve).

The end user did not require that much flow and wanted to reduce air consumption at his facility. He determined that EMS setting 2 would meet his needs. At 2.1 bar (30 psig) discharge pressure and EMS setting 2, the flow "X factor" is 0.59 and the air "X factor" is 0.46 (see dots on EMS curve).

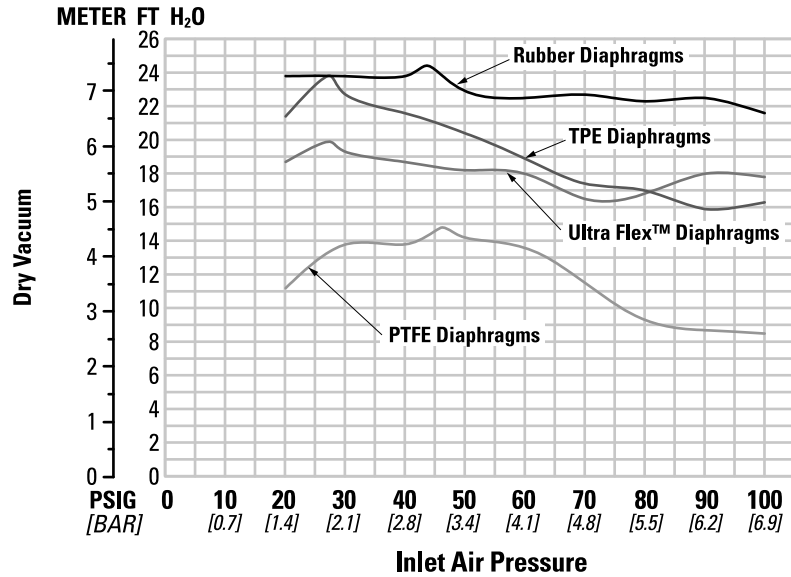
Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 163 lpm (43 gpm) and an air consumption of 43 Nm³/h (25 scfm). The flow rate was reduced by 41% while the air consumption was reduced by 54%, thus providing increased efficiency.

For a detailed example for how to set your EMS, see beginning of performance curve section.

Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.

SUCTION LIFT CURVES

PX8 METAL SUCTION LIFT CAPABILITY



Suction lift curves are calibrated for pumps operating at 305 m (1,000') above sea level. This chart is meant to be a guide only. There are many variables which can affect your pump's operating characteristics. The

number of intake and discharge elbows, viscosity of pumping fluid, elevation (atmospheric pressure) and pipe friction loss all affect the amount of suction lift your pump will attain.