



**WILDEN PUMP DESIGNATION SYSTEM**

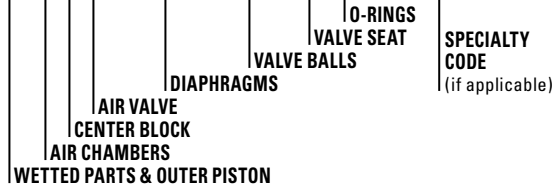
**PX1500 METAL**

**76 mm (3") Pump  
Maximum Flow Rate:  
1021 lpm (270 gpm)**

**LEGEND**

**PX1500 / XXXXX / XXX / XX / XXX / XXXX**

MODEL



**MATERIAL CODES**

**MODEL**

PX1500 = 76 mm (3")  
XPX1500 = 76 mm (3") ATEX

**WETTED PARTS/OUTER PISTON<sup>1</sup>**

AA = ALUMINUM / ALUMINUM  
HH = ALLOY C / ALLOY C  
SS = STAINLESS STEEL /  
STAINLESS STEEL

**AIR CHAMBERS**

A = ALUMINUM  
S = STAINLESS STEEL

**CENTER BLOCK**

A = ALUMINUM  
S = STAINLESS STEEL

**AIR VALVE**

A = ALUMINUM  
S = STAINLESS STEEL

**DIAPHRAGMS**

BNS = BUNA-N (Red Dot)  
XBS = CONDUCTIVE BUNA-N  
(Two Red Dots)<sup>2</sup>  
EPS = EPDM (Blue Dot)<sup>2</sup>  
PUS = POLYURETHANE (Clear)  
NES = NEOPRENE (Green Dot)  
TEU = PTFE w/EPDM  
BACK-UP (white)<sup>2</sup>  
TNU = PTFE w/NEOPRENE  
BACK-UP (White)  
FSS = SANIFLEX™ [Hytrel®  
(Cream)]  
VTS = VITON® (White Dot)  
WFS = WIL-FLEX™ [Santoprene®  
(Orange Dot)]  
TSU = PTFE W/SANIFLEX™  
BACK-UP (White)  
BNU = BUNA-N, ULTRA-FLEX™  
EPU = EPDM, ULTRA-FLEX™<sup>2</sup>  
NEU = NEOPRENE, ULTRA-FLEX™  
VTU = VITON®, ULTRA-FLEX™

**BALL VALVES**

BN = BUNA-N (Red Dot)  
FS = SANIFLEX™  
[Hytrel® (Cream)]  
EP = EPDM (Blue Dot)<sup>2</sup>  
NE = NEOPRENE (Green Dot)  
PU = POLYURETHANE (Brown)  
TF = PTFE (White)<sup>2</sup>  
VT = VITON® (Silver or White Dot)  
WF = WIL-FLEX™ [Santoprene®  
(Orange Dot)]

**VALVE SEAT**

A = ALUMINUM  
BN = BUNA-N (Red Dot)  
EP = EPDM (Blue Dot)<sup>2</sup>  
FS = SANIFLEX™ [Hytrel®  
(Cream)]  
NE = NEOPRENE (Green Dot)  
PU = POLYURETHANE (Brown)  
VT = VITON® (Silver or  
White Dot)  
WF = WIL-FLEX™ [Santoprene®  
(Orange Dot)]  
M = MILD STEEL  
S = STAINLESS STEEL  
H = ALLOY C

**VALVE SEAT O-RING**

TF = PTFE (White)<sup>2</sup>

**NOTE:**

1. PTFE-fitted models require stainless steel outer piston.
2. Meets the requirements of ATEX.

**SPECIALTY CODES**

- |   |  |
|---|--|
| 0044 Stallion balls & seats ONLY          | 0504 DIN flange  |
| 0100 Wil-Gard II™ 110V                    | 0677 Center Ported, NPT Inlet & Discharge (Clamped Drop-In)  |
| 0102 Wil-Gard II™ sensor wires ONLY       | 0678 Center Ported, BSPT Inlet & Discharge (Clamped Drop-In) |
| 0103 Wil-Gard II™ 220V                    |  |
| 0320 Submersible center block             |  |
| 0323 Submersible center block, DIN flange |  |

NOTE: MOST ELASTOMERIC MATERIALS USE COLORED DOTS FOR IDENTIFICATION.

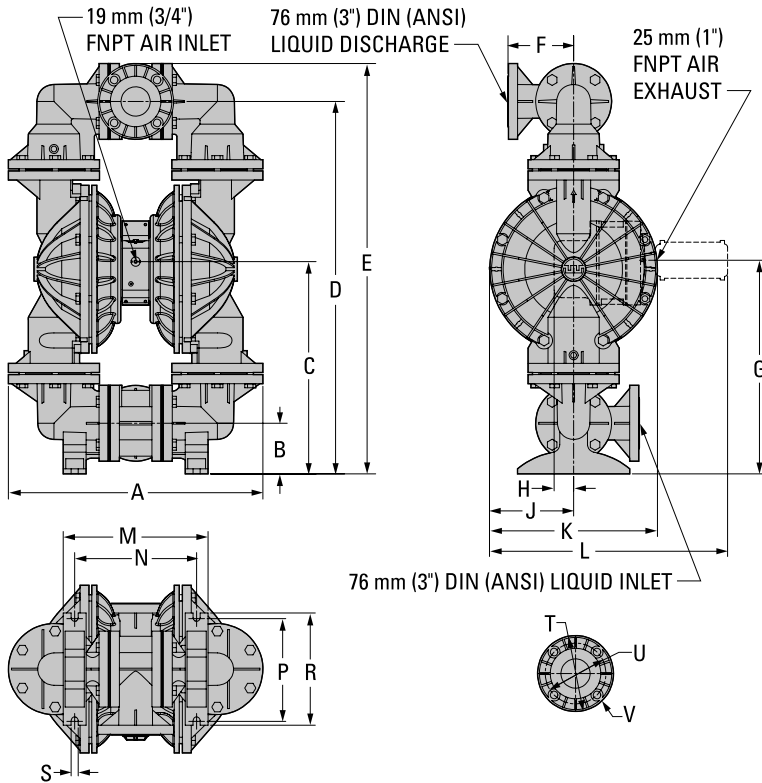
NOTE: Not all models are available with all material options.

Viton® is a registered trademark of DuPont Dow Elastomers.



**DIMENSIONAL DRAWINGS**

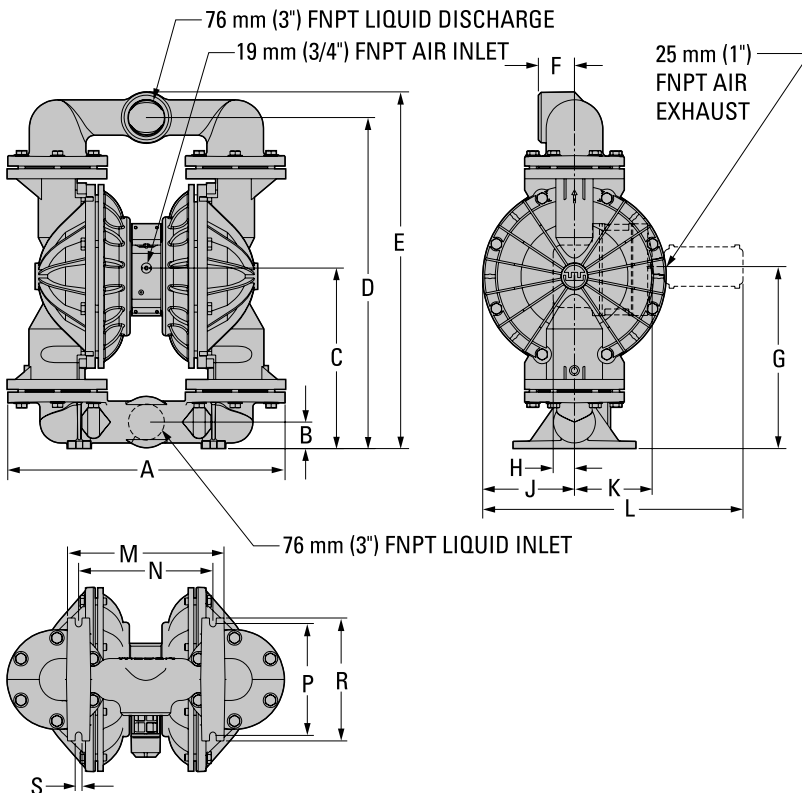
**PX1500 Aluminum**



**DIMENSIONS**

ITEM	METRIC (mm)	STANDARD (inch)
A	615	24.2
B	127	5.0
C	533	21.0
D	934	36.8
E	1031	40.6
F	165	6.5
G	536	21.1
H	48	1.9
J	211	8.3
K	422	16.6
L	597	23.5
M	363	14.3
N	307	12.1
P	259	10.2
R	282	11.1
S	18	0.7
	<b>DIN (mm)</b>	<b>ANSI (inch)</b>
T	200 DIA.	7.5 DIA.
U	160 DIA.	6.0 DIA.
V	18 DIA.	.8 DIA.

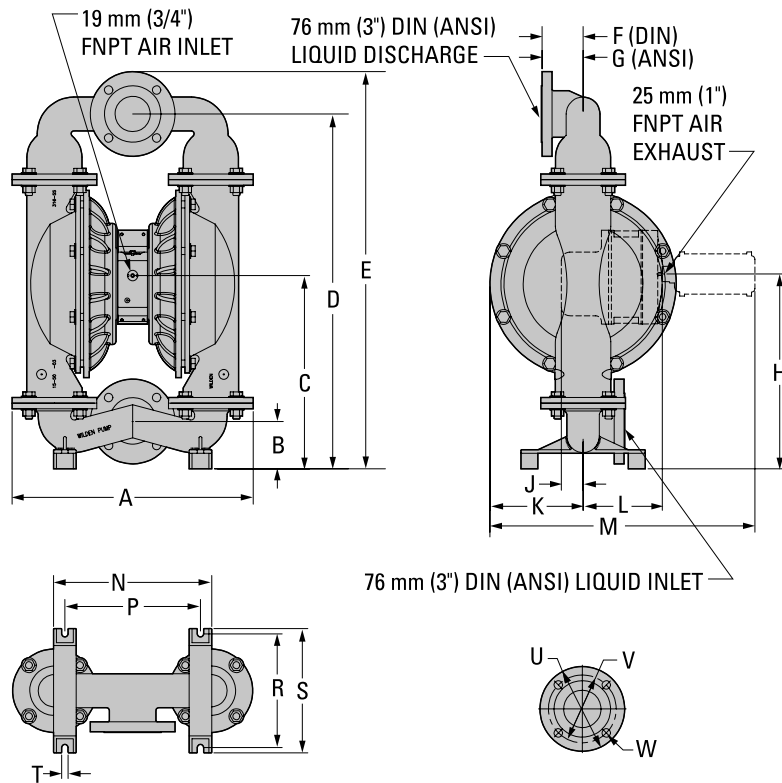
**PX1500 Aluminum Drop In Type**



**DIMENSIONS**

ITEM	METRIC (mm)	STANDARD (inch)
A	635	25.0
B	61	2.4
C	414	16.3
D	760	29.9
E	818	32.2
F	84	3.3
G	417	16.4
H	48	1.9
J	211	8.3
K	178	7.0
L	597	23.5
M	358	14.1
N	307	12.1
P	257	10.1
R	282	11.1
S	15	0.6

**PX1500 Stainless Steel/Alloy C**

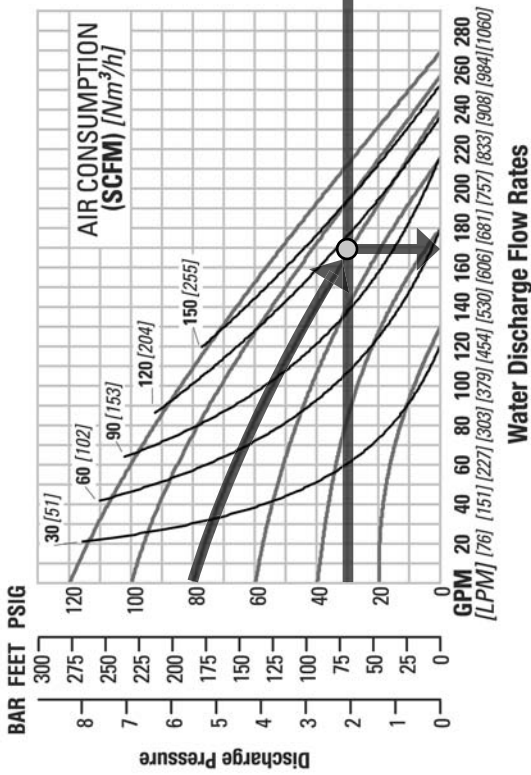


**DIMENSIONS**

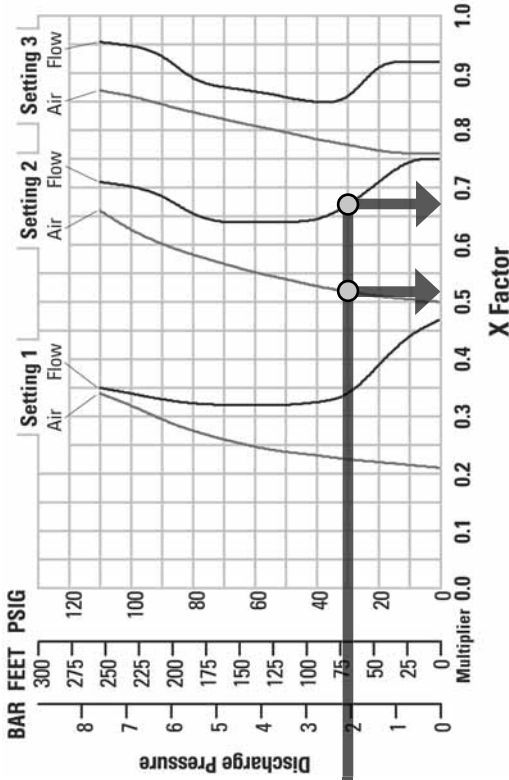
ITEM	METRIC (mm)	STANDARD (inch)
A	541	21.3
B	107	4.2
C	434	17.1
D	798	31.4
E	894	35.2
F	89	3.5
G	91	3.6
H	437	17.2
J	48	1.9
K	211	8.3
L	178	7.0
M	597	23.5
N	356	14.0
P	305	12.0
R	257	10.1
S	279	11.0
T	15	0.6
	<b>DIN (mm)</b>	<b>ANSI (inch)</b>
U	200 DIA.	7.5 DIA.
V	160 DIA.	6.0 DIA.
W	18 DIA.	.8 DIA.

**PX1500 ALUMINUM RUBBER-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 .....	6.1 m Dry (19.9') 8.8 m Wet (28.9')
Disp. Per Stroke .....	5.22 l (1.38 gal.) <sup>1</sup>
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.

*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.*

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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, Rubber-fitted pump operating at EMS setting 4, achieved a flow rate of 640 lpm (169 gpm) using 192 Nm<sup>3</sup>/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).

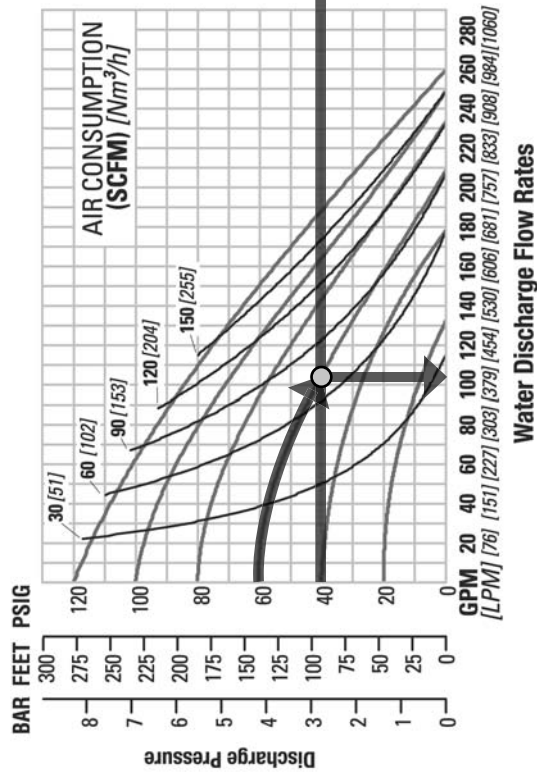
Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 429 lpm (113 gpm) and an air consumption of 100 Nm<sup>3</sup>/h (59 scfm). The flow rate was reduced by 33% while the air consumption was reduced by 48%, thus providing increased efficiency.

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

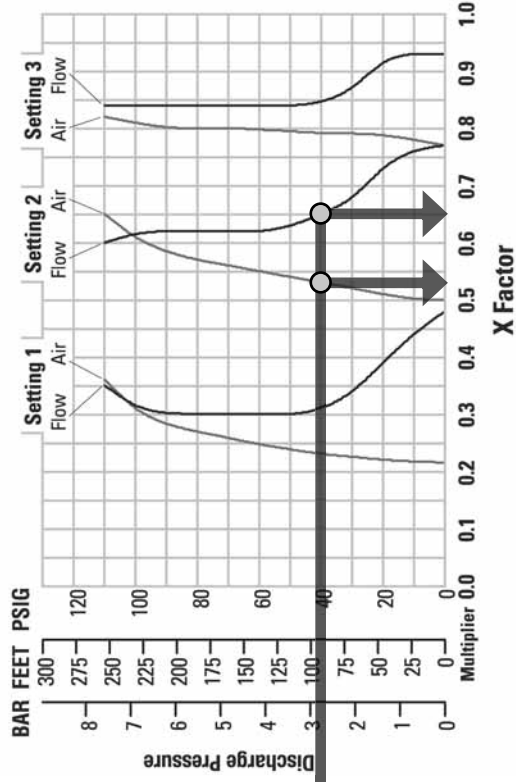
**Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.**

**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 (21.6') ..... 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.

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**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).

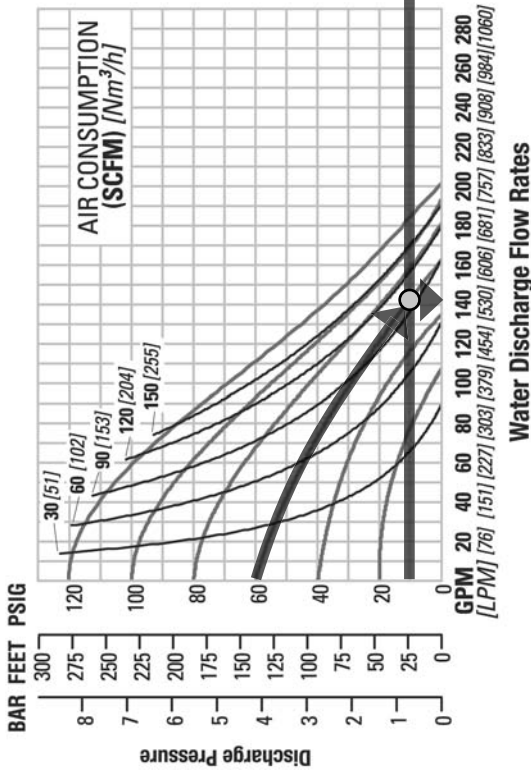
Multiplying the original setting 4 values by the "X factors" provides the setting 2 flow rate of 256 lpm (68 gpm) and an air consumption of 65 Nm<sup>3</sup>/h (38 scfm). The flow rate was reduced by 35% while the air consumption was reduced by 47%, thus providing increased efficiency.

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

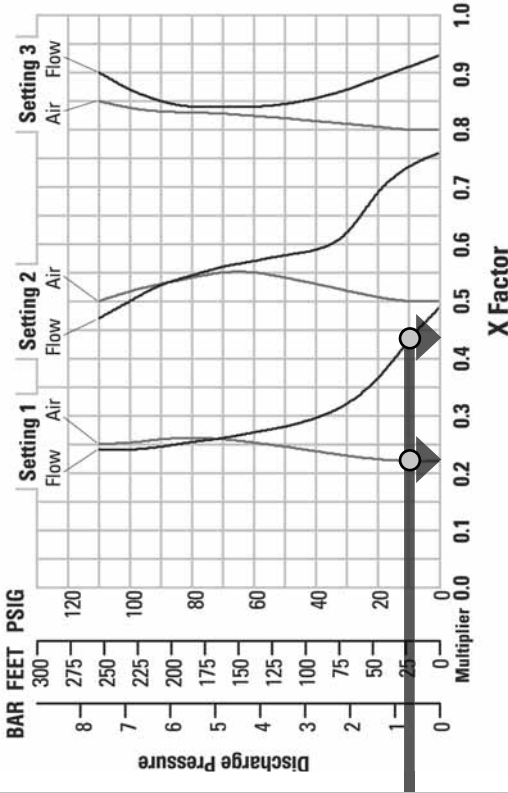
**Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.**

**PX1500 ALUMINUM PTFE-FITTED**

**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 (14.5') 7.8 m Wet (25.5')
Disp. Per Stroke	3.48 (0.92 gal.)
Max. Flow Rate	765 lpm (202 gpm)
Max. Size Solids	12.7 mm (1/2")

\*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.**

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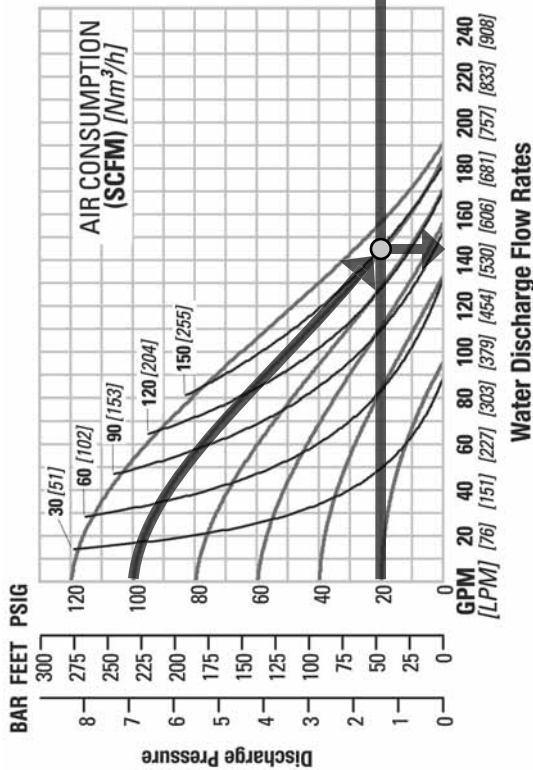
# PX1500 STAINLESS STEEL PTFE-FITTED



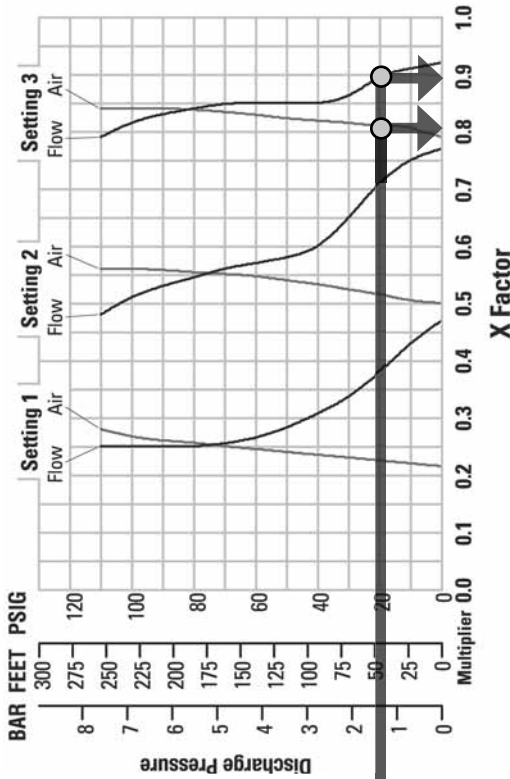
## PERFORMANCE



### 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 (0.83 gal.)
Max. Flow Rate	.....727 lpm (192 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 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<sup>3</sup>/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<sup>3</sup>/h (121 scfm). The flow rate was reduced by 11% while the air consumption was reduced by 19%, thus providing increased efficiency.

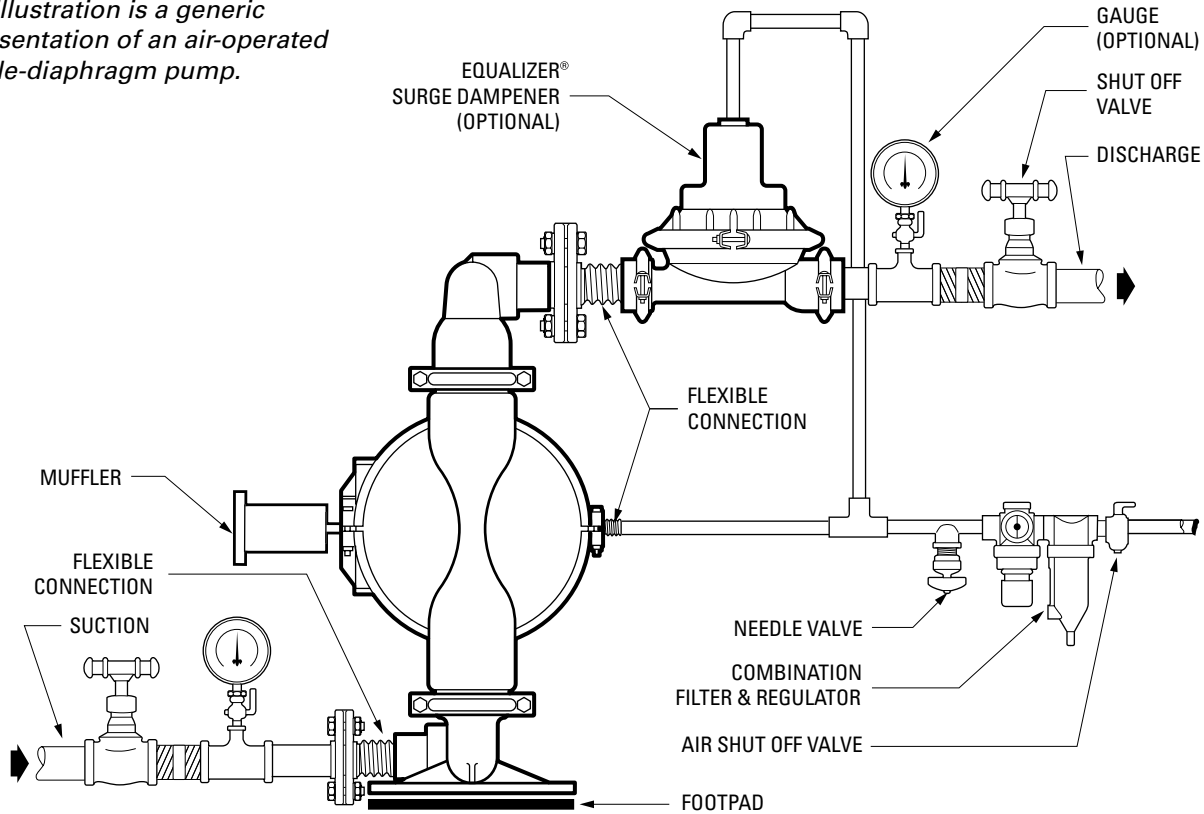
**For a detailed example for how to set your EMS, see beginning of performance curve section.**

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

*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.*

## SUGGESTED INSTALLATION

*This illustration is a generic representation of an air-operated double-diaphragm pump.*



**NOTE:** In the event of a power failure, the shut off valve should be closed, if the restarting of the pump is not desirable once power is regained.

**AIR OPERATED PUMPS:** To stop the pump from operating in an emergency situation, simply close the

shut off valve (user supplied) installed in the air supply line. A properly functioning valve will stop the air supply to the pump, therefore stopping output. This shut off valve should be located far enough away from the pumping equipment such that it can be reached safely in an emergency situation.