

# PX1500

M E T A L

**WILDEN**  
A DOVER COMPANY



**PROFLO<sup>TM</sup>**  
PROGRESSIVE PUMP TECHNOLOGY

## PX1500 PERFORMANCE

## Pro-Flo X<sup>™</sup> Operating Principle

The Pro-Flo X<sup>™</sup> 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<sup>™</sup> 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<sup>™</sup> 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

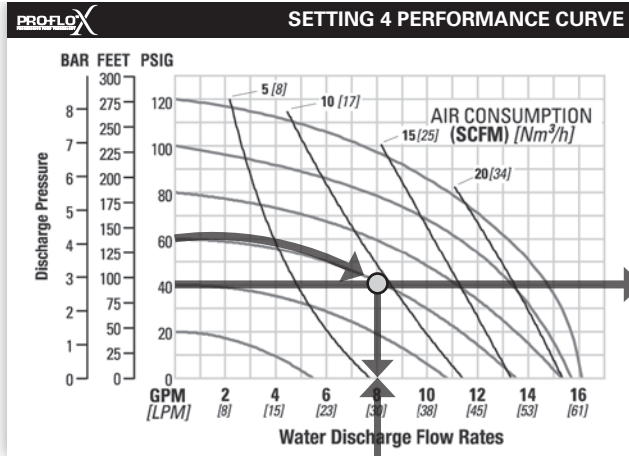


Figure 1

Example data point = **8.2** GPM

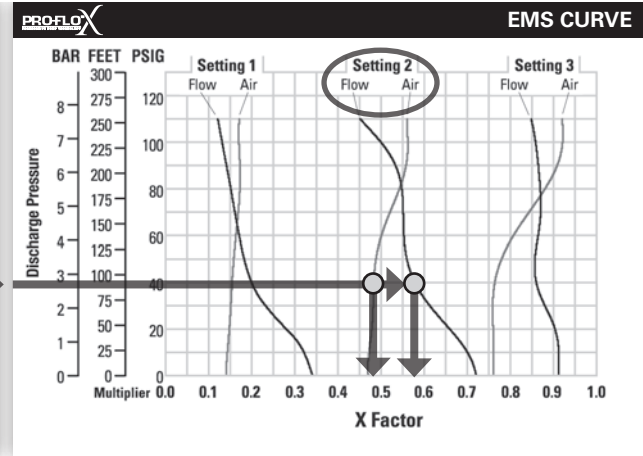


Figure 2

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<sup>™</sup> 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).

<b>8.2</b> gpm	(flow rate for Setting 4)
<b>.58</b>	(Flow X Factor setting 2)
<hr/>	
<b>4.8</b> gpm	(Flow rate for setting 2)
<b>9.8</b> scfm	(air consumption for setting 4)
<b>.48</b>	(Air X Factor setting 2)
<hr/>	
<b>4.7</b> 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 Nm<sup>3</sup>/h (4.7 scfm) respectively.

## Example 2.1

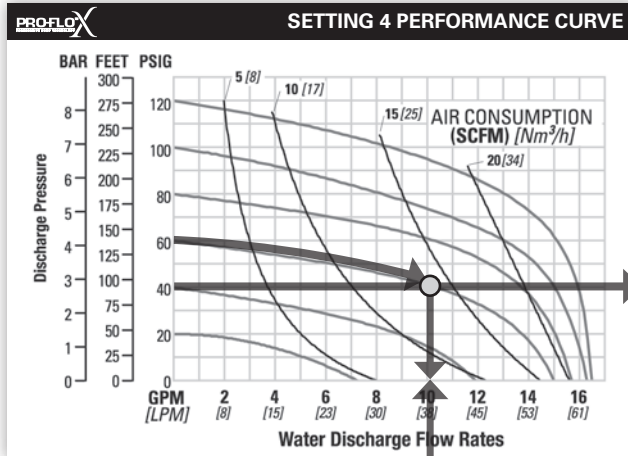


Figure 4

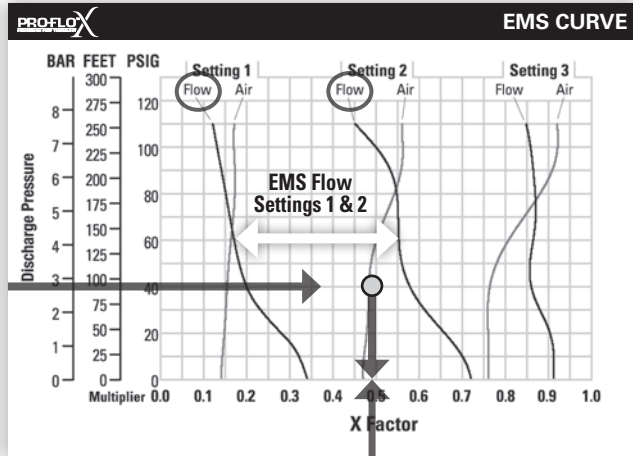


Figure 5

This is an example showing how to determine the inlet air pressure and the EMS setting for your Pro-Flo X<sup>™</sup> 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 Nm<sup>3</sup>/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

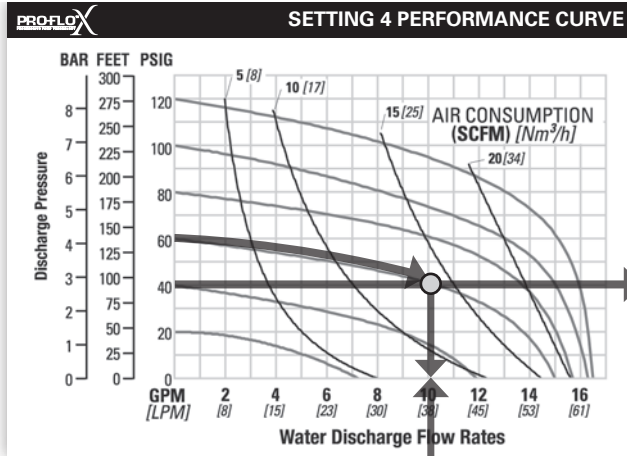


Figure 6

Example data point = **10.2** gpm

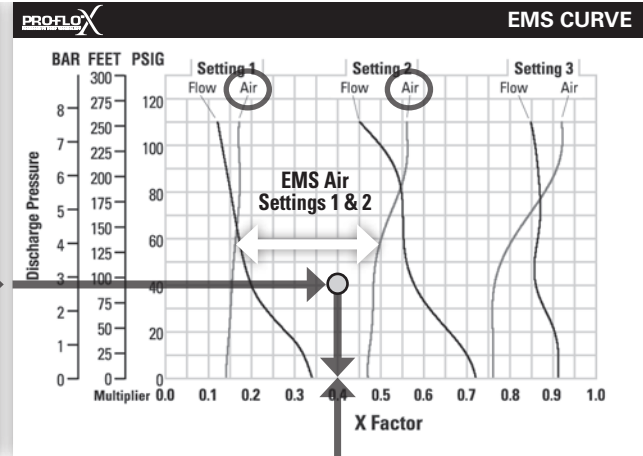


Figure 7

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 Nm<sup>3</sup>/h (5.6 scfm) of compressed air.

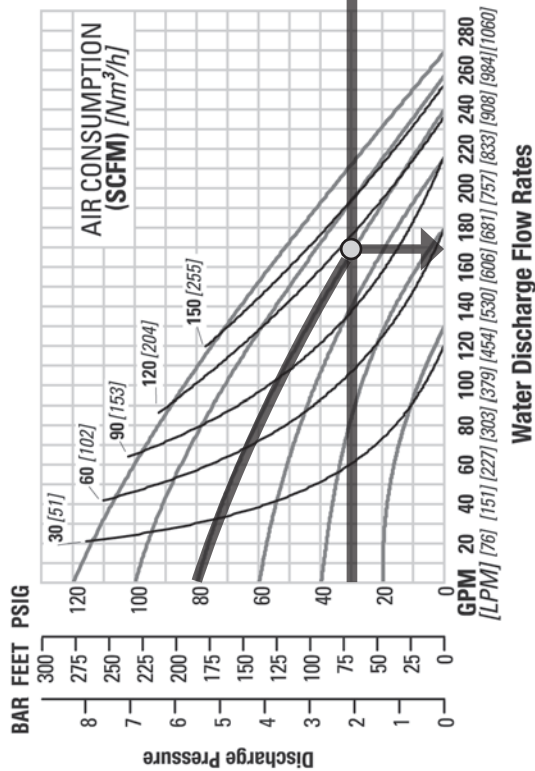
# PX1500 ALUMINUM RUBBER-FITTED



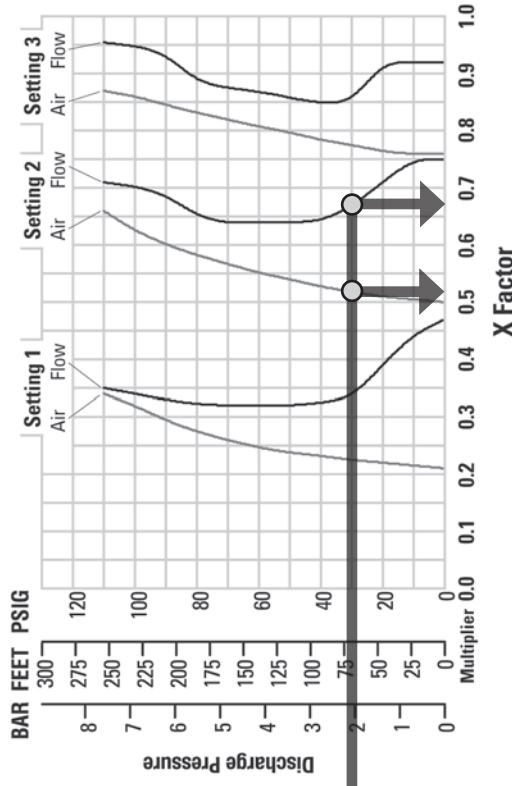
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	.....1031 mm (40.6")
Width	.....615 mm (24.2")
Depth	.....422 mm (16.6")
Ship Weight	.....Aluminum 83 kg (182 lbs.)
	Aluminum Drop-In 70 kg (152 lbs.)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....6.1 m Dry (19.9')
	8.8 m Wet (28.9')
Disp. Per Stroke	.....5.22 l (1.38 gal.)
Max. Flow Rate	.....1021 lpm (270 gpm)
Max. Size Solids	.....12.7 mm (1/2")

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

### EXAMPLE

A PX1500 aluminum, Rubber-fitted pump operating at EMS setting 4, achieved a flow rate of 640 lpm (169 gpm) using 192 Nm³/h (113 scfm) of air when run at 5.5 bar (80 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 0.67 and the air "X factor" is 0.52 (see dots on EMS curve).

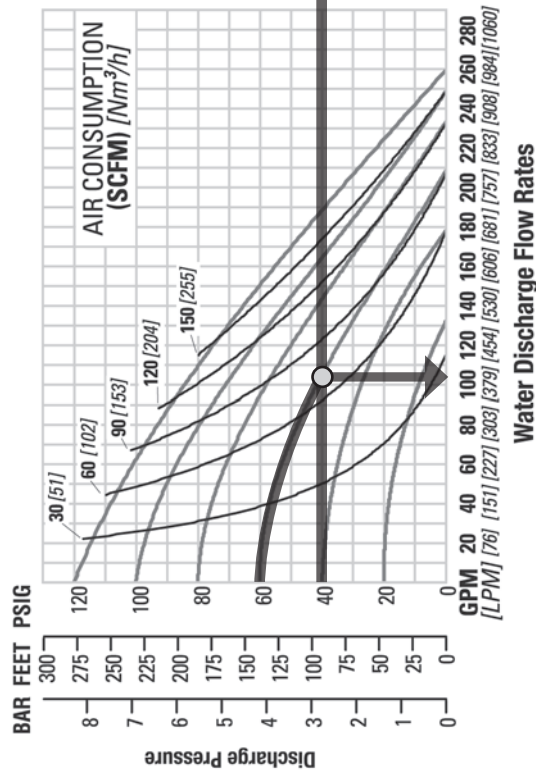
Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 429 lpm (113 gpm) and an air consumption of 100 Nm³/h (59 scfm). The flow rate was reduced by 33% while the air consumption was reduced by 48%, thus providing increased efficiency.

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

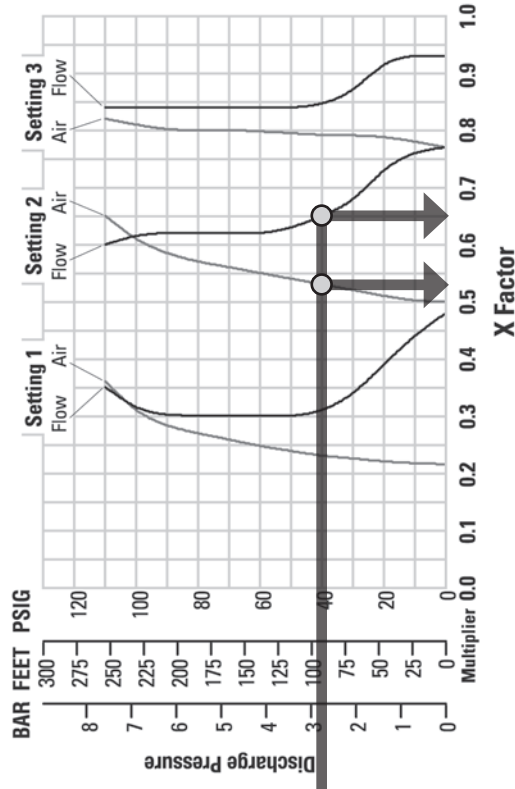
**Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.**

# PX1500 ALUMINUM TPE-FITTED

## SETTING 4 PERFORMANCE CURVE



## EMS CURVE



## TECHNICAL DATA

Height	1031 mm (40.6")
Width	615 mm (24.2")
Depth	422 mm (16.6")
Ship Weight	Aluminum 83 kg (182 lbs.)
	Aluminum Drop-In 70 kg (152 lbs.)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	6.6 m Dry (21.7')
	8.8 m Wet (28.9')
Disp. Per Stroke	4.47 l (1.18 gal.) <sup>1</sup>
Max. Flow Rate	984 lpm (260 gpm)
Max. Size Solids	12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 aluminum, TPE-fitted pump operating at EMS setting 4, achieved a flow rate of 394 lpm (104 gpm) using 122 Nm<sup>3</sup>/h (72 scfm) of air when run at 4.1 bar (60 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 0.65 and the air "X factor" is 0.53 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 256 lpm (68 gpm) and an air consumption of 65 Nm<sup>3</sup>/h (38 scfm). The flow rate was reduced by 35% while the air consumption was reduced by 47%, 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.**

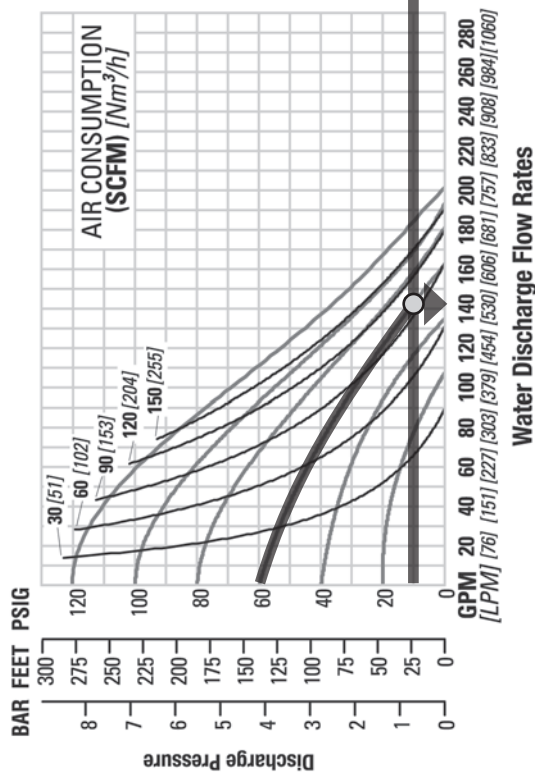
# PX1500 ALUMINUM PTFE-FITTED



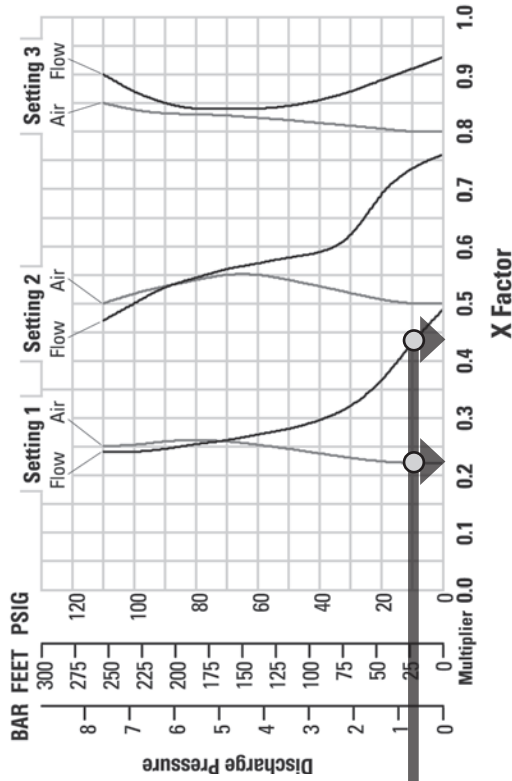
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	1031 mm (40.6")
Width	615 mm (24.2")
Depth	422 mm (16.6")
Ship Weight	Aluminum 83 kg (182 lbs.)
	Aluminum Drop-In 70 kg (152 lbs.)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	4.4 m Dry (14.4') 7.8 m Wet (25.6')
Disp. Per Stroke	3.48 l (0.92 gal.)
Max. Flow Rate	765 lpm (202 gpm)
Max. Size Solids	12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 aluminum, PTFE-fitted pump operating at EMS setting 4, achieved a flow rate of 538 lpm (142 gpm) using 160 Nm<sup>3</sup>/h (94 scfm) of air when run at 4.1 bar (60 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 0.43 and the air "X factor" is 0.22 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 1 flow rate of 231 lpm (61 gpm) and an air consumption of 35 Nm<sup>3</sup>/h (21 scfm). The flow rate was reduced by 57% while the air consumption was reduced by 78%, 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.**



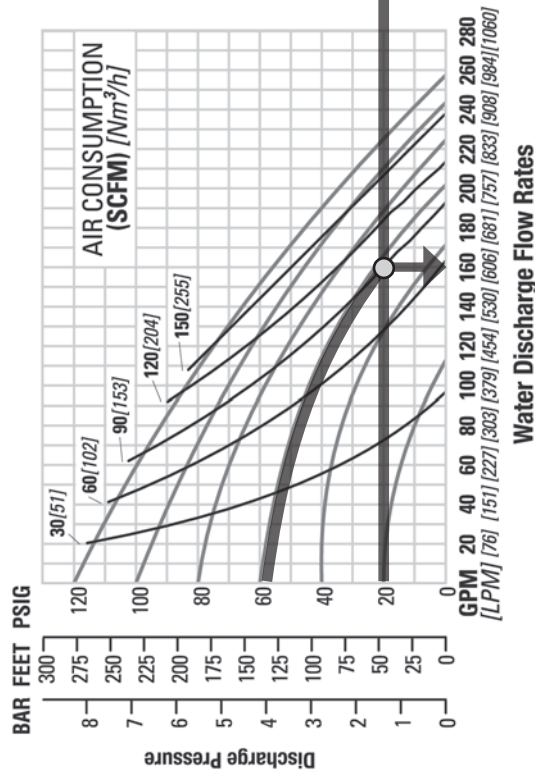
# PX1500 ALUMINUM FULL STROKE PTFE-FITTED



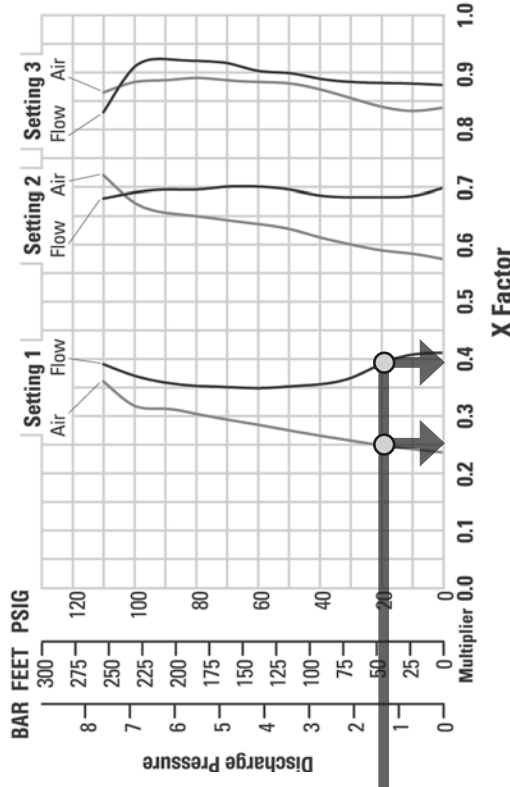
## PERFORMANCE



SETTING 4 PERFORMANCE CURVE



EMS CURVE



### TECHNICAL DATA

Height	1031 mm (40.6")
Width	615 mm (24.2")
Depth	422 mm (16.6")
Ship Weight	Aluminum 83 kg (182 lbs.)
	Aluminum Drop-in 70 kg (152 lbs.)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	6.4 m Dry (21.0') 9.0 m Wet (29.5')
Disp. Per Stroke	5.3 l (1.39 gal.)
Max. Flow Rate	974 lpm (257.3 gpm)
Max. Size Solids	12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 aluminum, Full Flow PTFE fitted pump operating at EMS setting 4, achieved a flow rate of 606 lpm (160 gpm) using 153 Nm<sup>3</sup>/h (90 scfm) of air when run at 4.0 bar (58 psig) air inlet pressure and 1.4 bar (20 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 1.4 bar (20 psig) discharge pressure and EMS setting 1, the flow "X factor" is 0.39 and the air "X factor" is 0.25 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 1 flow rate of 236 lpm (62 gpm) and an air consumption of 38 Nm<sup>3</sup>/h (23 scfm). The flow rate was reduced by 61% while the air consumption was reduced by 75%, 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.

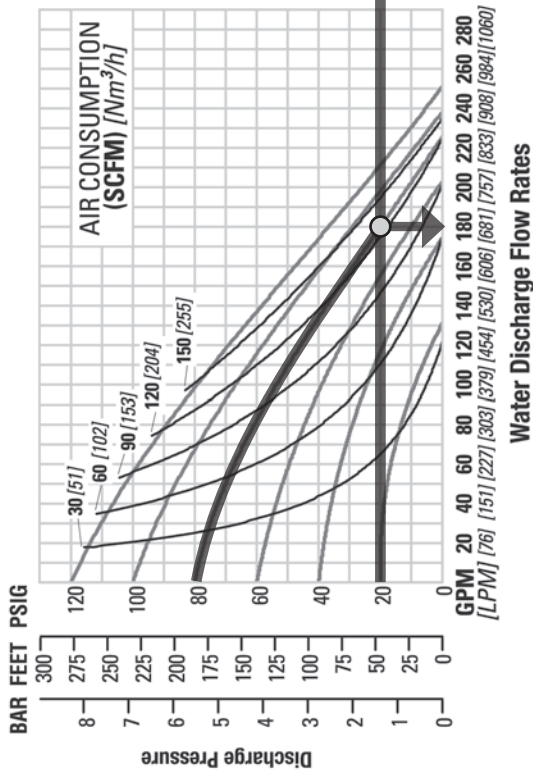
# PX1500 ALUMINUM ULTRA-FLEX™ FITTED



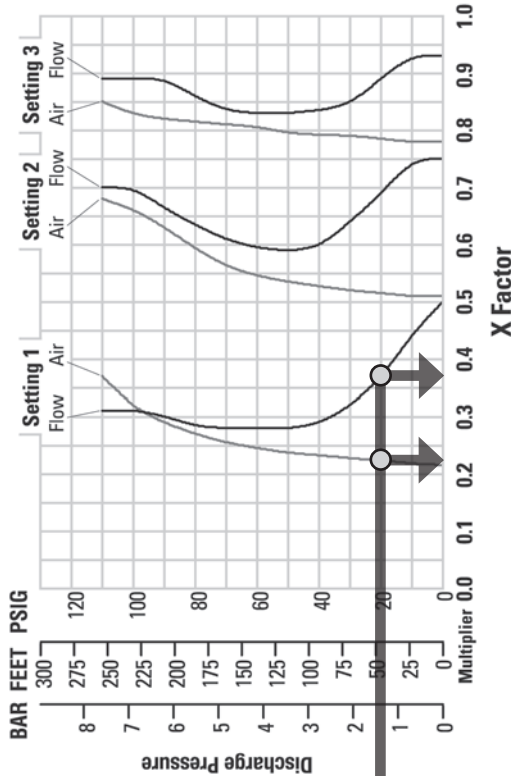
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	.....1031 mm (40.6")
Width	.....615 mm (24.2")
Depth	.....422 mm (16.6")
Ship Weight	.....Aluminum 83 kg (182 lbs.)
	Aluminum Drop-In 70 kg (152 lbs.)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....6.9 m Dry (22.7')
	8.8 m Wet (28.9')
Disp. Per Stroke	.....4.35 l (1.15 gal.) <sup>1</sup>
Max. Flow Rate	.....950 lpm (251 gpm)
Max. Size Solids	.....12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 aluminum, Ultra-Flex-fitted pump operating at EMS setting 4, achieved a flow rate of 681 lpm (180 gpm) using 207 Nm<sup>3</sup>/h (122 scfm) of air when run at 5.5 bar (80 psig) air inlet pressure and 1.4 bar (20 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 1.4 bar (20 psig) discharge pressure and EMS setting 1, the flow "X factor" is 0.37 and the air "X factor" is 0.22 (see dots on EMS curve).

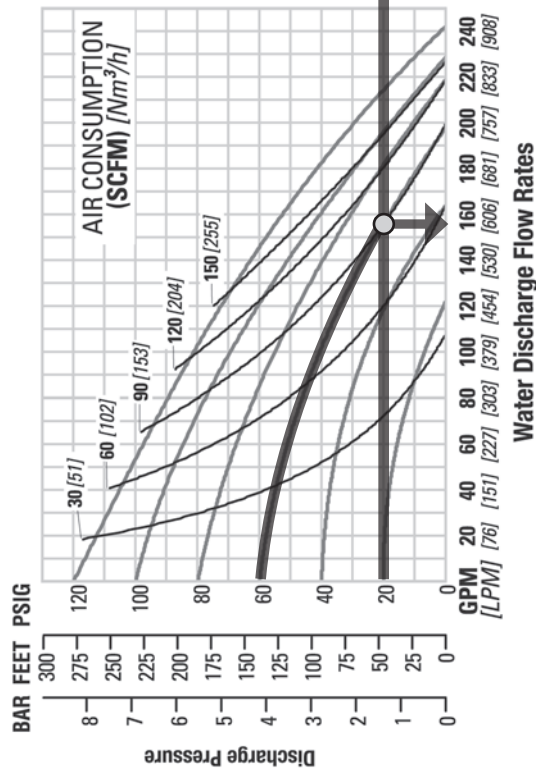
Multiplying the original setting 4 values by the "X factors" provides the setting 1 flow rate of 252 lpm (67 gpm) and an air consumption of 46 Nm<sup>3</sup>/h (27 scfm). The flow rate was reduced by 63% while the air consumption was reduced by 78%, thus providing increased efficiency.

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

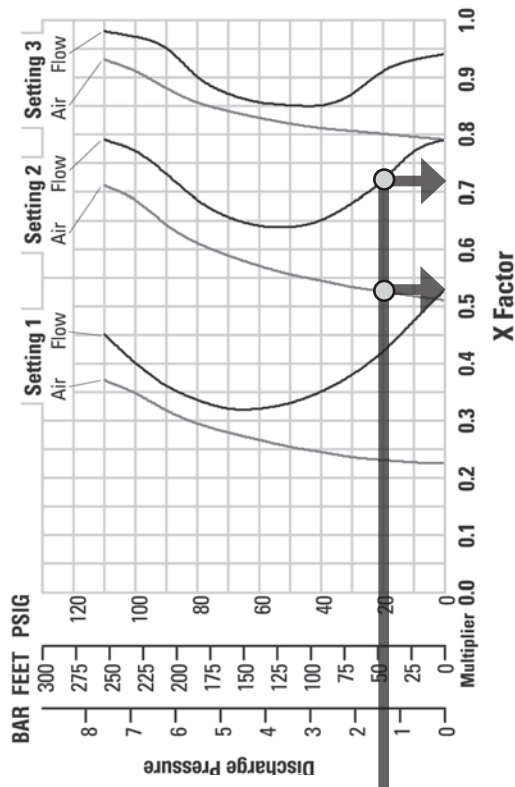
**Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.**

# PX1500 STAINLESS STEEL RUBBER-FITTED

## SETTING 4 PERFORMANCE CURVE



## EMS CURVE



## TECHNICAL DATA

Height	894 mm (35.2")
Width	541 mm (21.3")
Depth	419 mm (16.5")
Ship Weight	316 Stainless Steel 125 kg (275 lbs)
	Alloy C 130 kg (287 lbs)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	6.7 m Dry (22.1')
	9.5 m Wet (31.2')
Disp. Per Stroke	5.03 (1.33 gal.)
Max. Flow Rate	918 lpm (243 gpm)
Max. Size Solids	9.5 mm (3/8")

<sup>1</sup>Displacement 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 PX1500 stainless steel, rubber-fitted pump operating at EMS setting 4, achieved a flow rate of 591 lpm (156 gpm) using 153  $Nm^3/h$  (90 scfm) of air when run at 4.1 bar (60 psig) air inlet pressure and 1.4 bar (20 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 1.4 bar (20 psig) discharge pressure and EMS setting 2, the flow "X factor" is 0.72 and the air "X factor" is 0.47 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 425 lpm (112 gpm) and an air consumption of 72  $Nm^3/h$  (42 scfm). The flow rate was reduced by 28% while the air consumption was reduced by 53%, 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.

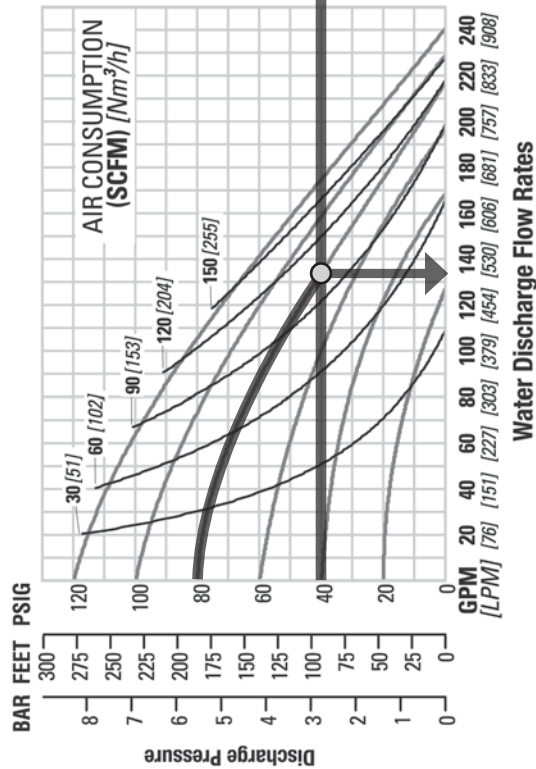
# PX1500 STAINLESS STEEL TPE-FITTED



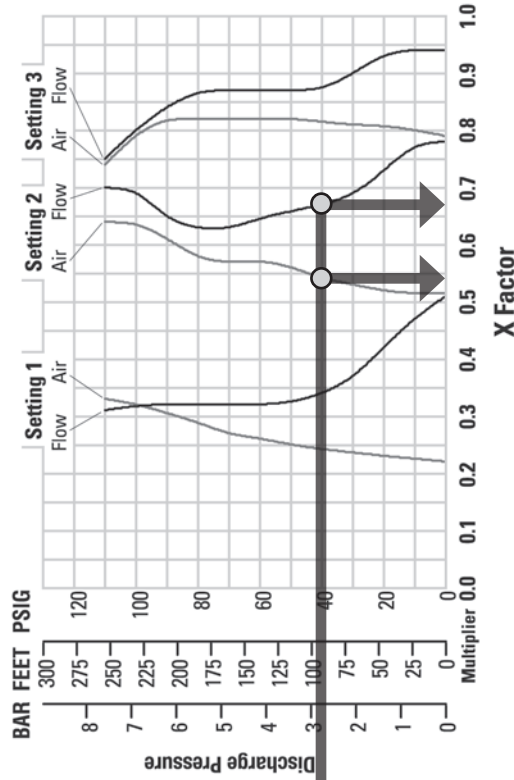
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	.....894 mm (35.2")
Width	.....541 mm (21.3")
Depth	.....419 mm (16.5")
Ship Weight	.....316 Stainless Steel 125 kg (275 lbs)
	Alloy C 130 kg (287 lbs)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....6.2 m Dry (20.4')
	9.3 m Wet (30.6')
Disp. Per Stroke	.....4.47 l (1.18 gal.) <sup>1</sup>
Max. Flow Rate	.....913 lpm (241 gpm)
Max. Size Solids	.....9.5 mm (3/8")

<sup>1</sup>Displacement 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 PX1500 stainless steel, TPE-fitted pump operating at EMS setting 4, achieved a flow rate of 503 lpm (133 gpm) using 175 Nm<sup>3</sup>/h (103 scfm) of air when run at 5.5 bar (80 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 0.67 and the air "X factor" is 0.54 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 337 lpm (89 gpm) and an air consumption of 94 Nm<sup>3</sup>/h (56 scfm). The flow rate was reduced by 33% while the air consumption was reduced by 46%, 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.**



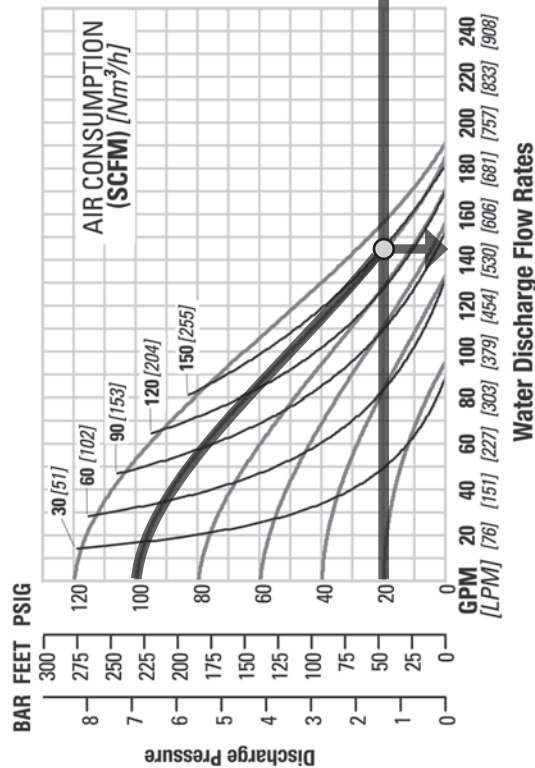
# PX1500 STAINLESS STEEL PTFE-FITTED



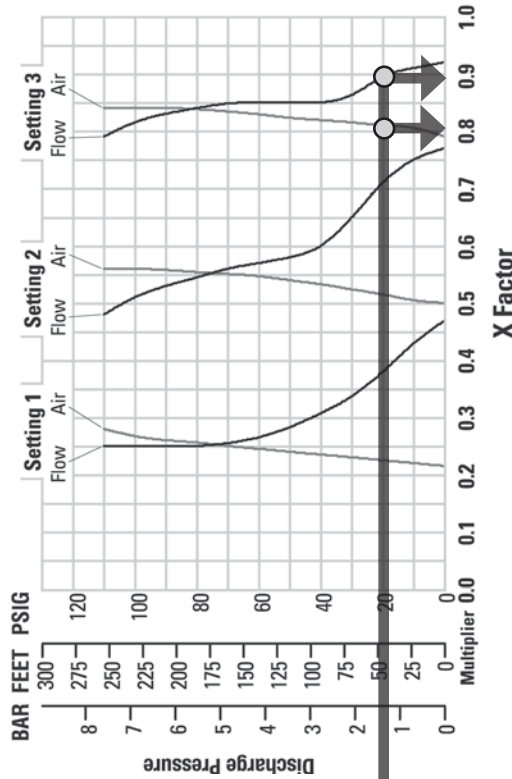
## PERFORMANCE



SETTING 4 PERFORMANCE CURVE



EMS CURVE



### TECHNICAL DATA

Height	.....894 mm (35.2")
Width	.....541 mm (21.3")
Depth	.....419 mm (16.5")
Ship Weight	.....316 Stainless Steel 125 kg (275 lbs)
	.....Alloy C 130 kg (287 lbs)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....4.8 m Dry (15.9')
	.....9.5 m Wet (31.2')
Disp. Per Stroke	.....3.14 l (0.83 gal.) <sup>1</sup>
Max. Flow Rate	.....727 lpm (192 gpm)
Max. Size Solids	.....9.5 mm (3/8")

<sup>1</sup>Displacement 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 PX1500 stainless steel, PTFE-fitted pump operating at EMS setting 4, achieved a flow rate of 545 lpm (144 gpm) using 253  $Nm^3/h$  (149 scfm) of air when run at 6.9 bar (100 psig) air inlet pressure and 1.4 bar (20 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 3 would meet his needs. At 1.4 bar (20 psig) discharge pressure and EMS setting 3, the flow "X factor" is 0.89 and the air "X factor" is 0.81 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 3 flow rate of 485 lpm (128 gpm) and an air consumption of 205  $Nm^3/h$  (121 scfm). The flow rate was reduced by 11% while the air consumption was reduced by 19%, 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.

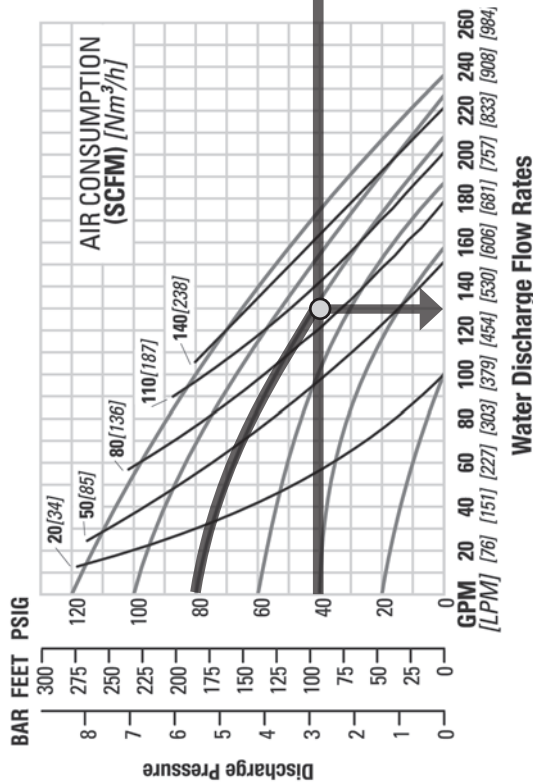
# PX1500 STAINLESS STEEL FULL STROKE PTFE-FITTED



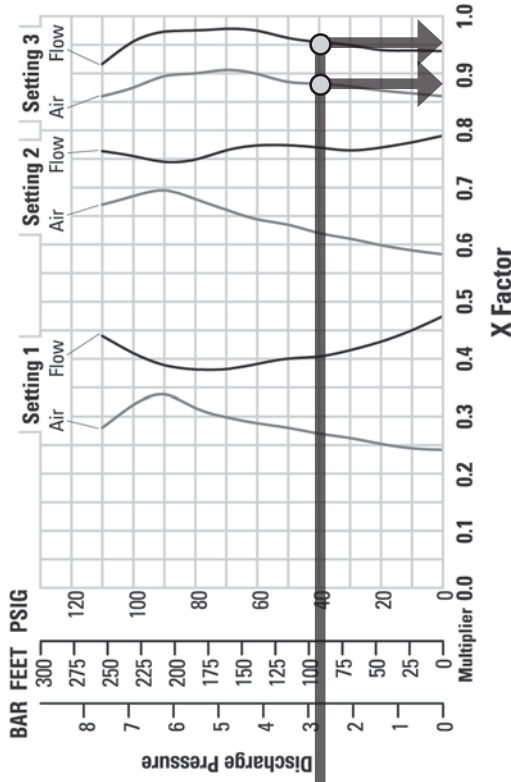
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	894 mm (35.2")
Width	541 mm (21.3")
Depth	419 mm (16.5")
Ship Weight	Stainless Steel 125 kg (275 lbs.) Alloy C 130 kg (287 lbs.)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	6.3m Dry (20.7') 8.6 m Wet (28.4')
Disp. Per Stroke	5.0 l (1.31 gal.)
Max. Flow Rate	893 lpm (236.0 gpm)
Max. Size Solids	9.5 mm (3/8")

\*Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2.1 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 PX1500 stainless, Full Flow PTFE fitted pump operating at EMS setting 4, achieved a flow rate of 492 lpm (130 gpm) using 178 Nm<sup>3</sup>/h (105 scfm) of air when run at 5.5 bar (80 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 3 would meet his needs. At 2.8 bar (40 psig) discharge pressure and EMS setting 3, the flow "X factor" is 0.95 and the air "X factor" is 0.88 (see dots on EMS curve).

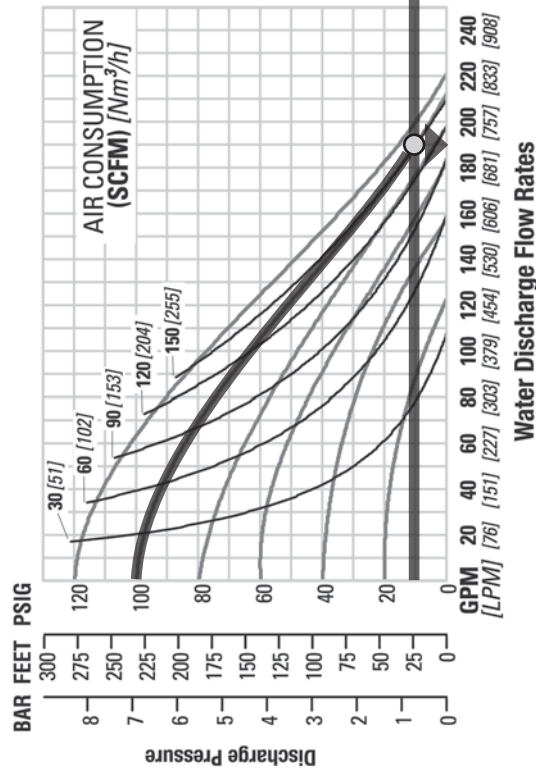
Multiplying the original setting 4 values by the "X factors" provides the setting 3 flow rate of 467 lpm (124 gpm) and an air consumption of 157 Nm<sup>3</sup>/h (92 scfm). The flow rate was reduced by 5% while the air consumption was reduced by 12%, thus providing increased efficiency.

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

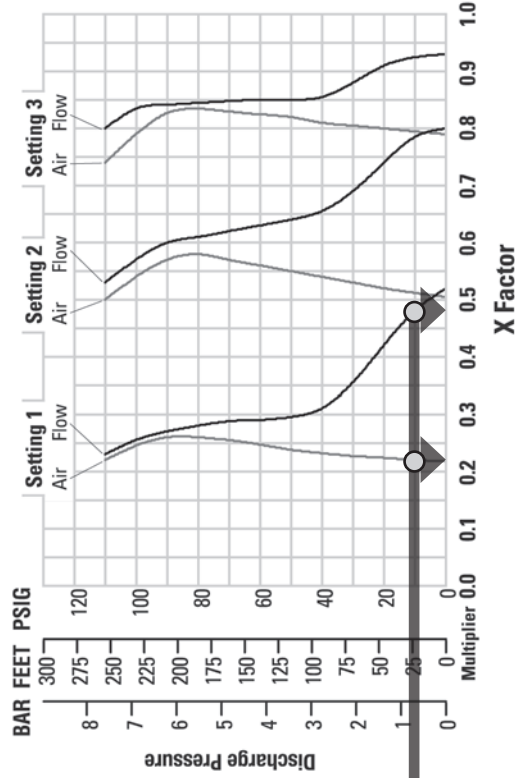
**Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.**

# PX1500 STAINLESS STEEL ULTRA-FLEX™ FITTED

## SETTING 4 PERFORMANCE CURVE



## EMS CURVE



## TECHNICAL DATA

Height	894 mm (35.2")
Width	541 mm (21.3")
Depth	419 mm (16.5")
Ship Weight	316 Stainless Steel 125 kg (275 lbs)
	Alloy C 130 kg (287 lbs)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	6.2 m Dry (20.4') 9.5 m Wet (31.2')
Disp. Per Stroke	4.43 l (1.17 gal.) <sup>1</sup>
Max. Flow Rate	8.40 lpm (222 gpm)
Max. Size Solids	9.5 mm (3/8")

<sup>1</sup>Displacement 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 PX1500 stainless steel, Ultra-Flex-fitted pump operating at EMS setting 4, achieved a flow rate of 719 lpm (190 gpm) using 255 Nm<sup>3</sup>/h (150 scfm) of air when run at 6.9 bar (100 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 0.48 and the air "X factor" is 0.22 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 1 flow rate of 345 lpm (91 gpm) and an air consumption of 56 Nm<sup>3</sup>/h (33 scfm). The flow rate was reduced by 52% while the air consumption was reduced by 78%, 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.**

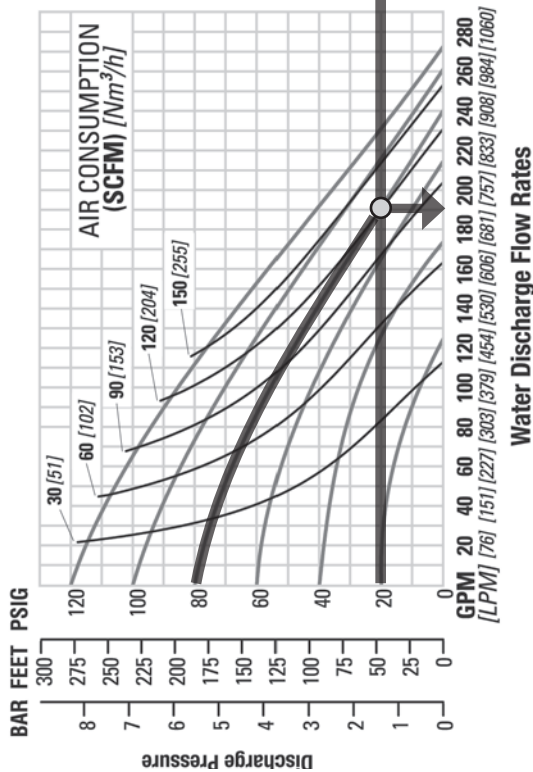
# PX1500 DROP-IN STAINLESS STEEL RUBBER-FITTED



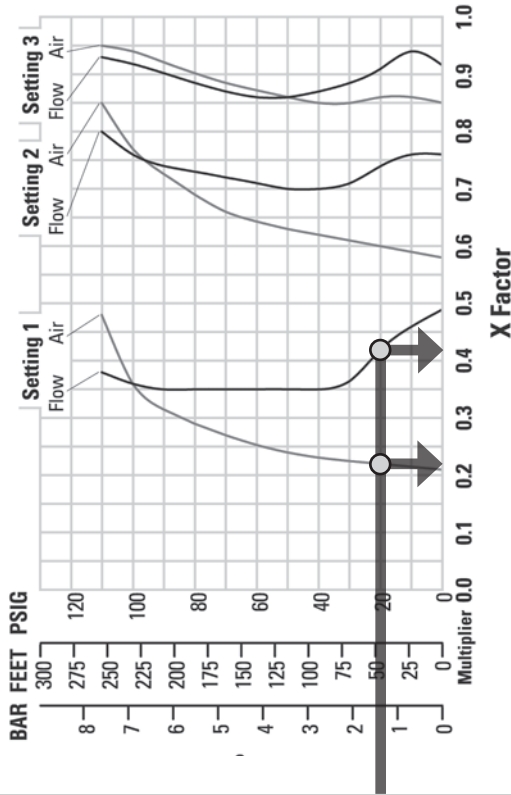
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	.....815 mm (32.1")
Width	.....650 mm (25.6")
Depth	.....422 mm (16.6")
Ship Weight	.....126 kg (278 lbs.)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....6.2 m Dry (20.4')
	.....8.6 m Wet (28.4')
Disp. Per Stroke	.....5.1 l (1.36 gal.) <sup>1</sup>
Max. Flow Rate	.....1030 lpm (272 gpm)
Max. Size Solids	.....12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 stainless steel, Rubber-fitted pump operating at EMS setting 4, achieved a flow rate of 727 lpm (192 gpm) using 206  $Nm^3/h$  (121 scfm) of air when run at 5.5 bar (80 psig) air inlet pressure and 1.4 bar (20 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 1.4 bar (20 psig) discharge pressure and EMS setting 1, the flow "X factor" is 0.42 and the air "X factor" is 0.22 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 1 flow rate of 305 lpm (81 gpm) and an air consumption of 45  $Nm^3/h$  (27 scfm). The flow rate was reduced by 58% while the air consumption was reduced by 78%, 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.**



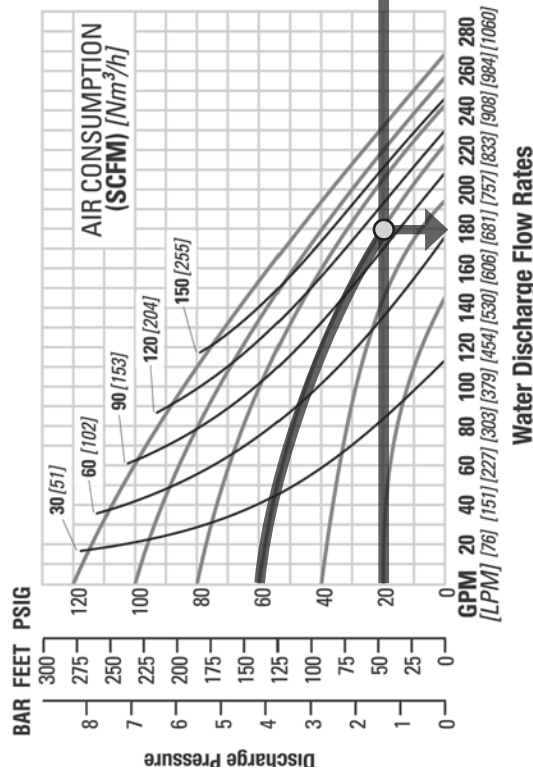
# PX1500 DROP-IN STAINLESS STEEL TPE-FITTED



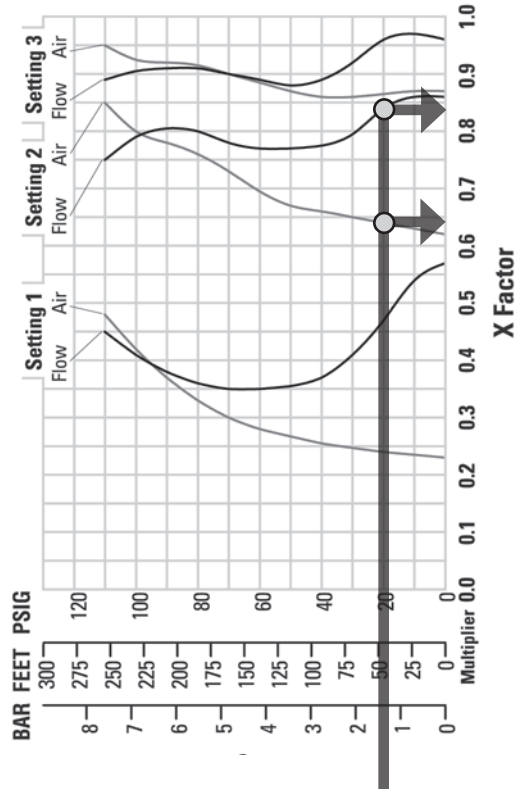
## PERFORMANCE



SETTING 4 PERFORMANCE CURVE



EMS CURVE



## TECHNICAL DATA

Height	.....	815 mm (32.1")
Width	.....	650 mm (25.6")
Depth	.....	422 mm (16.6")
Ship Weight	.....	126 kg (278 lbs.)
Air Inlet	.....	19 mm (3/4")
Inlet	.....	76 mm (3")
Outlet	.....	76 mm (3")
Suction Lift	.....	6.2 m Dry (20.4')
	.....	9.2 m Wet (30.1')
Disp. Per Stroke	.....	5.8 l (1.52 gal.) <sup>1</sup>
Max. Flow Rate	.....	1018 lpm (269 gpm)
Max. Size Solids	.....	12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 stainless steel, TPE-fitted pump operating at EMS setting 4, achieved a flow rate of 681 lpm (180 gpm) using 170 Nm<sup>3</sup>/h (100 scfm) of air when run at 4.1 bar (60 psig) air inlet pressure and 1.4 bar (20 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 1.4 bar (20 psig) discharge pressure and EMS setting 2, the flow "X factor" is 0.84 and the air "X factor" is 0.64 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 572 lpm (151 gpm) and an air consumption of 109 Nm<sup>3</sup>/h (64 scfm). The flow rate was reduced by 36% while the air consumption was reduced by 16%, 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.

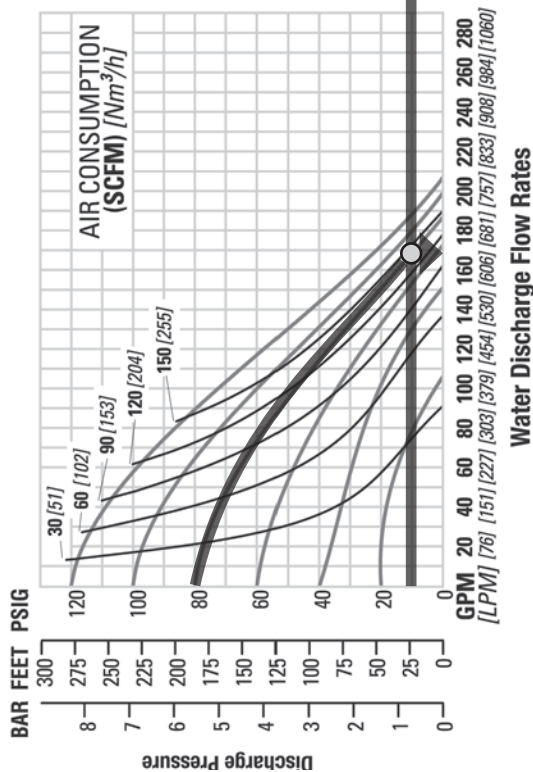
# PX1500 DROP-IN STAINLESS STEEL PTFE-FITTED



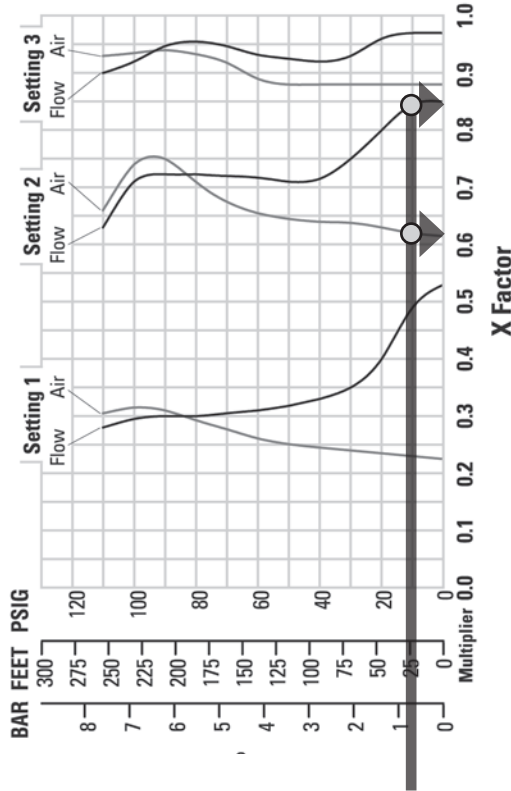
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



### TECHNICAL DATA

Height	.....815 mm (32.1")
Width	.....650 mm (25.6")
Depth	.....422 mm (16.6")
Ship Weight	.....126 kg (278 lbs.)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....4.5 m Dry (14.8') 9.0 m Wet (29.5')
Disp. Per Stroke	.....3.5 l (0.92 gal.) <sup>1</sup>
Max. Flow Rate	.....784 lpm (207 gpm)
Max. Size Solids	.....12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 stainless steel, PTFE-fitted pump operating at EMS setting 4, achieved a flow rate of 640 lpm (169 gpm) using 243 Nm<sup>3</sup>/h (143 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 2 would meet his needs. At 0.7 bar (10 psig) discharge pressure and EMS setting 2, the flow "X factor" is 0.84 and the air "X factor" is 0.62 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 537 lpm (142 gpm) and an air consumption of 151 Nm<sup>3</sup>/h (89 scfm). The flow rate was reduced by 16% while the air consumption was reduced by 38%, 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.**

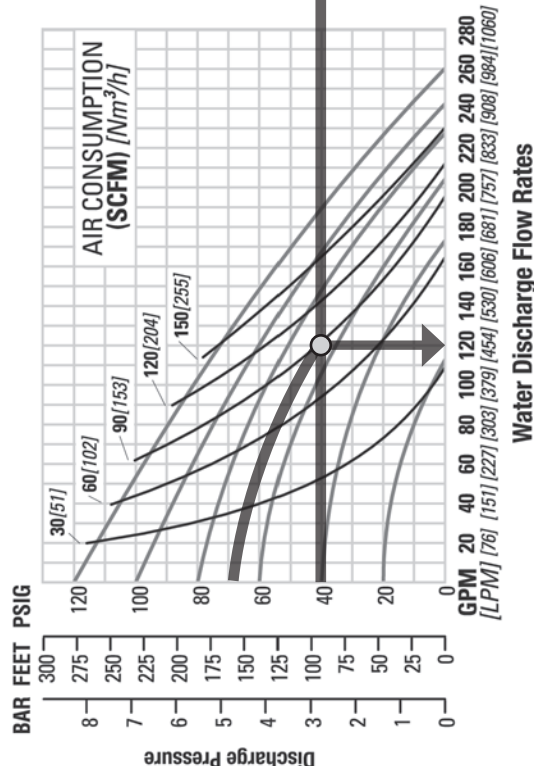
# PX1500 DROP-IN STAINLESS STEEL FULL STROKE PTFE-FITTED



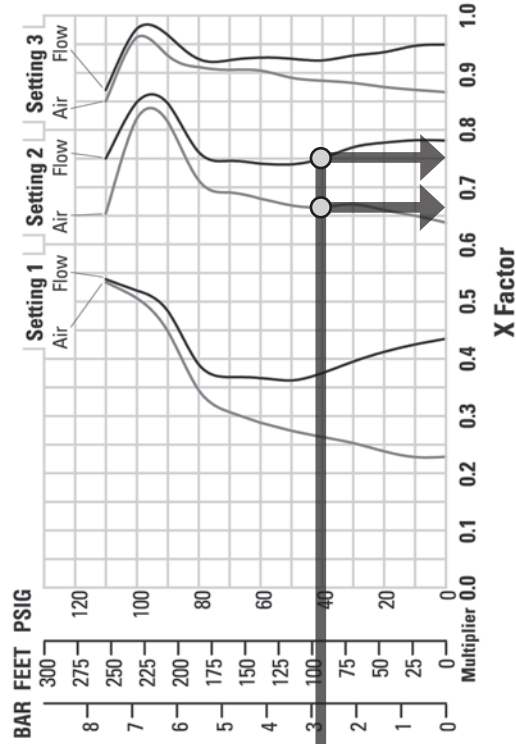
## PERFORMANCE



SETTING 4 PERFORMANCE CURVE



EMS CURVE



## TECHNICAL DATA

Height	815 mm (32.1")
Width	650 mm (25.6")
Depth	422 mm (16.6")
Ship Weight	126 kg (278 lbs.)
Air Inlet	19 mm (3/4")
Inlet	76 mm (3")
Outlet	76 mm (3")
Suction Lift	6.1m Dry (19.9') 9.3 m Wet (30.6')
Disp. Per Stroke	5.2 l (1.38 gal.) <sup>1</sup>
Max. Flow Rate	985 lpm (260.1 gpm)
Max. Size Solids	12.7 mm (1/2")

<sup>1</sup>Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2.1 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 PX1500 stainless steel, Full Flow PTFE fitted pump operating at EMS setting 4, achieved a flow rate of 454 lpm (120 gpm) using 155 Nm<sup>3</sup>/h (91 scfm) of air when run at 4.7 bar (68 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 0.75 and the air "X factor" is 0.66 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 341 lpm (90 gpm) and an air consumption of 102 Nm<sup>3</sup>/h (60 scfm). The flow rate was reduced by 25% while the air consumption was reduced by 34%, 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.**

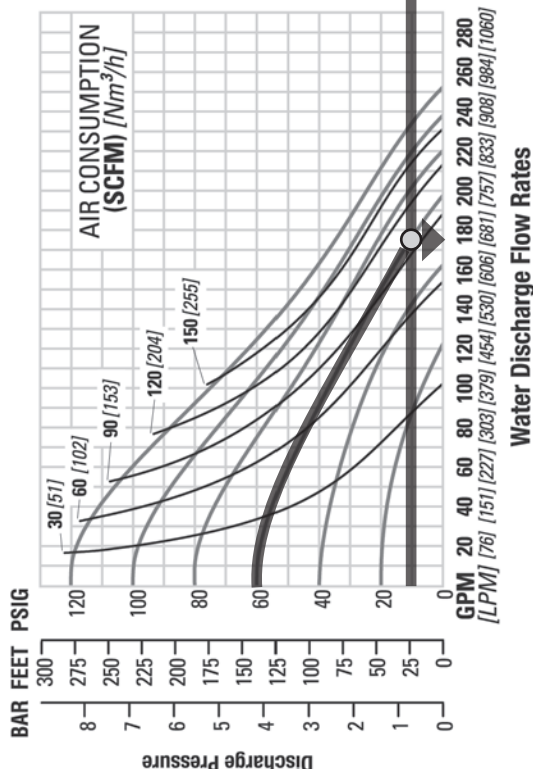
# PX1500 DROP-IN STAINLESS STEEL ULTRA-FLEX™ FITTED



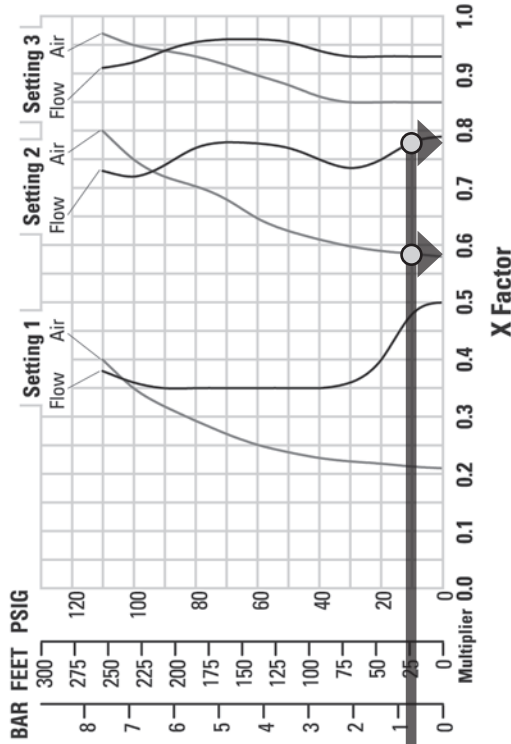
## PERFORMANCE



### SETTING 4 PERFORMANCE CURVE



### EMS CURVE



## TECHNICAL DATA

Height	.....815 mm (32.1")
Width	.....650 mm (25.6")
Depth	.....422 mm (16.6")
Ship Weight	.....126 kg (278 lbs.)
Air Inlet	.....19 mm (3/4")
Inlet	.....76 mm (3")
Outlet	.....76 mm (3")
Suction Lift	.....5.9 m Dry (19.3')
	.....8.6 m Wet (28.4')
Disp. Per Stroke	.....4.3 l (1.13 gal.) <sup>1</sup>
Max. Flow Rate	.....954 lpm (252 gpm)
Max. Size Solids	.....12.7 mm (1/2")

<sup>1</sup>Displacement 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 PX1500 stainless steel, Ultra-Flex-fitted pump operating at EMS setting 4, achieved a flow rate of 666 lpm (176 gpm) using 170 Nm<sup>3</sup>/h (100 scfm) of air when run at 4.1 bar (60 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 2 would meet his needs. At 0.7 bar (10 psig) discharge pressure and EMS setting 2, the flow "X factor" is 0.78 and the air "X factor" is 0.58 (see dots on EMS curve).

Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 520 lpm (137 gpm) and an air consumption of 99 Nm<sup>3</sup>/h (58 scfm). The flow rate was reduced by 22% while the air consumption was reduced by 42%, thus providing increased efficiency.

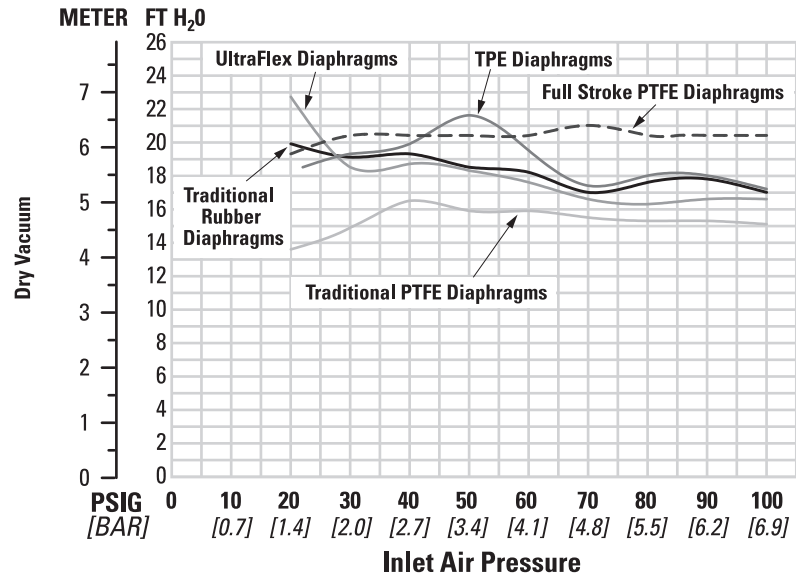
**For a detailed example for how to set your EMS, see beginning of performance curve section.**

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

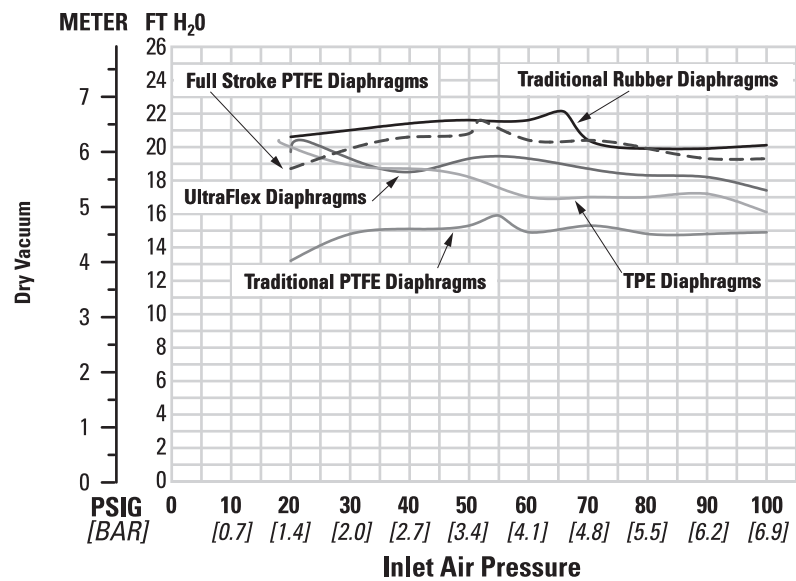


## SUCTION LIFT CURVES

### PX1500 ALUMINUM SUCTION LIFT CAPABILITY

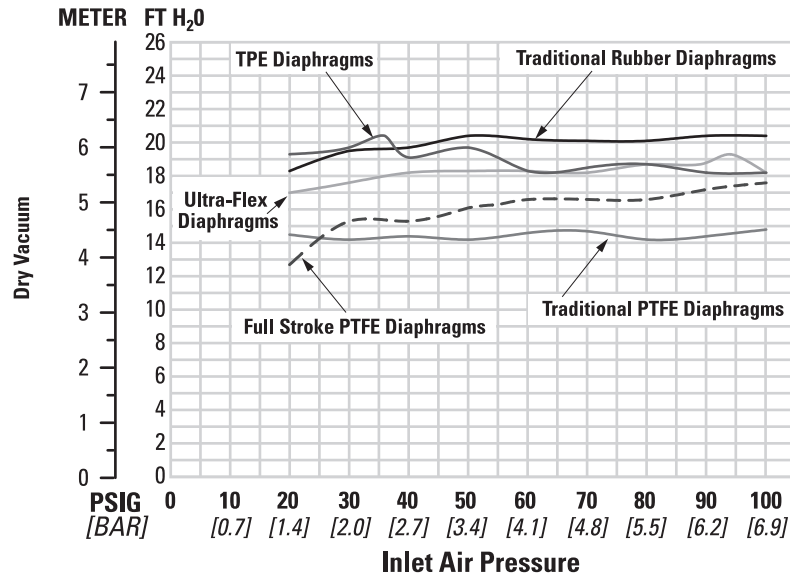


### PX1500 STAINLESS STEEL & ALLOY C SUCTION LIFT CAPABILITY



## SUCTION LIFT CURVES

### PX1500 STAINLESS STEEL DROP-IN SUCTION LIFT CAPABILITY



## NOTES