



 **Where Ideas Meet Industry**



Ws+ Self-Priming Pump

The Ws+ pump series is an exciting new addition to APV's range of self-priming pumps. It replaces the well-known ZMS series, which has proven successful for many years.

The Ws+ is designed to handle fluids mixed with air or foam significantly better and with greater efficiency than standard self-priming pumps.

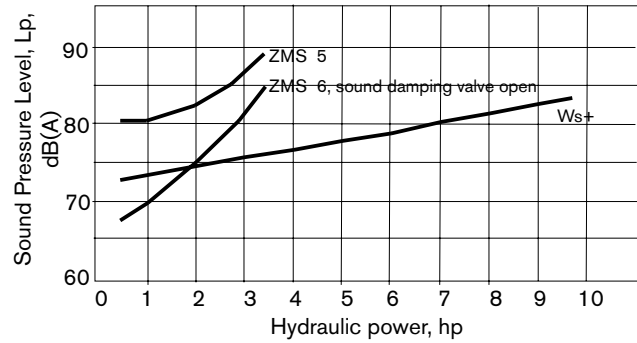
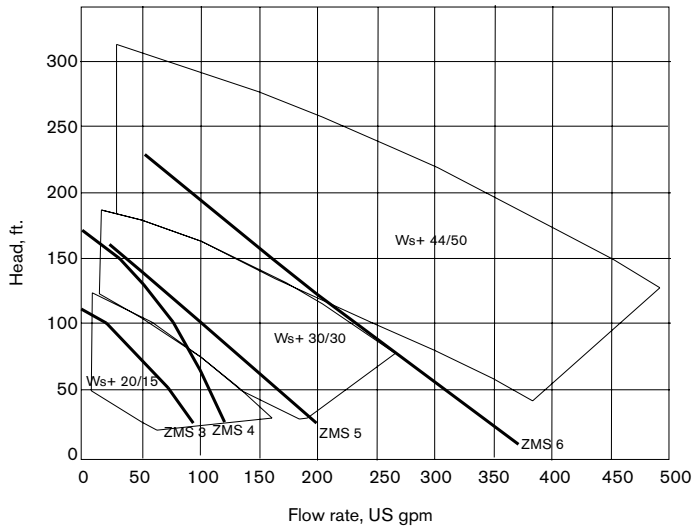
Furthermore, the new design is vastly superior to other pumps on the market.

The Ws+ pump works according to the water ring principle. However, unlike traditional self-priming pumps, the Ws+ is equipped with an open impeller which ensures a flexible flow range. The self-priming effect is obtained by means of an air screw mounted on the pump inlet.

Features and Benefits

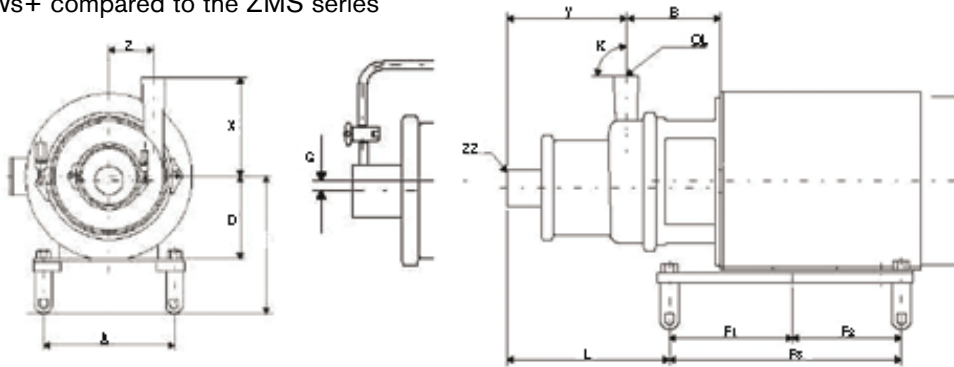
- **Improved hydraulic performance:** While the hydraulic performance is similar to that of the well-known W+ centrifugal pump series, the changeable impeller size increases the volumetric performance significantly.
- **Optimization possibilities:** The Ws+ series can be optimized in the same way as a conventional centrifugal pump (W+) for "customer designed" pump performance.
- **Higher efficiency:** The efficiency of the pump is increased compared to other self priming pumps by 25-90%.
- **Lower noise level:** Due to its hydraulic design, the noise level of the Ws+ is significantly lower than traditional liquid ring pumps.
- **3A and EHEDG approved:** Approved by the European Hygienic Equipment Design Group as a hygienic pump.
- **Interchangeable with W+ parts:** To reduce inventory cost the Ws+ series is based on the W+ design so that all commonly used spare parts are the same e.g. shaft seals, O-rings etc.
- **Horizontal inlet:** This is particularly useful in CIP applications. (Conventional self-priming pumps all have vertical inlet).
- **Less prone to damage by small objects:** Minimized risk of particles damaging the impellers.

Ws+



The noise emission curve shows the noise levels at different HP, compared to the ZMS series

The Ws+ range chart highlights the flexibility of the Ws+ compared to the ZMS series



All dimensions in inches

Pump	Motor frame	B	ZZ	OL	Y	F1	F2	F3	L	Z	X	D	A	E	G	K
Ws+20/15	182 TC	7.00	2.5	2	7.48	4.01	4.49	8.50	14.13	2.60	8.46	4.49	9.01	7.17	0.315	90°
	184 TC	7.00	2.5	2	7.48	4.01	5.51	9.53	14.13	2.60	8.46	4.49	9.01	7.17	0.315	
	213 TC	7.00	2.5	2	7.48	4.01	5.51	9.53	15.04	2.60	8.46	5.24	10.51	7.91	0.315	
	215 TC	7.00	2.5	2	7.48	2.52	7.00	9.53	16.54	2.60	8.46	5.24	10.51	7.91	0.315	
Ws+30/30	213 TC	6.14	2.5	2	7.60	4.01	5.51	9.53	14.29	3.27	9.05	5.24	10.51	7.91	0.394	90°
	215 TC	6.14	2.5	2	7.60	2.52	7.00	9.53	15.79	3.27	9.05	5.24	10.51	7.91	0.394	
	254 TC	6.77	2.5	2	7.60	0	8.27	8.27	19.13	3.27	9.05	6.26	12.52	8.62	0.394	
	256 TC	6.77	2.5	2	7.60	0	10.00	10.00	19.13	3.27	9.05	6.26	12.52	8.62	0.394	
Ws+44/50	254 TC	7.28	3	2	9.88	0	8.27	8.27	24.8	3.94	8.66	6.26	12.52	8.62	0.512	90°
	256 TC	7.28	3	2	9.88	0	10.00	10.00	24.8	3.94	8.66	6.26	12.52	8.62	0.512	
	284 TC	6.61	3	2	9.88	0	9.49	9.49	24.13	3.94	8.66	7.00	14.02	9.3701	0.512	
	286 TC	6.61	3	2	9.88	0	10.98	10.98	24.13	3.94	8.66	7.00	14.02	9.37	0.512	
	324 TC	7.68	3	2	9.88	0	10.51	10.51	25.67	3.94	8.66	8.00	15.98	10.354	0.512	
Tolerance inches		+0.197 -0	Nominal	Nominal	+0 -0.197	±0.079	±0.079	±0.079	+0 -0.197	±0.079	±0.079	±0.079	±0.079	±0.079	±0.020	+0.098 -0

APV, An SPX Brand
Phone: (888) 278-4321
Email: answers.us@apv.com

For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.apv.com.

SPX Corporation reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing.

Issued: 02/2009 7012-02-08-2008-US Copyright © 2008 SPX Corporation

SPX
WHERE IDEAS MEET INDUSTRY



Global Headquarters
13515 Ballantyne Corporate Place
Charlotte, North Carolina 28277
United States

Where Ideas Meet Industry

Where Ideas Meet Industry

www.spx.com