

A BETTER CHOICE
xcadusa.com



Irrigation Innovation Through
Design, Engineering and Experience™

Radius™
Radius is King™



2025/2026



A BETTER CHOICE

An Irrigation Products
Design and Distribution Company

Irrigation Innovation Through Design, Engineering and Experience™

XCAD USA® is a committed leader in the irrigation industry. We proudly supply our customers with superior irrigation products that are crafted with excellence. Our mission is to be the best value and to bring innovation to the irrigation industry through design, engineering and experience.

Over the last twenty-five years, **XCAD USA®** has been devoted to building lasting relationships with our customers. Those relationships have allowed our business to thrive and have provided us with the privilege to utilize and conserve one of the world's greatest resources: water (H₂O).

At **XCAD USA®** we are invested in our people, our state, our country and the world. Not only do we provide world class irrigation products for agricultural and industrial applications, we support communities and help grow farm economies.

All **XCAD USA®** irrigation products are designed by our engineering team in Rupert, Idaho. We are proud to invest in the people that build our products and the communities that they live in. Our company reflects the exemplary values of our customers, our employees, and our great state. We are honored to be recognized as a leader in our industry. **XCAD USA®** will continue to serve local communities throughout the USA, and the world, with our innovative products and our commitment to excellence. We are a great value and a better choice.

AQUA BURST

Torque-Driven™



Irrigation Innovation Through Design, Engineering and Experience™

AQUA BURST

Torque Driven™



Multi-Composite™

Raven-Smart™
Technology of Modern Design™

Precision Channel Spoon™

X SERIES BRASS™ - MADE TO LAST™

X75 Black Bird™

Radius™
Radius is King™

Creoplurology™
The Science of Making Rain™

AXIS-S™
End of Pivot Sprinkler

SX100 End Gun™
Thunderbolt™

AXIS-F™
End of Pivot Sprinkler

X-CART™

All XCAD USA® Products Are Designed and Engineered in the USA
Trademark of XCAD USA®

All prices are subject to change without notice

Irrigation Through Innovation

Raven-Smart™



RADIUS

Aqua Burst® Impact Sprinklers Are Water Lubricated

The use of additional lubricants such as Oil, Grease, Anti-Seize or Pipe Dope will damage the bearing assembly and void the warranty.

Teflon® tape is the only other recommended thread sealant.

Torque Driven™



SX10018



AXIS-S

Design and Engineering



AXIS-F



HF30

Workmanship



X75-18

Guaranteed

Designed and Engineered in the USA

All prices are subject to change without notice

AQUA BURST



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xcadusa.com

PIVOT SPRINKLERS AND ACCESSORIES

AQUA BURST

Radius™

Radius is King™



RADIUS-P

Jet Pack Sold Separately

Limited in supply.
Sold only in box quantities.
(15 per box)



RSJPACK

Nozzle(s) Not Included

Features

- Quick-Click™ rotary nozzle with Run, Off, and Flush modes
- Jet Pack™ nozzle carrier for 2 extra onboard nozzles
- Available in 3 pad configurations: Black, Blue, Purple
- Working pressure 6 - 20 psi

- The Radius Pivot Sprinkler requires a minimum of 2'- (0.6m) of reinforced flexible hose in the mounting assembly.
- Radius Sprinkler comes preassembled with weights. Do not use any other conventional weight system instead of/or in addition to the Radius Sprinkler.
- Always make sure that all components of the mounting assembly of the Radius Sprinkler are securely tightened.

• Black Plate

Multi-size droplets with maximum radius to help prevent runoff

• Blue Plate

Large droplets at a low trajectory for high wind applications

• Purple Plate

Small droplets for tight soils to help prevent soil sealing

RADIUS-BK

Black Plate

RADIUS-BL

Blue Plate

RADIUS-P

Purple Plate

Jet Pack™

Nozzle(s) Not Included

RSJPACK

Radius Jet Pack

- The Radius Jet Pack Nozzle Storage System allows for two extra nozzles for when water availability or water application needs increase or decrease as crop matures.
- Jet Pack Nozzle Holder allows you to match crop water requirements throughout the growing season.



PIVOT SPRINKLER REGULATOR

AQUA BURST

XPR Regulator

Patent Pending



XPR-20

Limited in supply.
Sold only in box quantities.

Features

- ◆ Allow at least 5 PSI (.35 BAR) extra pressure in order for the Aquaburst XPR Regulator to function properly.
- ◆ Aquaburst XPR Pressure Regulator has a flow of 5 to 15 gpm.
- ◆ 3/4 FNPT connections

XPR-6	6 PSI pressure regulator
XPR-10	10 PSI pressure regulator
XPR-15	15 PSI pressure regulator
XPR-20	20 PSI pressure regulator

- ◆ Aqua Burst™ XPR Regulators are designed for accuracy, durability, and efficiency for today's advanced pivot or linear systems
- ◆ XPR Regulators maintain desired sprinkler pressure and increase performance by regulating a constant outlet pressure, improving distribution patterns and application rates

AQUA BURST



1-208-438-9223

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xcadusa.com

2025 / 2026

RADIUS QUICK-CLICK™ NOZZLES

Radius Quick-Click™ Nozzle Chart



EVEN NOZZLE



Odd numbers have diamonds.

NOZZLE #	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19
COLOR	Light Blue	Beige	Beige	Gold	Gold	Lime	Lime	Lavender	Lavender	Gray	Gray
DIAMOND	◆		◆		◆		◆		◆		◆
PSI BAR	GPM LPM	GPM LPM	GPM LPM	GPM LPM	GPM LPM	GPM LPM	GPM LPM				
6 0.4	0.34 1.28	0.42 1.59	0.50 1.89	0.61 2.30	0.71 2.68	0.82 3.10	0.95 3.59	1.08 4.08	1.22 4.61	1.36 5.14	1.53 5.79
10 0.7	0.44 1.66	0.54 2.04	0.65 2.46	0.79 2.99	10.92 3.48	1.06 4.01	1.23 4.65	1.40 5.29	1.58 5.98	1.75 6.62	1.97 7.45
15 1.0	0.53 2.00	0.66 2.50	0.79 2.99	0.96 3.63	1.13 4.27	1.29 4.88	1.51 5.71	1.71 6.47	1.93 7.30	2.14 8.09	2.41 9.12
20 1.4	0.62 2.34	0.76 2.87	0.92 3.48	1.11 4.20	1.30 4.92	1.49 5.63	1.74 6.58	1.98 7.49	2.23 8.44	2.48 9.38	2.79 10.56
25 1.7	0.69 2.61	0.85 3.22	1.02 3.86	1.24 4.69	1.46 5.52	1.67 6.32	1.95 7.38	2.21 8.36	2.50 9.46	2.77 10.48	3.12 11.81
30 2.1	0.76 2.87	0.93 3.52	1.12 4.23	1.36 5.14	1.59 6.01	1.83 6.92	2.14 8.09	2.42 9.15	2.74 10.37	3.03 11.46	3.41 12.90
40 2.8	0.87 3.29	1.07 4.05	1.29 4.88	1.57 5.94	1.84 6.96	2.11 7.98	2.47 9.34	2.80 10.59	3.16 11.96	3.50 13.24	3.94 14.91
50 3.4	0.97 3.67	1.20 4.54	1.45 5.48	1.76 6.66	2.06 7.79	2.36 8.93	2.76 10.44	3.13 11.84	3.53 13.32	3.91 14.79	4.41 16.69

NOZZLE #	#20	#21	#22	#23	#24	#25	#26	#27	#28	#29	#30
COLOR	Turquoise	Turquoise	Yellow	Yellow	Red	Red	White	White	Blue	Blue	Dark Brown
DIAMOND		♦		♦		♦		♦		♦	
PSI	BAR	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM
6	0.4	1.70	6.43	1.84	6.96	2.04	7.72	2.22	8.40	2.44	9.23
10	0.7	2.19	8.28	2.38	9.00	2.64	9.99	2.86	10.82	3.16	11.96
15	1.0	2.69	10.18	2.91	11.01	3.23	12.22	3.50	13.24	3.86	14.61
20	1.4	3.10	11.73	3.36	12.71	3.73	14.11	4.05	15.32	4.46	16.88
25	1.7	3.47	13.13	3.76	14.23	4.17	15.78	4.52	17.10	4.99	18.88
30	2.1	3.80	14.38	4.12	15.59	4.56	17.25	4.96	18.77	5.47	20.70
40	2.8	4.39	16.16	4.76	18.01	5.27	19.94	5.72	21.65	6.31	23.88
50	3.4	4.90	18.54	5.32	20.13	5.89	22.29	6.40	24.22	7.06	26.72

NOZZLE #	#42		#43		#44		#45		#46		#47		#48		#49		#50		
COLOR	Mustard		Mustard		Maroon		Maroon		Cream		Cream		Dark Blue		Dark Blue		Copper		
DIAMOND			♦				♦				♦				♦				
PSI	BAR	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM	GPM	LPM
6	0.4	7.60	28.76	7.96	30.13	8.33	31.52	8.73	33.04	9.12	34.51	9.58	36.26	9.96	37.99	10.31	39.02	10.77	40.76
10	0.7	9.81	37.13	10.28	38.91	10.75	40.68	11.27	42.66	11.77	44.54	12.36	46.78	12.86	48.67	13.31	50.38	13.91	52.64
15	1.0	12.01	45.45	12.59	47.65	13.17	19.84	13.80	52.23	14.41	54.54	15.14	57.30	15.75	59.61	16.30	61.70	17.03	64.45
20	1.4	13.87	52.49	14.54	55.03	15.20	57.53	15.93	60.30	16.64	62.98	17.49	66.20	18.19	68.84	18.82	71.23	19.67	74.45
25	1.7	15.51	58.70	16.25	61.51	17.00	64.34	17.81	67.41	18.61	70.43	19.55	74.00	20.33	79.94	21.05	79.67	21.99	83.23
30	2.1	16.99	64.30	17.80	67.37	18.62	70.47	19.51	73.85	20.38	77.13	21.42	81.07	22.28	84.32	23.05	87.24	24.09	91.18
40	2.8	19.61	74.22	20.56	77.82	21.50	81.37	22.53	85.28	23.54	89.09	24.73	93.60	25.72	97.35	26.62	100.76	27.82	105.29
50	3.4	21.93	83.00	22.98	86.98	24.04	90.99	25.19	95.34	26.31	99.58	27.65	104.66	28.76	108.85	29.76	112.64	31.10	117.71

RADIUS QUICK-CLICK™ NOZZLES

Radius Quick-Click™ Nozzles



RVN-9	Rotary Valve Nozzle	#9 LT BLUE	♦
RVN-10	Rotary Valve Nozzle	#10 BEIGE	
RVN-11	Rotary Valve Nozzle	#11 BEIGE	♦
RVN-12	Rotary Valve Nozzle	#12 GOLD	
RVN-13	Rotary Valve Nozzle	#13 GOLD	♦
RVN-14	Rotary Valve Nozzle	#14 LIME	
RVN-15	Rotary Valve Nozzle	#15 LIME	♦
RVN-16	Rotary Valve Nozzle	#16 LAVENDER	
RVN-17	Rotary Valve Nozzle	#17 LAVENDER	♦
RVN-18	Rotary Valve Nozzle	#18 GRAY	
RVN-19	Rotary Valve Nozzle	#19 GRAY	♦
RVN-20	Rotary Valve Nozzle	#20 TURQUOISE	
RVN-21	Rotary Valve Nozzle	#21 TURQUOISE	♦
RVN-22	Rotary Valve Nozzle	#22 YELLOW	
RVN-23	Rotary Valve Nozzle	#23 YELLOW	♦
RVN-24	Rotary Valve Nozzle	#24 RED	
RVN-25	Rotary Valve Nozzle	#25 RED	♦
RVN-26	Rotary Valve Nozzle	#26 WHITE	
RVN-27	Rotary Valve Nozzle	#27 WHITE	♦
RVN-28	Rotary Valve Nozzle	#28 BLUE	
RVN-29	Rotary Valve Nozzle	#29 BLUE	♦

RVN-30	Rotary Valve Nozzle	#30 DK BROWN	
RVN-31	Rotary Valve Nozzle	#31 DK BROWN	♦
RVN-32	Rotary Valve Nozzle	#32 ORANGE	
RVN-33	Rotary Valve Nozzle	#33 ORANGE	♦
RVN-34	Rotary Valve Nozzle	#34 DK GREEN	
RVN-35	Rotary Valve Nozzle	#35 DK GREEN	♦
RVN-36	Rotary Valve Nozzle	#36 PURPLE	
RVN-37	Rotary Valve Nozzle	#37 PURPLE	♦
RVN-38	Rotary Valve Nozzle	#38 BLACK	
RVN-39	Rotary Valve Nozzle	#39 BLACK	♦
RVN-40	Rotary Valve Nozzle	#40 DK TURQUOISE	
RVN-41	Rotary Valve Nozzle	#41 DK TURQUOISE	♦
RVN-42	Rotary Valve Nozzle	#42 MUSTARD	
RVN-43	Rotary Valve Nozzle	#43 MUSTARD	♦
RVN-44	Rotary Valve Nozzle	#44 MAROON	
RVN-45	Rotary Valve Nozzle	#45 MAROON	♦
RVN-46	Rotary Valve Nozzle	#46 CREAM	
RVN-47	Rotary Valve Nozzle	#47 CREAM	♦
RVN-48	Rotary Valve Nozzle	#48 DK BLUE	
RVN-49	Rotary Valve Nozzle	#49 DK BLUE	♦
RVN-50	Rotary Valve Nozzle	#50 COPPER	

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AXIS END OF PIVOT SPRINKLER



AXIS-F
Field Turbine

AQUA BURST 
Viscous™ Technology

Features

- New 'V-Torque' brass dampener
- Easy nozzle assembly and replacement
- 15 to 50 psi working pressure
- Use in conjunction with X100 End Gun sprinkler for added acreage and improved coverage
- Comes with a full set of nozzles: 12, 15, 18 & 21
- 1 1/4" NPT base
- Use in combination with Seal-Matic® 1 1/4" valve

AXIS-FIELD™

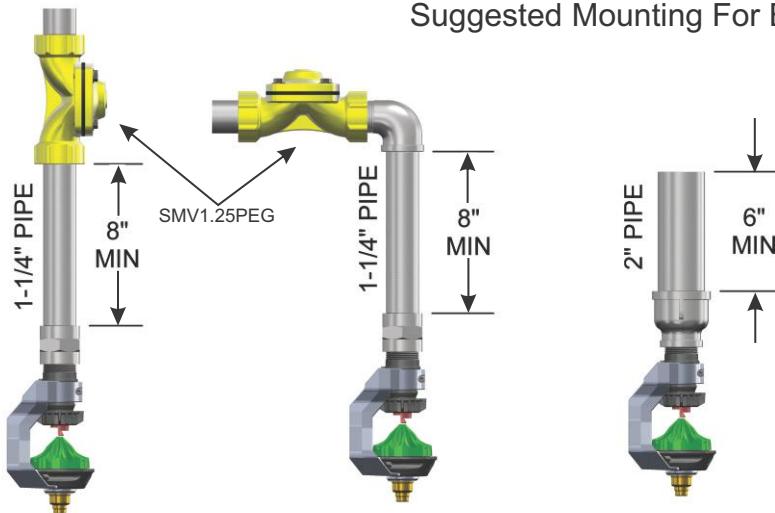
End of Pivot Sprinkler

includes nozzle set

AXIS-F	Axis-F Sprinkler with Nozzle Set
AXIS-NOZ	Axis Replacement Nozzle Set

Built in the USA

Suggested Mounting For Best Performance



Improper Mounting Positions



Improper Mounting Reduces Performance

Preliminary Performance (US Units)

Radius - GPM

Operating Pressure Must be 15 psi (min) to 50 (max) psi

PSI	#12 nozzle	#15 nozzle	#18 nozzle	#21 nozzle
15	31 - 12.0	32 - 19.0	38 - 29.0	38 - 35.5
20	33 - 13.5	35 - 21.8	41 - 32.8	41 - 41.5
25	35 - 15.3	38 - 24.3	44 - 36.5	44 - 48.0
30	37 - 16.5	41 - 26.5	47 - 39.8	47 - 52.0
35	38 - 17.8	43 - 28.8	49 - 43.0	49 - 55.5
40	39 - 19.0	45 - 30.8	51 - 46.5	51 - 59.5
45	40 - 20.0	46 - 32.3	52 - 49.5	51 - 62.5
50	41 - 21.0	47 - 33.8	53 - 51.0	51 - 65.5

This performance chart does not represent droplet, conditions, uniformity, application rate or suitability of the applications made herein.

Poor hydraulic entrance conditions reduce performance.

Aqua Burst® sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

AXIS END OF PIVOT SPRINKLER



AXIS-S
Sky Turbine

AQUA BURST 
 Viscous™ Technology

Features

- New 'V-Torque' brass dampener
- Easy nozzle assembly and replacement
- 15 to 50 psi working pressure
- Use in conjunction with X100 End Gun sprinkler for added acreage and improved coverage
- Comes with a full set of nozzles: 12, 15, 18 & 21
- 1 1/4" NPT base
- Use in combination with Seal-Matic® 1 1/4" valve

AXIS-SKY™

End of Pivot Sprinkler

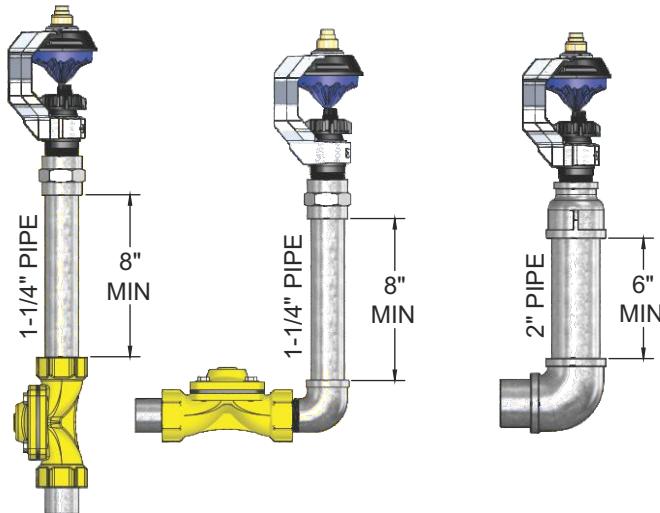
includes nozzle set

AXIS-S Axis-S Sprinkler with Nozzle Set

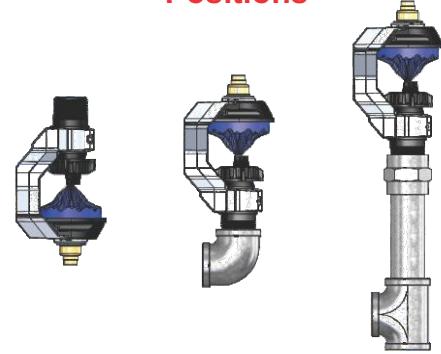
AXIS-NOZ Axis Replacement Nozzle Set

Built in the USA

Suggested Mounting For Best Performance



Improper Mounting Positions



Improper Mounting Reduces Performance

Preliminary Performance (US Units)

Radius - GPM

Operating Pressure Must be 15 psi (min) to 50 (max) psi

PSI	#12 nozzle	#15 nozzle	#18 nozzle	#21 nozzle
15	36 - 12.0	37 - 19.0	42 - 29.0	43 - 35.5
20	38 - 13.5	40 - 21.8	42 - 32.8	45 - 41.5
25	41 - 15.3	42 - 24.3	42 - 36.5	47 - 48.0
30	43 - 16.5	44 - 26.5	43 - 39.8	48 - 52.0
35	44 - 17.8	45 - 28.8	45 - 43.0	50 - 55.5
40	44 - 19.0	46 - 30.8	46 - 46.5	50 - 59.5
45	45 - 20.0	46 - 32.3	46 - 49.5	46 - 62.5
50	45 - 21.0	47 - 33.8	47 - 51.0	46 - 65.5

This performance chart does not represent droplet, conditions, uniformity, application rate or suitability of the applications made herein.

Poor hydraulic entrance conditions reduce performance.

Aqua Burst® sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

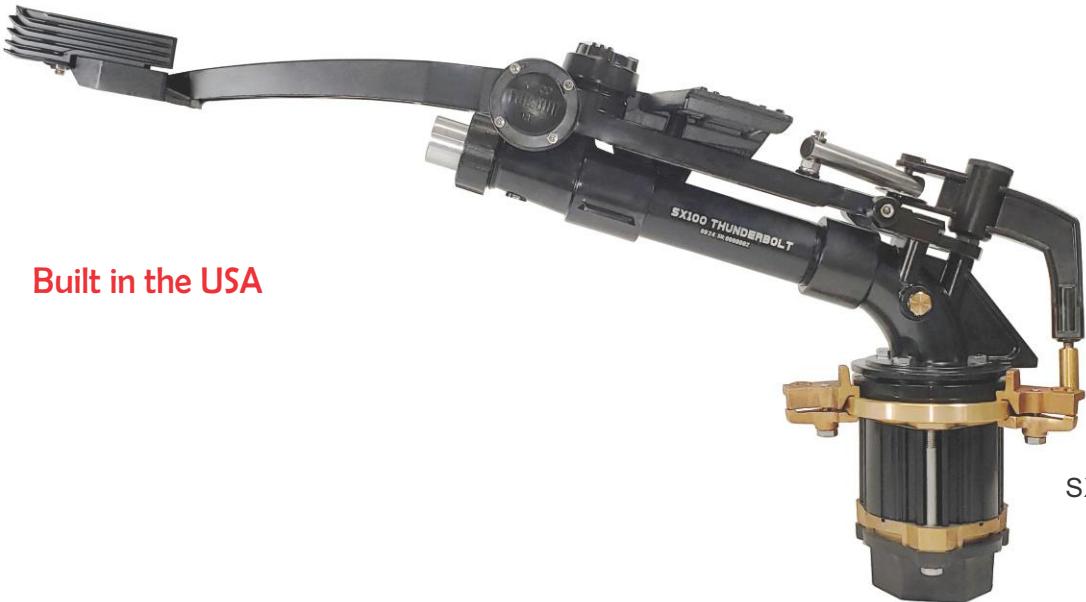
END GUNS

3-Year Limited Warranty

Designed and Built
 In Rupert, Idaho, USA

SX100 End Gun™ Thunderbolt™

Raven-Smart™
 Technology



SX10018

Built in the USA

Features

- ◆ 37 - 290 gpm, 35 - 100 psi
- ◆ 18° trajectory - Pivot end gun
- ◆ 24° trajectory - Movable and solid set
- ◆ 43° trajectory - Dust control and mining
- ◆ Continuous forward and reverse speeds
- ◆ Adjustable control from 30° to 330°
- ◆ 2" NPT

SX10018 End Gun™ Thunderbolt™
 sold individually

SX10018 18° End Gun

SX10024 24° End Gun

SX10043 43° End Gun

Advantages

- ◆ All stainless steel ball bearings
- ◆ Comes standard with both high and low force drive vanes for superior performance of small to large nozzles
- ◆ Powder-coated aluminum drive arm
- ◆ Stainless-steel nozzle mount and stud
- ◆ Fully adjustable shift box
- ◆ Solid brass reversing stops
- ◆ Taper ring nozzles
- ◆ All aluminum parts are epoxy coated or fully anodized
- ◆ 100% Rebuildable in our factory or your shop!

End Gun Does Not Include Nozzle

Warranty and Disclaimer

XCAD USA /Aqua Burst™ X100 End Gun™ and SX100 End Gun™ sprinklers are warranted for one year from date of manufacture to be free of defective materials and workmanship when used within the working specifications for which the product was designed and intended and under normal use and service. This warranty includes an additional three (3) year service plan (from date of purchase) for repair of any non-functioning X100 End Gun™ and SX100 End Gun™ due to defective materials and workmanship or excessive wear when used in normal working conditions. The manufacturer's liability under this warranty is limited solely to repair of defective parts and labor and the manufacturer will not be liable for any freight, crop loss or other consequential damages resulting from defects, excessive wear or breach of warranty. This warranty is expressly in lieu of all other warranties, express or implied, including the warranties of merchantability and or liabilities of the manufacturer. No agent, employee or representative of the manufacturer has the authority to waive, alter or add to the provisions of this warranty, nor make any representations or warranty not contained herein. **XCAD USA** /Aqua Burst™ reserves the right to define this warranty or any other warranty as **XCAD USA** /Aqua Burst™ sees fit.

AQUA BURST® SX100 Thunderbolt Performance Charts



SX100-51H
(GRAY)

Refer to gray shaded area on chart.

Single Straight Bore Nozzle

SX100-51L
(BLACK)



SX10018

Radius - GPM

Large Gray Drive Vane SX100-51H				Factory Installed Small Black Drive Vane SX100-51L										
PSI	.4" Nozzle	.45" Nozzle	.5" Nozzle	.55" Nozzle	.6" Nozzle	.65" Nozzle	.70" Nozzle	.75" Nozzle	.80" Nozzle	.85" Nozzle	.90" Nozzle	.95" Nozzle	.1" Nozzle	
40	74 - 26	79 - 35	85 - 42	90 - 52	95 - 61	99 - 71	102 - 84	107 - 95	111 - 108	119 - 123	122 - 139	128 - 154	-	
45	77 - 28	83 - 37	88 - 44	93 - 55	98 - 64	102 - 76	106 - 87	110 - 101	115 - 114	124 - 131	126 - 146	132 - 162	136 - 180	
50	80 - 29	86 - 39	92 - 46	96 - 58	101 - 68	105 - 80	110 - 92	114 - 105	118 - 119	127 - 138	131 - 151	135 - 169	140 - 187	
55	82 - 31	89 - 40	95 - 49	99 - 61	104 - 72	109 - 84	113 - 97	117 - 111	122 - 125	131 - 145	134 - 160	139 - 178	144 - 196	
60	84 - 32	92 - 41	97 - 51	102 - 63	108 - 78	112 - 88	117 - 101	119 - 116	125 - 132	134 - 150	138 - 167	143 - 186	148 - 205	
65	86 - 34	94 - 43	100 - 54	105 - 65	110 - 80	116 - 93	121 - 105	123 - 120	129 - 137	139 - 157	141 - 175	147 - 195	153 - 214	
70	87 - 36	96 - 44	102 - 55	108 - 68	111 - 81	119 - 98	125 - 110	126 - 125	133 - 142	141 - 163	145 - 181	152 - 202	158 - 223	
75	89 - 37	100 - 46	105 - 57	110 - 70	115 - 84	122 - 100	127 - 114	130 - 130	136 - 148	141 - 163	149 - 187	156 - 209	162 - 230	
80	91 - 39	103 - 48	108 - 59	111 - 72	118 - 86	125 - 102	130 - 118	134 - 133	138 - 152	144 - 168	152 - 193	159 - 215	165 - 237	
85	93 - 40	106 - 50	110 - 61	113 - 75	121 - 89	129 - 104	134 - 120	138 - 137	141 - 157	147 - 174	154 - 199	161 - 222	167 - 244	
90	94 - 42	109 - 52	112 - 63	116 - 77	124 - 93	133 - 107	137 - 124	143 - 142	145 - 162	150 - 180	157 - 206	163 - 228	169 - 251	
95	97 - 43	112 - 54	115 - 65	118 - 80	128 - 96	137 - 111	141 - 129	147 - 146	149 - 167	152 - 185	159 - 212	165 - 235	172 - 259	
100	99 - 45	115 - 56	118 - 67	121 - 83	131 - 99	141 - 115	146 - 133	151 - 150	152 - 172	155 - 191	161 - 217	168 - 242	174 - 265	

SX10024

Radius - GPM

Large Gray Drive Vane SX100-51H				Factory Installed Small Black Drive Vane SX100-51L										
PSI	.4" Nozzle	.45" Nozzle	.5" Nozzle	.55" Nozzle	.6" Nozzle	.65" Nozzle	.70" Nozzle	.75" Nozzle	.80" Nozzle	.85" Nozzle	.90" Nozzle	.95" Nozzle	.1" Nozzle	
40	79 - 28	85 - 37	91 - 45	96 - 55	101 - 65	105 - 76	109 - 89	114 - 101	118 - 115	127 - 131	130 - 148	136 - 164	-	
45	82 - 30	89 - 39	94 - 47	99 - 58	104 - 68	109 - 81	113 - 93	118 - 107	122 - 127	132 - 139	135 - 155	140 - 172	145 - 191	
50	85 - 31	92 - 41	98 - 49	103 - 62	107 - 72	112 - 85	117 - 98	122 - 112	126 - 127	136 - 147	139 - 161	144 - 180	149 - 199	
55	88 - 33	95 - 43	101 - 52	106 - 65	111 - 77	116 - 89	121 - 103	125 - 118	130 - 133	139 - 154	143 - 170	148 - 189	153 - 209	
60	90 - 34	98 - 44	104 - 54	109 - 67	115 - 83	120 - 94	125 - 107	127 - 123	134 - 140	143 - 160	147 - 178	152 - 198	157 - 218	
65	91 - 36	100 - 46	107 - 57	112 - 69	117 - 85	123 - 99	129 - 112	131 - 128	138 - 146	148 - 167	150 - 186	157 - 207	163 - 228	
70	93 - 38	103 - 47	109 - 59	115 - 72	118 - 86	127 - 104	133 - 117	135 - 133	142 - 151	150 - 173	154 - 193	162 - 215	169 - 237	
75	95 - 39	107 - 49	112 - 61	117 - 74	122 - 89	130 - 106	136 - 121	139 - 138	145 - 157	154 - 179	158 - 199	166 - 222	173 - 245	
80	97 - 41	110 - 51	115 - 63	118 - 77	126 - 92	133 - 108	138 - 125	143 - 142	147 - 162	156 - 185	162 - 205	169 - 229	176 - 252	
85	99 - 43	113 - 53	117 - 65	121 - 80	129 - 95	137 - 111	143 - 128	147 - 146	151 - 167	160 - 191	164 - 212	171 - 236	178 - 260	
90	101 - 45	116 - 55	119 - 67	123 - 82	132 - 99	142 - 114	146 - 132	152 - 151	154 - 172	162 - 197	167 - 219	174 - 243	180 - 267	
95	103 - 46	119 - 57	123 - 69	126 - 85	136 - 102	146 - 118	151 - 137	156 - 155	158 - 178	165 - 203	169 - 225	176 - 250	183 - 275	
100	105 - 48	122 - 60	126 - 71	129 - 88	139 - 105	150 - 122	155 - 141	161 - 160	162 - 183	167 - 208	172 - 231	179 - 257	185 - 282	

Gray drive vane is intended for use **ONLY** at low pressures and/or small nozzle sizes as indicated by the gray shaded area on the SX100 End Gun performance chart. **Use in any other manner will void warranty.**

Operate ONLY between 40 psi (min) and 100 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

END GUNS

SX100 End Gun™ Thunderbolt™

SX100V18	18° End Gun with Valve
SX100V24	24° End Gun with Valve
SX100V43	43° End Gun with Valve

SX100 with Valve



Features

- 37 - 290 gpm, 35 - 100 psi
- 18° trajectory - Pivot end gun
- 24° trajectory - Movable and solid set
- 43° trajectory - Dust control and mining
- Continuous forward and reverse speeds
- Adjustable control from 30° to 330°

2" Seal Matic™ Valve Combo

No electric solenoid required for End Gun™ control when used with booster pump

X100 Complete Replacement Bearing

Also Fits Nelson™ SR100 and SR75
(Does not include stops)



X100BA

Complete Bearing Assembly
 with SS Ball Bearing

Features

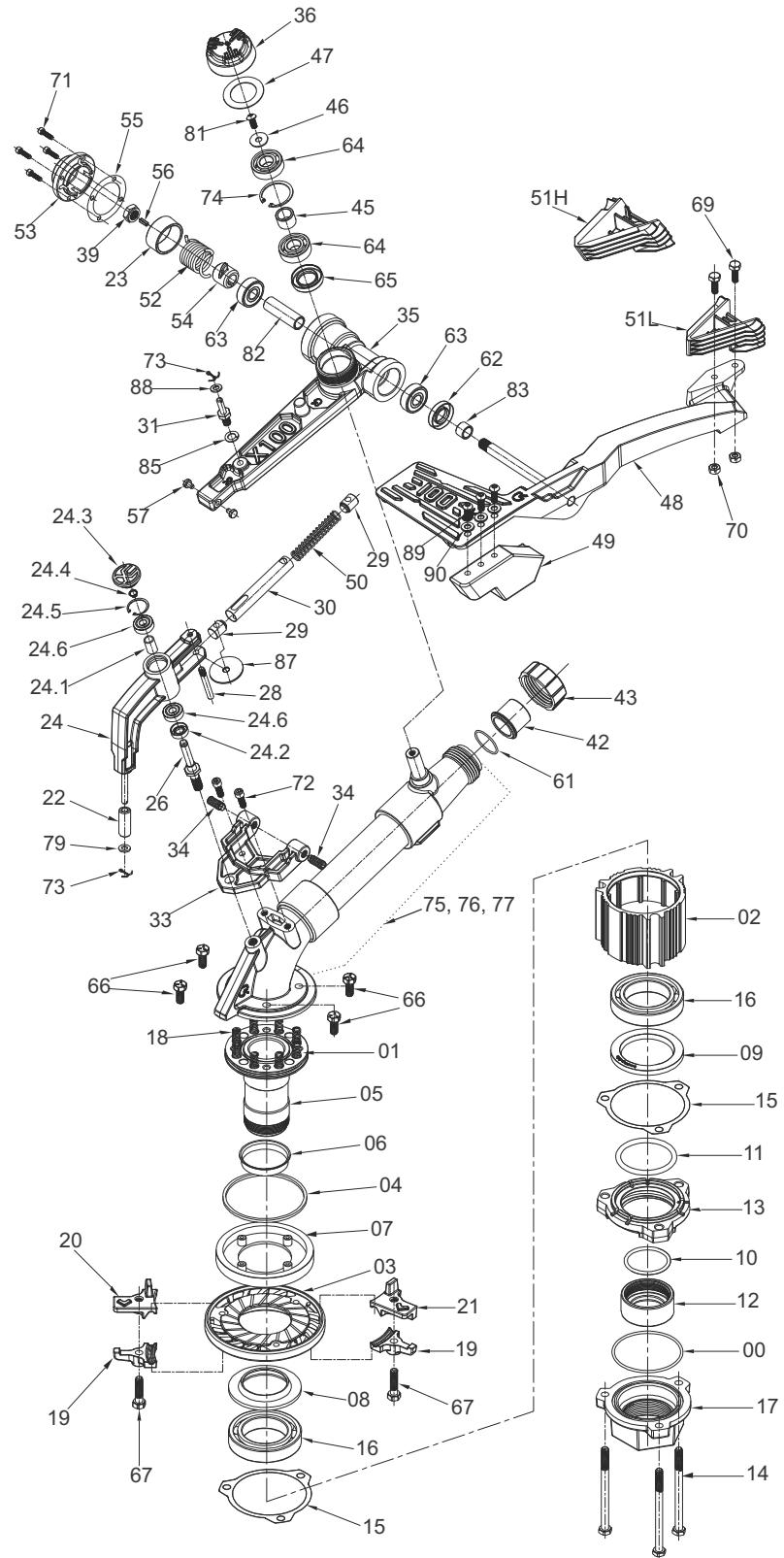
- Standard stainless steel ball bearings
- Anodized aluminum body and bearing stem
- One-piece brass bearing base carrier with Aqua Burst®
 exclusive UltraSlip impregnated o-ring

X100BA

Built in the USA

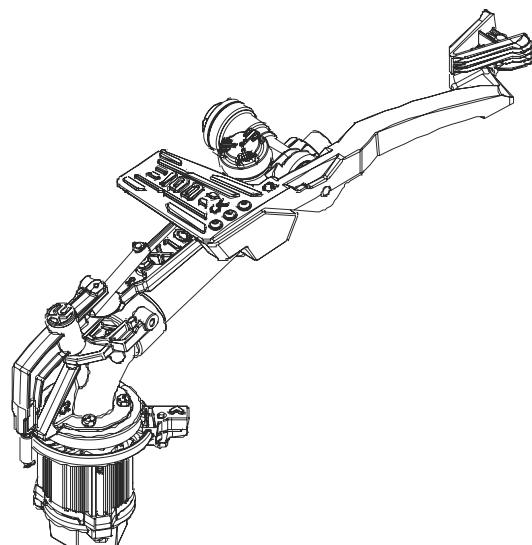
END GUN REPLACEMENT PARTS

SX100 End Gun™ Parts



END GUN REPLACEMENT PARTS

X100-00	Base Nut O-Ring -150 (orange)	X100-51H	Gray Drive Vane (Large)
X100-01	O-Ring -226 (light pink)	X100-51L	Black Drive Vane (Small)
X100-02	Bearing Housing	X100-52	Arm Spring, SS
X100-03	Upper Bearing Carrier	X100-53	Arm Spring Cover
X100-04	Brake Seal	X100-54	Spring Pawl
X100-05	Bearing Stem	X100-55	Spring Cover Gasket
X100-06	Seal Sleeve	X100-56	Pawl Key, Brass
X100-07	Brake Disc	X100-57	Impact Button, Brass
X100-08	Upper Bearing Seal (med. blue)	X100-61	Nozzle O-ring -025 (yellow)
X100-09	Lower Bearing Seal (purple)	X100-62	Arm Seal (red)
X100-10	O-Ring -224 (dark blue)	X100-63	Arm Bearing 6201, SS
X100-11	O-Ring -331 (med. green)	X100-64	Shift Arm Bearing 6202, SS
X100-12	Chromed Stem Nut	X100-65	Shift Arm Seal (orange)
X100-13	Bearing Base Carrier	X100-66	Bolt 5/16-18 x 5/8, SS
X100-14	Bearing Hex Bolt	X100-67	Bolt 5/16-18 x 1 1/4, SS
X100-15	Housing Gasket	X100-69	Bolt 1/4" x 3/4", SS
X100-16SS	Ball Bearing 6010, SS	X100-70	Nut 1/4, SS
X100-17	Base Nut Flange	X100-71	Cap Screw #8 x 5/8, SS
X100-18	Friction Spring	X100-72	Cap Screw 1/4 x 1/2, SS
X100-19	Reverse Stop, Bottom	X100-73	Cotter Pin
X100-20	Reverse Stop, Left	X100-74	Snap Ring 1 3/8", SS
X100-21	Reverse Stop, Right	X100-75	X100 18° Elbow Body
X100-22	Swing Arm Pin Bushing	X100-76	X100 24° Elbow Body
X100-23	Nylon Arm Spring Sleeve	X100-77	X100 43° Elbow Body
X100-24	Reverse Swing Arm Assembly	X100-79	Brass Washer
X100-24-1	Bearing Spacer	X100-81	1/4 x 1/2" Buttonhead Screw, SS
X100-24-2	Shaft Seal	X100-82	Long Shaft Sleeve
X100-24-3	Urethane Cap	X100-83	Short Shaft Sleeve
X100-24-4	Circlip	X100-85	Split Lock Washer, 5/16", SS
X100-24-5	Internal Retaining Ring	X100-87	Fender Washer, 1/4" x 1 1/2", SS
X100-24-6	SS 608 Bearing	X100-88	M6x18mm Washer, 1.6mm
X100-26	Reverse Arm Stud		
X100-28	Threaded Swing Arm Top Pin		
X100-29	Trip Spring Follower		
X100-30	Spring Guide Pipe		
X100-31	Shift Arm Stud		
X100-33	Shift Box, SS		
X100-34	Shift Box Set Screw		
X100-35	Shift Arm		
X100-36	Bearing Boss Cover		
X100-39	Arm Nut, SS		
X100-42	Straight Bore Nozzle		
X100-43	Nozzle Retainer Nut		
X100-45	Shift Arm Spacer		
X100-46	Bearing Washer, SS		
X100-47	Arm Bearing Cap Gasket		
X100-48	X100 Single Strut Arm		
X100-49	Arm Weight		
X100-50	Trip Spring, SS		



END GUNS

Raven-Smart™
 Technology

X75 End Gun™ Black Bird™



**X75-18
 Pivot Gun**



**X75-24
 Field Gun**

Features

- ♦ Comes standard with 8 nozzles
 3, 3.5, 4, 4.5, 5, 5.5, 6 and 6.5
- ♦ Powder-coated nozzle mount, drive arm and body
- ♦ 18° trajectory pivot end gun
- ♦ 27° trajectory movable solid set
- ♦ 18 - 100 gpm, 40 - 90 psi
- ♦ Full and part circle
- ♦ Replaceable spoon
- ♦ 2" NPT male thread, 1 1/2" NPT female thread
- ♦ High-quality composite bearings

X75-18 End Gun™ Black Bird™ sold individually

X75-18

X75-24

18° End Gun

24/27° End Gun

Warranty and Disclaimer

XCAD USA /Aqua Burst™ X-75 End Gun™ sprinklers are warranted for one year from date of manufacture to be free of defective materials and workmanship when used within the working specifications for which the product was designed and intended and under normal use and service. The manufacturer's liability under this warranty is limited solely to repair of defective parts and labor and the manufacturer will not be liable for any freight, crop loss or other consequential damages resulting from defects, excessive wear or breach of warranty. This warranty is expressly in lieu of all other warranties, express or implied, including the warranties of merchantability and or liabilities of the manufacturer. No agent, employee or representative of the manufacturer has the authority to waive, alter or add to the provisions of this warranty, nor make any representations or warranty not contained herein. **XCAD USA** /Aqua Burst™ reserves the right to define this warranty or any other warranty as **XCAD USA** /Aqua Burst™ sees fit.

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AQUA BURST® X75 Black Bird Performance Charts

X75-18

18°

Radius - GPM

Pivot Gun

PSI	.3" Nozzle	.35" Nozzle	.4" Nozzle	.45" Nozzle	.5" Nozzle	.55" Nozzle	.6" Nozzle	.65" Nozzle
20	-	-	-	-	55 - 33	66 - 40	70 - 47	75 - 55
25	-	-	-	-	65 - 37	70 - 44	78 - 53	80 - 62
30	-	-	60 - 26	68 - 33	75 - 40	81 - 48	82 - 57	84 - 68
35	-	-	66 - 28	74 - 35	80 - 43	86 - 52	89 - 62	90 - 73
40	63 - 17	65 - 23	71 - 30	80 - 38	83 - 46	90 - 56	93 - 66	95 - 78
45	65 - 18	70 - 24	78 - 32	84 - 40	87 - 49	91 - 59	96 - 70	99 - 83
50	70 - 19	74 - 26	81 - 33	86 - 42	90 - 52	93 - 62	100 - 74	102 - 87
55	72 - 20	78 - 27	82 - 35	88 - 44	94 - 54	95 - 65	102 - 78	105 - 91
60	73 - 21	80 - 28	84 - 36	92 - 46	97 - 56	100 - 68	105 - 81	108 - 96
65	75 - 21	81 - 29	85 - 38	95 - 48	102 - 59	104 - 71	110 - 85	116 - 99
70	81 - 22	82 - 30	86 - 39	100 - 49	106 - 61	108 - 74	112 - 88	120 - 103
75	83 - 23	84 - 31	87 - 41	108 - 51	112 - 63	113 - 76	115 - 91	122 - 107
80	85 - 24	86 - 32	88 - 42	111 - 53	114 - 65	115 - 79	119 - 94	124 - 110

X75-24

24/27°

Radius - GPM

Field Gun

PSI	.3" Nozzle	.35" Nozzle	.4" Nozzle	.45" Nozzle	.5" Nozzle	.55" Nozzle	.6" Nozzle	.65" Nozzle
20	-	-	-	-	69 - 33	70 - 40	72 - 47	75 - 55
25	-	-	-	-	71 - 37	75 - 44	77 - 53	80 - 62
30	-	-	74 - 26	75 - 33	77 - 40	79 - 48	84 - 57	87 - 67
35	-	-	78 - 28	80 - 35	82 - 43	84 - 52	86 - 62	95 - 73
40	68 - 17	78 - 23	81 - 30	83 - 38	86 - 46	88 - 56	89 - 66	99 - 78
45	69 - 18	80 - 24	83 - 32	86 - 40	93 - 49	95 - 59	100 - 70	102 - 82
50	70 - 19	85 - 26	90 - 33	91 - 42	95 - 52	100 - 62	104 - 74	107 - 87
55	71 - 20	90 - 27	92 - 35	95 - 44	100 - 54	104 - 65	106 - 78	110 - 91
60	76 - 21	92 - 28	95 - 36	100 - 46	103 - 56	109 - 68	111 - 81	113 - 95
65	80 - 21	96 - 29	98 - 38	103 - 48	109 - 59	115 - 71	116 - 84	117 - 99
70	82 - 22	100 - 30	101 - 39	105 - 49	111 - 61	119 - 74	120 - 88	121 - 103
75	83 - 23	103 - 31	104 - 41	110 - 51	114 - 63	124 - 76	125 - 91	127 - 106
80	85 - 24	107 - 32	108 - 42	115 - 53	117 - 65	125 - 79	127 - 94	130 - 110

Operate ONLY between 20 psi (min) and 80 psi (max)

Aqua Burst™ impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

MULTI-COMPOSITE™ 1/2" BASE IMPACT SPRINKLER

1/2" Full-Circle, Dual-Angle Multi-Composite™ Impact

Raven-Smart™ Technology



Features

- ♦ Full-circle, dual angle, 2-in-1 impact sprinkler
- ♦ **10° or 23° trajectory**
- ♦ Included plug allows use of nozzle in either side
- ♦ 1/2" male NPT base
- ♦ Fits NOZ5R-Style nozzle
- ♦ 3/8-24 UNF nozzle threads

Sprinkler Head Does Not Include Nozzle

Advantages

- ♦ Anodized aluminum drive arm
- ♦ Composite body is super-strong and impact resistant
- ♦ All-brass bearing
- ♦ Stainless-steel fulcrum pin, arm spring, and bearing spring
- ♦ Suitable for most solid set and portable applications
- ♦ Ideal for low precipitation rates
- ♦ Built-in vane straightener for improved performance
- ♦ Highly efficient water distribution
- ♦ Made from domestic and foreign parts

AL1023

100/case

AL1023

AQUA BURST® Performance Chart

Normal Stream Height At 2.5' Above Nozzle at Normal Pressure

Radius - GPM

PSI	3/32" nozzle	7/64" nozzle	1/8" nozzle	9/64" nozzle
35	36 - 1.51	38 - 2.06	39 - 2.69	40 - 3.40
40	36 - 1.62	39 - 2.21	39 - 2.88	40 - 3.63
45	37 - 1.71	39 - 2.32	39 - 3.04	40 - 3.86
50	37 - 1.82	39 - 2.47	40 - 3.21	41 - 4.07
55	38 - 1.90	40 - 2.58	40 - 3.37	41 - 4.25
60	38 - 1.99	40 - 2.70	40 - 3.52	41 - 4.45

Operate ONLY between 35 psi (min) and 60 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

AQUA BURST



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MULTI-COMPOSITE™ 3/4" IMPACT SPRINKLER

3/4" Full-Circle Multi-Composite™ Impact

Precision Channel™ Aluminum Arm

Raven-Smart™ Technology



AL30

Aqua-Burst® AL30 Multi-Composite™ Sprinklers are designed to outlast and outperform all other 3/4" impact sprinkler brands

Features

- Full-circle impact – 26° trajectory
- 3/4" male NPT base
- Single (AL30) or dual nozzle (AL30D)

Sprinkler Head Does Not Include Nozzle

Advantages

- Anodized die-cast aluminum drive arm with *Precision Channel Spoon™* for smooth Torque-Driven™ operation and reduced splash-down
- Composite body is super-strong and impact resistant
- Highly efficient water distribution at both high and low operating pressures
- All-brass Seal-Lock bearing creates a debris resistant captive seal for long bearing wear
- Bearing spindle with debris journal to slow bearing wear
- Stainless-steel fulcrum pin, arm spring and bearing spring for long wearing reliability
- Ideal for wheel line, solid set and frost control
- Works well with either straight bore nozzle or flow-control nozzle with 1/4" NPT threads
- Made with domestic and foreign parts
- **Preassembled with XC-33 thread sealant**

60/case

AL30

AL30-C (w/chrome bearing)

AL30-SP (w/plastic spindle)

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Single Nozzle
Radius - GPM

PSI	1/8" nozzle	9/64" nozzle	5/32" nozzle	11/64" nozzle	3/16" nozzle
30	39 - 2.1	41 - 3.2	42 - 3.9	44 - 4.7	46 - 5.6
35	40 - 2.4	41 - 3.5	44 - 4.3	46 - 5.3	47 - 6.0
40	40 - 2.5	42 - 3.7	44 - 4.6	46 - 5.5	48 - 6.4
45	41 - 2.8	42 - 3.7	45 - 5.1	47 - 5.8	49 - 6.8
50	41 - 3.1	43 - 3.9	46 - 5.1	48 - 6.2	50 - 7.3
55	42 - 3.2	43 - 4.3	46 - 5.4	48 - 6.4	50 - 7.6
60	42 - 3.4	44 - 4.5	47 - 5.6	49 - 6.6	51 - 7.9
65	43 - 3.6	44 - 4.7	47 - 5.8	49 - 6.9	51 - 8.2
70	44 - 3.9	45 - 4.9	48 - 6.0	50 - 7.9	52 - 8.6

Dual Nozzle
Radius - GPM

PSI	1/8" x 3/32" nozzles	9/64" x 3/32" nozzles	5/32" x 3/32" nozzles	11/64" x 3/32" nozzles	3/16" x 1/8" nozzles
30	39 - 3.2	41 - 4.6	43 - 5.4	44 - 6.2	45 - 8.1
35	39 - 3.3	41 - 5.0	43 - 5.8	45 - 6.7	46 - 8.8
40	40 - 3.4	42 - 5.3	44 - 6.2	46 - 7.2	48 - 9.5
45	40 - 3.8	42 - 5.7	45 - 6.5	47 - 7.7	49 - 10.1
50	41 - 4.2	43 - 5.9	45 - 6.9	47 - 8.1	50 - 10.6
55	42 - 4.5	43 - 6.2	46 - 7.3	48 - 8.4	50 - 11.0
60	43 - 4.6	44 - 6.5	46 - 7.6	48 - 8.7	51 - 11.6
65	43 - 4.9	44 - 6.8	47 - 7.9	49 - 9.0	52 - 12.2
70	44 - 5.2	45 - 7.0	47 - 8.2	50 - 9.2	52 - 12.6

Operate ONLY between 30 psi (min) and 70 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

1/2" BRASS IMPACT SPRINKLER

1/2" Full-Circle Brass Impact Torque Driven™ Spoon Technology



HF20

Features

- Full-circle impact - 23° trajectory
- 1/2" male NPT base
- Single nozzle
- 3/8-24 UNF nozzle threads
- **Factory installed 1/8" or 7/64" nozzle**

Advantages

- Cast brass drive arm with I-Beam construction and Torque-Driven™ spoon technology with improved balance, rotation speed, and durability
- Advanced arm balance with consistent rotation speed and increased durability
- Suitable for a wide range of nozzles - 3/32", 7/64", 1/8", 9/64"
- Stainless-steel fulcrum pin, arm spring, and bearing spring
- Cast brass body with large impact bridges and cored water passage
- Coined body and arm ensures proper arm position and smooth operation
- Suitable for solid set and portable applications
- Made with domestic and foreign parts
- **Preassembled with XC-33 thread sealant**

100 /case

HF20-18

HF20-764

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Radius - GPM

PSI	3/32" nozzle	7/64" nozzle	1/8" nozzle	9/64" nozzle
35	36 - 1.50	38 - 2.05	39 - 2.69	39 - 3.39
40	36 - 1.61	38 - 2.19	39 - 2.88	40 - 3.62
45	37 - 1.71	39 - 2.32	39 - 3.04	40 - 3.84
50	37 - 1.80	39 - 2.45	40 - 3.21	41 - 4.05
55	38 - 1.89	40 - 2.57	40 - 3.37	41 - 4.24
60	38 - 1.97	40 - 2.68	41 - 3.52	41 - 4.43

Operate ONLY between 30 psi (min) and 60 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.



1/2" BRASS FULL-CIRCLE WEDGE IMPACT SPRINKLER

1/2" BRASS FULL-CIRCLE WEDGE IMPACT Torque Driven™ Spoon Technology



HF20W

100 /case

HF20W

Features

- Full-circle impact - 23° trajectory
- 1/2" male NPT base
- Single nozzle
- 3/8-24 UNF nozzle threads
- Fits NOZ5R-Style nozzle

Advantages

- Cast brass drive arm with I-Beam construction and Torque-Driven™ spoon technology with improved balance, rotation speed, and durability
- Advanced arm balance with consistent rotation speed and increased durability
- Suitable for a wide range of nozzles - 3/32", 7/64", 1/8", 9/64"
- Stainless-steel fulcrum pin, arm spring, and bearing spring
- Cast brass body with large impact bridges and cored water passage
- Coined body and arm ensures proper arm position and smooth operation
- Suitable for solid set and portable applications
- Made with domestic and foreign parts
- **Preassembled with XC-33 thread sealant**

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Radius - GPM

PSI	1/16" nozzle	5/64" nozzle	3/32" nozzle	7/64" nozzle
20	-	30 - 0.81	33 - 1.14	34 - 1.55
25	29 - 0.58	31 - 0.90	33 - 1.27	35 - 1.73
30	29 - 0.64	31 - 0.99	34 - 1.39	35 - 1.90
25	30 - 0.68	32 - 1.07	34 - 1.50	36 - 2.05
40	30 - 0.74	32 - 1.14	35 - 1.61	37 - 2.19
45	31 - 0.77	33 - 1.21	35 - 1.71	37 - 2.32
50	31 - 0.82	34 - 1.27	36 - 1.80	38 - 2.45
55	32 - 0.86	34 - 1.33	36 - 1.89	38 - 2.57
60	32 - 0.90	34 - 1.39	37 - 1.97	38 - 2.68

Operate ONLY between 20 psi (min) and 60 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

3/4" BRASS IMPACT SPRINKLER

3/4" Full-Circle Brass Impact Torque Driven™



HF30

Features

- Full-circle impact – 26° trajectory
- 3/4" male NPT base
- Single (HF30) or dual nozzle (HF30D)
- Fits 3/4" size nozzle (NOZ75 series)

Sprinkler Head Does Not Include Nozzle

Advantages

- Cast brass drive arm with I-Beam construction and Torque-Driven™ spoon technology with improved balance, rotation speed, and durability
- Cast brass body with triple bridge construction and cored water passage
- Seal-Lock bearing creates a captive seal
- Spindle with debris journal to slow bearing wear
- Stainless-steel fulcrum pin, arm spring, and bearing spring for long wearing reliability
- Ideal for hand line, wheel line, solid set, and a wide-range of other applications
- Made with domestic and foreign parts
- **Preassembled with XC-33 thread sealant**

60/case

HF30 (single)

HF30D (dual)

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Single Nozzle
Radius - GPM

PSI	1/8" nozzle	9/64" nozzle	5/32" nozzle	11/64" nozzle	3/16" nozzle
35	40 - 2.4	41 - 3.3	43 - 4.1	45 - 5.1	46 - 5.9
40	40 - 2.6	42 - 3.5	44 - 4.5	46 - 5.3	47 - 6.4
45	41 - 2.9	42 - 3.7	44 - 4.7	46 - 5.7	48 - 6.7
50	42 - 3.1	43 - 4.0	45 - 4.9	47 - 6.1	48 - 7.2
55	42 - 3.3	43 - 4.3	45 - 5.1	48 - 6.4	49 - 7.5
60	43 - 3.5	44 - 4.5	46 - 5.4	49 - 6.7	49 - 7.8
65	43 - 3.7	44 - 4.7	46 - 5.7	49 - 7.0	50 - 8.1
70	44 - 3.9	45 - 4.8	47 - 5.9	50 - 7.2	51 - 8.4

Dual Nozzle
Radius - GPM

PSI	1/8"x3/32" nozzles	9/64"x3/32" nozzles	5/32"x3/32" nozzles	11/64"x3/32" nozzles	3/16"x3/32" nozzles
35	40 - 4.1	41 - 4.8	44 - 4.7	45 - 6.4	46 - 7.4
40	41 - 4.4	42 - 5.2	44 - 6.1	45 - 7.0	47 - 8.0
45	41 - 4.6	42 - 5.5	45 - 6.5	46 - 7.5	48 - 8.6
50	42 - 4.9	43 - 5.8	45 - 6.8	47 - 7.9	49 - 9.1
55	42 - 5.2	43 - 6.1	46 - 7.1	48 - 8.3	50 - 9.5
60	43 - 5.4	44 - 6.3	46 - 7.4	48 - 8.7	51 - 9.8
65	43 - 5.7	44 - 6.6	47 - 7.8	48 - 9.0	51 - 10.3
70	43 - 5.9	45 - 6.9	47 - 8.1	49 - 9.4	52 - 10.6

Operate ONLY between 35 psi (min) and 70 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

AQUA BURST



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xcadusa.com

3/4" BRASS/ALUMINUM IMPACT SPRINKLER

Precision Channel™ Aluminum Arm Torque Driven™



HF30AL

60/case
HF30AL (single)

Features

- Full-circle impact – 26° trajectory
- 3/4" male NPT base
- Single nozzle
- Fits 3/4" size nozzle (NOZ75 series)

Sprinkler Head Does Not Include Nozzle

Advantages

- Anodized die-cast aluminum drive arm with *Precision Channel Spoon™* for smooth Torque-Driven™ operation and reduced splash-down
- Cast brass body with triple bridge construction and cored water passage
- Spindle with debris journal to slow bearing wear
- Seal-Lock bearing creates a captive seal
- Stainless-steel fulcrum pin, arm spring, and bearing spring for long wearing reliability
- Suitable for portable, solid-set and row-crop, frost protection and mechanical move systems
- Made with domestic and foreign parts
- **Preassembled with XC-33 thread sealant**

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Radius - GPM

PSI	1/8" nozzle	9/64" nozzle	5/32" nozzle	11/64" nozzle	3/16" nozzle
30	39 - 2.2	41 - 3.0	42 - 3.8	44 - 4.6	45 - 5.5
35	40 - 2.4	41 - 3.3	43 - 4.1	45 - 5.1	45 - 5.9
40	40 - 2.6	42 - 3.5	44 - 4.5	46 - 5.3	46 - 6.4
45	41 - 2.9	42 - 3.7	44 - 4.7	46 - 5.7	47 - 6.7
50	41 - 3.1	43 - 4.0	45 - 4.9	47 - 6.1	48 - 7.2
55	42 - 3.3	43 - 4.3	45 - 5.1	48 - 6.4	49 - 7.5
60	42 - 3.5	44 - 4.5	46 - 5.4	49 - 6.7	49 - 7.8
65	43 - 3.7	44 - 4.7	46 - 5.7	49 - 7.0	50 - 8.1
70	44 - 3.9	45 - 4.8	47 - 5.9	50 - 7.2	51 - 8.4

Operate ONLY between 30 psi (min) and 70 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

MULTI-COMPOSITE™ 1/2" BASE ADJUSTABLE IMPACT SPRINKLERS

1/2" Heavy-Duty Adjustable Multi-Composite™ Impact



60/case
 X25ED-S

Standard Spoon Arm

- ◆ Full or part-circle, impact sprinkler
- ◆ 23° trajectory
- ◆ 1/2" male NPT base
- ◆ Wide range of brass nozzles
- ◆ **9/64" nozzle installed**
- ◆ 3/8-24 UNF nozzle threads

- ◆ Anodized aluminum drive arm with brass bushings
- ◆ Composite body is super-strong and impact resistant
- ◆ All-brass bearing
- ◆ Stainless-steel fulcrum pin, arm spring, and bearing spring
- ◆ Operates well at both high and low pressures
- ◆ Easily adjustable from 20° to 340° or full-circle
- ◆ Built-in vane straightener for improved performance
- ◆ Adjustable diffuser pin
- ◆ Made with domestic and foreign parts

AQUA BURST® Performance Chart

Normal Stream Height At 2.5' Above Nozzle at Normal Pressure

Radius - GPM

PSI	1/8" nozzle	9/64" nozzle	5/32" nozzle
35	36 - 2.46	36 - 3.41	39 - 4.30
40	37 - 2.68	37 - 3.69	40 - 4.58
45	38 - 2.71	37 - 3.97	43 - 4.89
50	39 - 2.96	39 - 4.09	45 - 5.16
55	39 - 3.18	40 - 4.17	46 - 5.31
60	39 - 3.29	41 - 4.25	47 - 5.60

1/2" Heavy-Duty Adjustable Multi-Composite™ Impact

Raven-Smart™
 Technology



60/case
 X25ED

Anti-Backsplash Arm

- ◆ Full or part-circle, impact sprinkler
- ◆ 23° trajectory
- ◆ 1/2" male NPT base
- ◆ Wide range of brass nozzles
- ◆ **9/64" nozzle installed**
- ◆ 3/8-24 UNF nozzle threads

- ◆ Anodized aluminum drive arm with brass bushings
- ◆ Composite body is super-strong and impact resistant
- ◆ All-brass bearing
- ◆ Stainless-steel fulcrum pin, arm spring, and bearing spring
- ◆ Operates well at both high and low pressures
- ◆ Easily adjustable from 20° to 340° or full-circle
- ◆ Built-in vane straightener for improved performance
- ◆ Adjustable diffuser pin
- ◆ Made with domestic and foreign parts

AQUA BURST® Performance Chart

Normal Stream Height At 2.5' Above Nozzle at Normal Pressure

Radius - GPM

PSI	1/8" nozzle	9/64" nozzle	5/32" nozzle
35	36 - 2.46	36 - 3.41	39 - 4.30
40	37 - 2.68	37 - 3.69	40 - 4.58
45	38 - 2.71	37 - 3.97	43 - 4.89
50	39 - 2.96	39 - 4.09	45 - 5.16
55	39 - 3.18	40 - 4.17	46 - 5.31
60	39 - 3.29	41 - 4.25	47 - 5.60

Operate ONLY between 35 psi (min) and 60 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

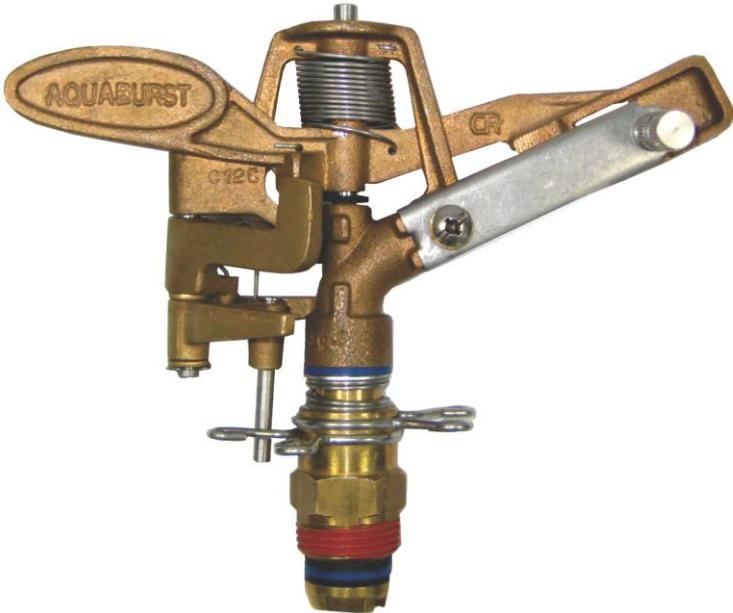
AQUA BURST



1-208-438-9223
Email: xcad@pmt.org
xcadusa.com

3/4" BRASS IMPACT SPRINKLERS

3/4" Adjustable Brass Impact Sprinkler



X35ED

Features

- Full or part-circle impact – 25° trajectory
- 3/4" male NPT base
- Single nozzle
- Fits 3/4" size nozzle - (NOZ75 series)

Sprinkler Head Does Not Include Nozzle

Advantages

- Cast brass drive arm with triple bridge construction
- Heavy-Duty all-brass trip assembly
- Cast brass body with cored water passage
- Stainless-steel fulcrum pin, arm spring and bearing spring for long-wearing reliability
- An all-purpose, single nozzle, full or part circle, intermediate to high pressure sprinkler
- Perfect companion for all intermediate sprinklers where arc of coverage must be adjustable
- Easy-to-use diffuser pin for precise application
- Works well with either straight bore or flow control nozzle
- Made with domestic and foreign parts
- Preassembled with XC-33 thread sealant**

20/case

X35ED

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Radius - GPM

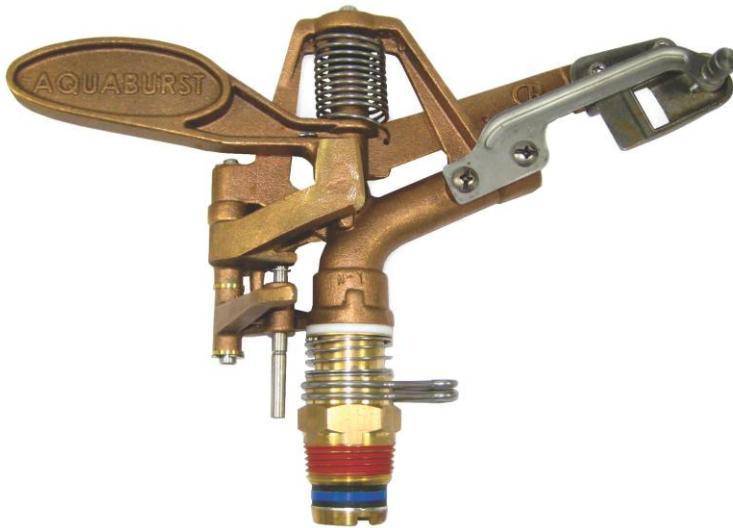
PSI	9/64" nozzle	5/32" nozzle	11/64" nozzle	3/16" nozzle
35	41 - 3.45	42 - 4.28	43 - 4.99	44 - 5.91
40	42 - 3.66	42 - 4.57	43 - 5.26	44 - 6.44
45	43 - 3.90	43 - 4.84	44 - 5.58	45 - 6.74
50	44 - 4.07	44 - 5.21	45 - 5.94	46 - 7.03
55	45 - 4.30	46 - 5.40	47 - 6.21	47 - 7.41
60	45 - 4.48	46 - 5.73	47 - 6.50	48 - 7.72
70	46 - 4.80	47 - 5.91	48 - 7.00	50 - 8.23

Operate **ONLY** between 35 psi (min) and 70 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

1" BRASS IMPACT SPRINKLERS

1" Adjustable Brass Impact Sprinkler



X65ED-S

Features

- Full or part-circle impact – 24° trajectory
- 1" male NPT base
- Single nozzle
- Fits 1" size nozzle - (NOZ1 series)

Sprinkler Head Does Not Include Nozzle

Advantages

- Features replaceable stainless steel spoon
- Chrome bearing standard
- Adjustable arc from 20° to 340° or full-circle coverage
- Solid brass construction
- Stainless-steel fulcrum pin, arm spring, and bearing spring for long-wearing reliability
- Easy-to-use diffuser pin for precise application
- Ideal for pasture, turf, wastewater treatment, auxiliary pivot end gun, and other large-scale applications where adjustable coverage is necessary
- Made with domestic and foreign parts
- **Preassembled with XC-33 thread sealant**

sold individually

X65ED-S (Adjustable)

X65F-S

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

Single Nozzle
 Radius - GPM

PSI	7/32" nozzle	1/4" nozzle	9/32" nozzle	5/16" nozzle	11/32" nozzle	3/8" nozzle	13/32" nozzle
35	52 - 8.1	54 - 10.8	58 - 13.5	59 - 16.5	62 - 19.5	64 - 22.7	67 - 26.2
40	54 - 8.7	56 - 11.5	61 - 14.5	62 - 17.8	65 - 21.3	68 - 24.5	70 - 28.2
45	56 - 9.2	58 - 12.2	63 - 15.2	64 - 18.8	67 - 22.2	71 - 25.9	73 - 30.1
50	59 - 9.9	61 - 12.9	64 - 16.0	67 - 19.9	69 - 23.4	72 - 27.2	75 - 32.0
55	61 - 10.2	63 - 13.4	66 - 16.9	69 - 20.8	72 - 24.5	74 - 28.4	77 - 34.1
60	62 - 10.7	65 - 14.2	67 - 17.6	71 - 21.9	73 - 25.6	76 - 29.5	79 - 36.0
65	64 - 11.2	66 - 14.8	69 - 18.4	73 - 22.8	75 - 26.5	79 - 30.8	82 - 38.2
70	65 - 11.8	67 - 15.4	70 - 19.2	74 - 23.7	77 - 27.7	81 - 32.1	85 - 40.3

Operate ONLY between 35 psi (min) and 70 psi (max)

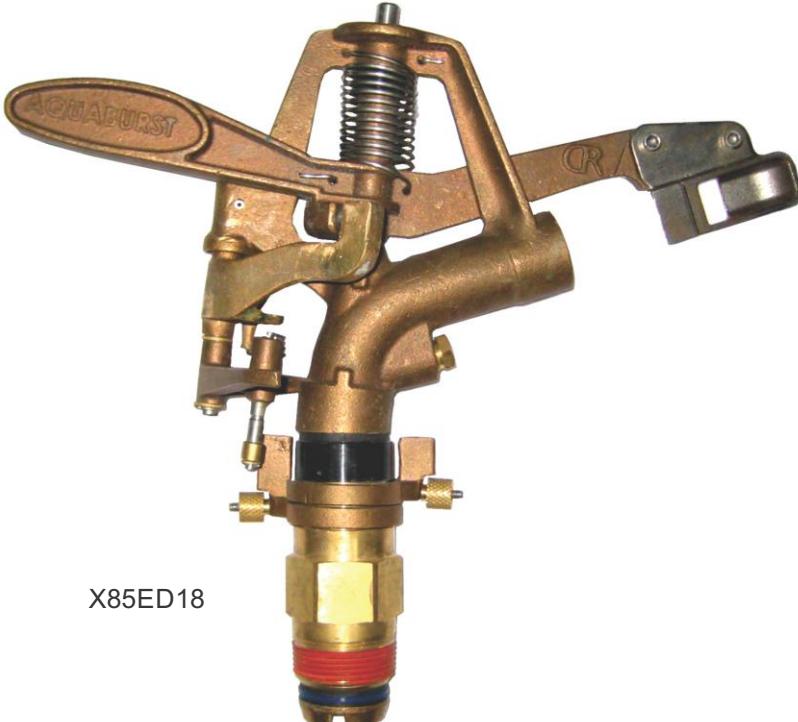
Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

AQUA BURST

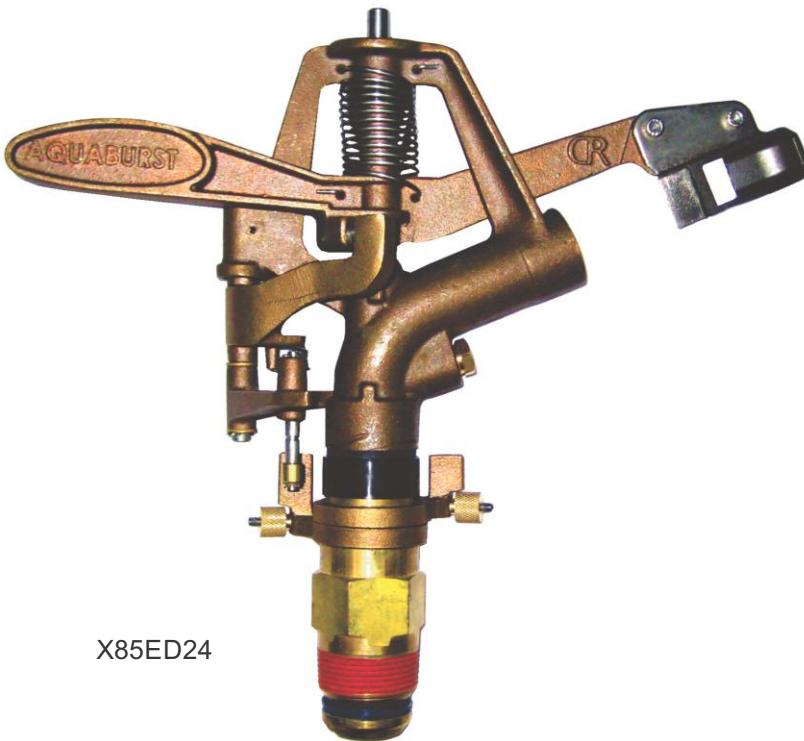


1-208-438-9223
Email: xcad@pmt.org
xcadusa.com

1 1/4" BRASS IMPACT SPRINKLERS



X85ED18



X85ED24

Features

- ♦ Full or part-circle impact
- ♦ 18° or 24° trajectory
- ♦ 1 1/4" male NPT base
- ♦ Dual nozzle - NOZ125 Series

Sprinkler Head Does Not Include Nozzle

Advantages

- ♦ Chrome bearing standard
- ♦ Heavy-duty stainless-steel and brass construction
- ♦ Easy to use adjustable locking brass trip collars
- ♦ Internal vane straightener standard
- ♦ Removable stainless-steel spoons standard
- ♦ Ideal for pasture, waste water treatment, pivot end gun, and other large scale applications where adjustable coverage is necessary
- ♦ Made with domestic and foreign parts
- ♦ **Preassembled with XC-33 thread sealant**

sold individually

X85ED18

X85ED24

X85F24 (full circle)

X85ED24 Dual Nozzle

AQUA BURST® Performance Chart

Normal Stream Height At 14' Above Nozzle at Normal Pressure

Single Straight Bore Nozzle w/Spreader

Radius - GPM

PSI	11/32" x 7/32"	3/8" x 7/32"	13/32" x 7/32"	7/16" x 7/32"	15/32" x 7/32"
35	66 - 20.1	67 - 30.7	70 - 34.6	72 - 38.5	75 - 42.5
40	68 - 20.8	69 - 32.0	73 - 37.0	76 - 41.3	78 - 45.7
45	70 - 22.1	72 - 34.9	76 - 39.4	78 - 43.9	81 - 48.6
50	72 - 23.3	73 - 37.2	78 - 41.6	80 - 46.2	83 - 51.4
55	74 - 24.2	76 - 38.5	80 - 42.8	82 - 48.6	85 - 54.1
60	76 - 25.0	78 - 40.8	82 - 46.1	85 - 51.0	87 - 56.6
65	77 - 26.2	80 - 42.7	84 - 48.0	87 - 53.3	88 - 59.3
70	80 - 27.2	82 - 44.5	85 - 49.9	89 - 55.2	90 - 61.5
75	81 - 27.9	84 - 46.0	87 - 51.7	90 - 57.3	92 - 63.7
80	83 - 29.1	85 - 47.8	88 - 53.9	91 - 59.4	94 - 66.1

Additional Performance Charts on pg 26

Operate ONLY between 35 psi (min) and 80 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.



1 1/4" BRASS IMPACT SPRINKLERS

AQUA BURST® Performance Charts

Normal Stream Height At 14' Above Nozzle at Normal Pressure
 Single Straight Bore Nozzle

Radius - GPM

X85ED18

PSI	11/32" nozzle	3/8" nozzle	13/32" nozzle	7/16" nozzle	15/32" nozzle	1/2" nozzle	17/32" nozzle	9/16" nozzle	5/8" nozzle	11/16" nozzle
35	59 - 19.8	61 - 23.5	64 - 26.5	66 - 30.9	69 - 34.1	69 - 39.3	72 - 43.3	72 - 49.3	72 - 59.8	73 - 72.2
40	61 - 21.1	63 - 24.9	66 - 28.3	69 - 33.2	71 - 37.3	73 - 41.1	75 - 46.4	77 - 52.8	77 - 64.0	78 - 77.8
45	63 - 22.6	66 - 26.6	69 - 30.4	71 - 34.6	73 - 39.7	75 - 43.7	78 - 49.3	79 - 56.6	83 - 69.9	83 - 83.0
50	66 - 23.8	68 - 27.5	71 - 32.6	73 - 36.9	76 - 42.2	78 - 47.0	80 - 51.5	82 - 59.7	85 - 71.8	86 - 87.3
55	68 - 24.9	70 - 29.3	73 - 33.8	75 - 38.8	78 - 44.4	80 - 49.1	82 - 54.1	85 - 62.6	89 - 76.1	91 - 91.9
60	70 - 25.6	72 - 30.1	75 - 34.9	77 - 41.0	80 - 46.8	82 - 51.9	85 - 57.4	87 - 65.3	91 - 79.0	94 - 96.4
65	72 - 26.7	74 - 31.3	77 - 36.2	79 - 42.8	81 - 48.3	84 - 54.0	87 - 60.2	89 - 67.8	93 - 83.2	96 - 100.9
70	73 - 27.6	76 - 32.5	78 - 37.6	81 - 44.6	83 - 50.5	86 - 56.2	89 - 62.3	91 - 71.3	95 - 86.4	98 - 104.8
75	74 - 28.8	77 - 33.6	80 - 38.9	83 - 45.9	85 - 52.2	87 - 58.4	90 - 64.5	93 - 73.9	97 - 88.8	100 - 108.1
80	76 - 29.7	79 - 34.6	81 - 41.2	84 - 47.6	87 - 54.8	89 - 60.2	92 - 66.9	95 - 76.8	98 - 93.0	101 - 112.2

AQUA BURST® Performance Charts

Normal Stream Height At 14' Above Nozzle at Normal Pressure
 Single Straight Bore Nozzle

Radius - GPM

X85ED24

PSI	11/32" nozzle	3/8" nozzle	13/32" nozzle	7/16" nozzle	15/32" nozzle	1/2" nozzle	17/32" nozzle	9/16" nozzle	5/8" nozzle	11/16" nozzle
35	66 - 19.5	67 - 23.3	70 - 26.6	72 - 30.7	75 - 34.5	77 - 39.0	78 - 43.1	78 - 49.3	78 - 60.2	78 - 72.3
40	68 - 20.8	69 - 24.8	73 - 28.2	76 - 33.0	78 - 37.4	81 - 41.4	82 - 46.3	84 - 52.6	85 - 64.4	86 - 78.3
45	70 - 22.1	72 - 26.4	76 - 30.6	78 - 34.8	81 - 39.6	83 - 44.1	86 - 49.0	88 - 56.0	91 - 69.1	92 - 83.3
50	72 - 23.3	73 - 27.6	78 - 31.5	80 - 37.2	83 - 42.0	86 - 47.2	88 - 51.2	91 - 59.3	93 - 72.4	96 - 87.5
55	74 - 24.2	76 - 29.2	80 - 33.1	82 - 38.9	85 - 44.3	88 - 49.4	90 - 54.3	94 - 62.1	97 - 76.5	98 - 92.7
60	76 - 25.0	78 - 30.0	82 - 34.5	85 - 40.8	87 - 46.5	90 - 52.1	93 - 57.6	95 - 64.4	100 - 79.4	101 - 96.8
65	77 - 26.2	80 - 31.2	84 - 36.1	87 - 42.6	88 - 48.4	92 - 54.2	94 - 60.3	98 - 68.0	101 - 83.5	104 - 101.3
70	80 - 27.2	82 - 32.6	85 - 38.0	89 - 44.0	90 - 50.3	94 - 56.4	96 - 62.1	100 - 71.5	102 - 87.1	106 - 105.4
75	81 - 27.9	84 - 33.5	87 - 39.1	90 - 45.5	92 - 52.0	95 - 58.5	98 - 64.7	101 - 73.3	104 - 89.9	108 - 108.8
80	83 - 29.1	85 - 34.8	88 - 41.0	91 - 47.6	94 - 54.2	96 - 60.3	100 - 67.3	103 - 76.2	106 - 93.5	109 - 112.4

Operate ONLY between 35 psi (min) and 80 psi (max)

Aqua Burst® impact sprinklers are only guaranteed to function optimally with nozzle sizes and pressure from each individual model's performance chart.

SUPER-DUTY SPRINKLER CARTS

AQUA BURST

Garden Sprinkler Cart

X-CART™



X-CART.5



X25ED-S



XCART-.5

Features

- ◆ 3/4" has stainless steel riser
- ◆ High-strength design for years of reliable service
- ◆ Solid construction tires. Never worry about flat tires!
- ◆ UHMW Wheel Bushings for smooth operation
- ◆ Ideal for Fire Suppression, Home and Ranch

X-CART.5	XCART-.5	Garden Cart with X25ED-S 1/2" sprinkler Garden Cart for 1/2" sprinkler, 3/4" stainless steel riser
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Two-year Warranty



TPSA34

T-Post Sprinkler Clamp

TPSA34

T-Post sprinkler clamp/adapter for 3/4" impact

SUPER-DUTY SPRINKLER CARTS

AQUA BURST

X-CART™

Super-Duty Sprinkler Carts

XCART-1 Ranchette Cart for 3/4"-1" sprinkler, 1" frame, 4.1x3.5x4 tires

XCART-1.5 Ranchers Cart for 1" to 1 1/4" sprinkler, 1 1/2" frame, 13x3.25"x8 tires

XCART-2 Field Gun Cart for 1 1/4" to 2" end gun, 2" frame, 16" tires



XCART-1



XCART-1.5



XCART-2

1-XCS-TIRE 4.10/3.50-4 PU Wheel, Black, 74MM Hub Length, 16MM Center Hub Hole

1.5-XCS-TIRE 13X3.25-8 PU Wheel, Black, 90MM Hub Length, 16MM Bushing

2-XCS-TIRE 16X6.5-8 PU Wheel, Black, 104MM Hub Length, 20MM Nylon Bushing

Features

- ◆ **100% Hot-Dip Galvanized, Inside and Out**
- ◆ High-strength double truss design for years of reliable service
- ◆ Solid construction tires. Never worry about flat tires!
- ◆ UHMW Wheel Bushings for smooth operation
- ◆ Ideal for Fire Suppression, Home and Ranch
- ◆ **To prevent carts from tipping over:**
Do Not Extend Sprinkler Height with Larger Nozzle Sizes

AQUA BURST

Super-Duty Sprinkler Carts

- ◆ Assembles easily in just minutes
- ◆ Features hot-dip galvanized high-strength double truss design with solid construction tires and UHMW wheel bushings

100% Hot-Dip Galvanized,

Inside and Out

Two-year Warranty

AQUA BURST



1-208-438-9223
Email: xcad@pmt.org
xcadusa.com

SPRINKLER NOZZLES

Brass 1/8" 3/8-24 UNF Straight-Bore Nozzle

Fits 1/2" Impact Sprinkler

Second Nozzle on 3/4" Dual Impact Sprinkler
Fits Rain Bird™ and Nelson™



NOZ5R-116	1/16"
NOZ5R-564	5/64"
NOZ5R-332	3/32"
NOZ5R-18	1/8"
NOZ5R-532	5/32"
NOZ5R-764	7/64"
NOZ5R-964	9/64"

Brass 1/8" NPT Straight-Bore Nozzle

Fits 1/2" Impact Sprinkler

Second Nozzle on 3/4" Dual Impact Sprinkler
1/8" NPT thread fits Weathertec™ and Storm™



NOZ5W-116	1/16"
NOZ5W-564	5/64"
NOZ5W-18	1/8"
NOZ5W-532	5/32"
NOZ5W-964	9/64"

Brass 1/4" NPT Straight-Bore Nozzle

Fits 3/4" Impact Sprinkler

1/4" NPT thread fits most 3/4" base brass impact sprinklers



NOZ75-764	7/64"
NOZ75-18	1/8"
NOZ75-964	9/64"
NOZ75-532	5/32"
NOZ75-1164	11/64"
NOZ75-1364	13/64"
NOZ75-1564	15/64"
NOZ75-316	3/16"
NOZ75-732	7/32"
NOZ75-14	1/4"

Brass Straight-Bore Nozzle

Fits 1" Impact Sprinkler

Fits most 1" base brass impact sprinklers



NOZ1-732	7/32"
NOZ1-1564	15/64"
NOZ1-14	1/4"
NOZ1-932	9/32"
NOZ1-516	5/16"
NOZ1-1132	11/32"
NOZ1-38	3/8"

Brass Straight-Bore Nozzle

Fits 1 1/4" Impact Sprinkler

Fits AquaBurst®, Nelson™ and RainBird™



NOZ125-1132	11/32"	NOZ125-12	1/2"
NOZ125-38	3/8"	NOZ125-1732	17/32"
NOZ125-1332	13/32"	NOZ125-916	9/16"
NOZ125-716	7/16"	NOZ125-58	5/8"
NOZ125-1532	15/32"	NOZ125-1116	11/16"

Plug Nozzle



NOZ-PLG18	Brass 1/8" NPT
NOZ-PLG25	Brass 1/4" NPT
NOZ-PLPLG18	Plastic 1/8" NPT
NOZ5RPLG	Brass 1/8" 3/8-24 UNF

END GUN NOZZLES



X100-42-5

X100-42-.4	26 - 45 gpm
X100-42-.45	35 - 46 gpm
X100-42-.5	42 - 67 gpm
X100-42-.55	52 - 83 gpm
X100-42-.6	61 - 99 gpm
X100-42-.65	71 - 115 gpm
X100-42-.7	84 - 133 gpm
X100-42-.75	95 - 150 gpm
X100-42-.8	108 - 172 gpm
X100-42-.85	123 - 191 gpm
X100-42-.9	139 - 217 gpm
X100-42-.95	154 - 242 gpm
X100-42-1	180 - 265 gpm



X75-NOZSET



X75NOZ

X75-NOZSET	8 Piece Nozzle Set for X75
X75NOZ-.3	0.3 Nozzle
X75NOZ-.35	0.35 Nozzle
X75NOZ-.4	0.4 Nozzle
X75NOZ-.45	0.45 Nozzle
X75NOZ-.5	0.5 Nozzle
X75NOZ-.55	0.55 Nozzle
X75NOZ-.6	0.6 Nozzle
X75NOZ-.65	0.65 Nozzle



SR-100

SR100NOZ-.4	0.4
SR100NOZ-.45	0.45
SR100NOZ-.5	0.5
SR100NOZ-.55	0.55
SR100NOZ-.6	0.6
SR100NOZ-.65	0.65
SR100NOZ-.7	0.7
SR100NOZ-.75	0.75
SR100NOZ-.8	0.8
SR100NOZ-.85	0.85
SR100NOZ-.9	0.9
SR100NOZ-.95	0.95
SR100NOZ-1	1.0



SPRINKLER TOOLS AND REPLACEMENT PARTS

Sprinkler Bearing Assembly

Bearing assembly includes spindle, housing, spring and washers



HF30BRNG



HF20BRNG



AL30BRNG

AL30BRNG

Fits Aqua Burst® 3/4" AL30 Series Impact Sprinklers

HF30BRNG

Fits Aqua Burst®, Nelson™ and Rain Bird™ 3/4" Full-Circle Impact Sprinklers

HF20BRNG

Fits Aqua Burst®, Nelson™ and Rain Bird™ 1/2" Full-Circle Impact Sprinklers

X35BRNG

Fits Aqua Burst® X35ED Impact Sprinklers

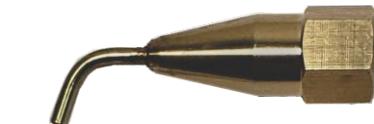
X65BRNG
(Chrome Plated Spindle)

Fits Aqua Burst® and Rain Bird™ 1" Full-Circle Impact Sprinklers

X85BRNG
(Chrome Plated Spindle)

Fits Aqua Burst® and Rain Bird™ 1 1/4" Full-Circle Impact Sprinklers

For wear washers and other AquaBurst® sprinkler parts
contact **XCAD USA®** for price and availability



PITOT25

PITOT25

Brass 1/4" pitot tube

Pitot Tube

Standard

Heavy-Duty

AQUA BURST

Water Master Hydro Bearing

Replacement Bearing for Water Master



HYB1



HYB1-C

HYB1

1" NPT Base - Brass

HYB1-C

1" NPT Base - Chrome Plate

SELF LEVELING ELBOW

**Built To A
Higher Standard**



LEV75

AQUA BURST 

**3/4" Heavy-Duty
Wheel Line Leveler**

LEV75

For 3/4" Brass Impact
16/Box

Features

- ◆ High-quality bearing washers
- ◆ Stainless-steel drop tube
- ◆ Cast iron weight with smooth water passage
- ◆ Powder coated finish

Universal Leveler Repair Components

Leveler Rebuild Kit

		List
LEV01	Stainless-Steel Bearing Spring	\$ 1.24
LEV02	Neoprene Washer	\$ 0.44
LEV03	Teflon Washer	\$ 0.44
LEV04	Brass Spindle	\$ 9.95
LEV05	O-Ring	\$ 0.31
LEV06	Retaining Washer	\$ 0.75
LEV07	Snap Ring	\$ 1.24

LEVRK **Rebuilds 20 levelers**

120 piece kit contains:

20 - Lev02	Neoprene Washers
40 - Lev03	Teflon Washers
20 - Lev05	O-rings
20 - Lev06	Retaining Washers
20 - Lev07	Snap Rings

AQUA BURST



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SPRINKLER ACCESSORIES

AQUA BURST® YARD ART



Squirtle Yard Sprinkler

Can be strung in series

SQUIRTLE.75

3/4" Hose Thread

SQUIRTLE.75



ST50B



ST75H

Sprinkler Stand

ST50B	1/2" Butterfly
ST50H	1/2" Heart
ST75B	3/4" Butterfly
ST75H	3/4" Heart

Key-Lock Coupler and Key



KLC1-C



KLC1-K



KLC75-C



KLC75-K

KLC75-C	3/4" NPT Threads
KLC75-K	3/4" NPT Threads
KLC1-C	1" NPT Threads
KLC1-K	1" NPT Threads

TUFF-TEE™ AND ACCESSORIES



TUFF-TEE3

*Tuff-Tee™ Universal Locking Couplers
 are only available in Idaho and Washington states
 through XCAD distributors: WISH or BA Fischer.*

*See JM Eagle for pipe and fittings in all states.***

Tuff-Tee™

**Universal PVC Key Lock Coupler
 Patented**

Features

- ◆ Can be used with Impact Sprinkler with male aluminum adapter
- ◆ Can be used with both PVC and aluminum risers
- ◆ Leak-proof o-ring operation
- ◆ Male and female riser attachments
- ◆ Easy-Pull™ spline key
- ◆ Made with corrosion resistant PVC
- ◆ Can be converted and used in connection with aluminum solid set pipe
- ◆ For pipe and fitting contact JM Eagle**

TUFF-TEE3

3" PVC Tuff-Tee for Solid Set

Tuff-Tee™ Accessories

TT-PULLKEY	Easy-Pull Key
TT-ORING	3" Tuff Tee O-Ring (Green)
TT-RADOR	Riser Adapter O-Ring (Blue)
TT-AAOR	Acme Adapter O-Ring (Orange)



Easy-Pull™
 TT-PULLKEY



TT-ORING



TT-RADOR



TT-AAOR

Contact JM Eagle for pipe and fittings:
 JM Eagle
 5200 W Century Blvd
 Los Angeles, CA 90045
 (310) 693-8200

TUFF-TEE™ ACCESSORIES



TT-ALPLUG

TT-NPTRAD
Male Aluminum Adapter

TT-SWFA



TT-SWMA



TT-MPEND



TT-MWEND

TT-ALPLUG T-T Aluminum End Plug

TT-NPTRAD T-T Male Aluminum Riser Adapter

TT-SWFA T-T 3" Female Adapter
Solvent WeldTT-SWMA T-T 3" Male Adapter
Solvent Weld

TT-MPEND Aluminum Male Press-On End

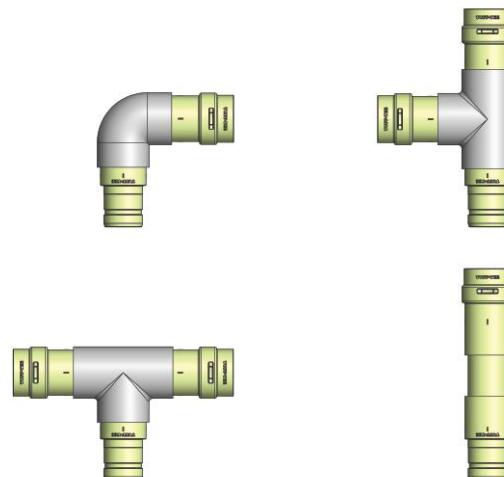
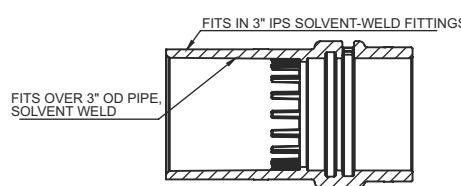
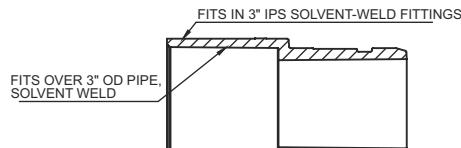
TT-MWEND Aluminum Male Weld-On End

TT-AASW 3/4" Acme Adapter
Solvent Weld

TT-AANPT 3/4" Acme Adapter FNPT

TT-SWRAD T-T PVC Riser Adapter
Solvent Weld

TT-PVCRAD T-T PVC Riser Adapter FNPT



TT-AASW

TT-AANPT



TT-SWRAD

TT-PVCRAD

PIVOT ACCESSORIES

BLACK MAX™

Torque-Tough™

BX™ COUPLER

Universal Heavy-Duty Drive Line Coupler
 With In-Flex™ Technology

Raven Smart™

Technology of Modern Design



PDLTTBM
 (12 per box)

Black Max™ driveline couplers
 are torque-tough for today's extreme
 field conditions.

Try one today and give it
 your own torque-tough test.

Features

- Our die-cast anodized aluminum body coupled with an In-Flex™ Disc adds the strength and flexibility that is ideal for today's mechanized irrigation systems with large tires, 4x4 corner machines and corner-steering gear boxes
- In-Flex™ Thermoplastic Disc is 30% more flexible than the competitive brands
- In-Flex™ technology keeps gear boxes and centerdrives running longer
- Pre-Assembled for easy one-size wrench installation
- Universal Design – Fits 3/4", 7/8" and 1" square shafts
- Fits under most driveline covers for maximum safety

PDLTTBM
 Fits 3/4", 7/8" and 1" square shaft

PDLTTBM-SL
 Replacement Shaft Lock

PDLDISC-BM
 Replacement In-Flex™ Disc

PDLCVR
 Driveline Coupler Cover

PDLCLAMP
 Stainless Steel Clamp for PDLCVR



PDLCVR



PDLCLAMP

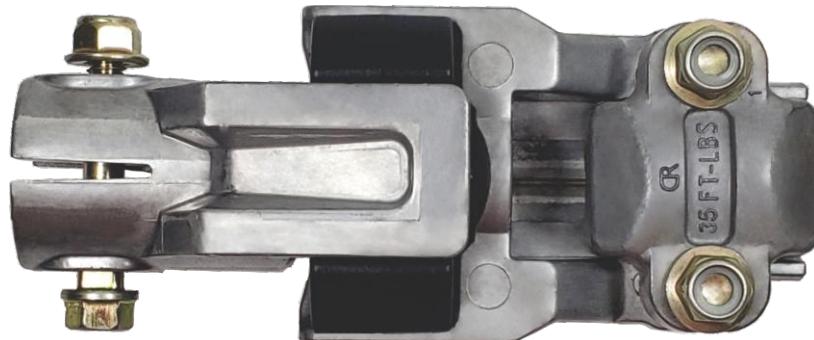
PIVOT ACCESSORIES

Torque-Tough™

SC3™ COUPLER

Universal Pivot Drive Line Coupler
 Patent Pending

Raven-Smart™
 Technology



PDLSC3
 (14 per box)

PDLSC3 Universal Pivot Drive Line Coupler

Features

- ◆ EZ Installation - Fits all brands of center pivots and laterals with 1" round and 3/4" and 7/8" square shafts
 - ◆ Shock reducing, UV-protected, thermoplastic polyurethane drive puck
 - ◆ Comes preassembled with high strength, square shaft saddle
- ◆ EZ Installation with one wrench tightening 3 bolts for complete assembly
- ◆ High-quality degassed diecast aluminum design that fits under most drive line safety covers

PIVOT ACCESSORIES

Torque-Tough™

TORKZILLA™
Universal Pivot Drive Line Coupler

Raven-Smart™
Technology



TKZILLA
(14 per box)

TKZILLA

Universal 5-Bolt Pivot Drive Line Coupler

Features

- ♦ EZ Installation - Easiest split coupler to install; uses 5 3/8" bolt and locking flange bolts.
 - ♦ Need only one 9/16" wrench for complete installation.
- ♦ Fits all brands of center pivots and laterals with 1" round 7/8" square shafts
 - ♦ Shock reducing, UV-protected, thermoplastic polyurethane drive puck
- ♦ High-quality diecast aluminum design that fits under most drive line safety covers

PIVOT ACCESSORIES



PDLEXP-L



Small Disc Fits Under Most Drive Line Shields

PDLEXP-S



PDLEND-L



PDLEND-S

X-Spandable™ Expandable Drive Line

(With Super Flex Disc)

Leave the Rubber on the Road

PDLEXP-L	Universal w/Large (4 1/2") Disc
PDLEXP-S	Universal w/Small (3 5/8") Disc
PDLEND-L	Replacement Shaft End (Large disc)
PDLEND-S	Replacement Shaft End (Small disc)

Features

- X-Spandable™ drive line systems with Super Flex disc
- Strongest and most versatile in the industry
- Heavy-duty telescoping design
- Super Flex Discs outperform rubber
- Quickly attaches with just two bolts
- Replacement Super Flex Discs available for competitive brands
- Small disc fits under most pivot manufacturers' driveline covers
- Zinc-plated finish

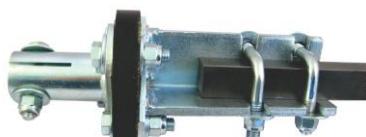


PDLDISC-L



PDLDISC-S

Replacement Super Flex Disc

PDLDISC-L Large Replacement Super Flex Disc
(4 1/2")PDLDISC-S Small Replacement Super Flex Disc
(3 5/8")

PDLVBLT

Heavy-Duty V-Bolt Universal U-Joint

Quickly Attaches to Both 3/4" and 7/8" Shafts
(With Super Flex Disc)PDLVBLT Universal 7/8" or 3/4"
8/Box

PVTRNG

Weld-In Pivot Rim Repair Ring

3/8" ID Thickness, 5/16" OD Thickness, 1" Step

PVTRNG

Universal Style

PIVOT ACCESSORIES

Highest Specifications In The Industry

Standard Stainless-Steel Impeller



BP2HP-X



BP5HP-W

Assembled in the USA

2HP Parts Interchangeable With
Berkley Model #C2MPS Booster Pumps

All Pumps are 50-60hz

(See Pump Curve, Page 40)



BPM2HP-X

2 hp Specifications

X Model	#N56C20P36H30FA-C
X Frame	56J
Phase	3
Insul. Class	B5
Serv. Factor	1.5
Hertz	50/60
RPM	2890/3450
Volts	380/460
Bearings	6203/6205



BPM5HP-W

5 hp Specifications

WEG Model	#00536ET3E184JM-W22
WEG Frame	182/4JM
Phase	3
Insul. Class	F
Serv. Factor	1.25
Hertz	50/60
RPM	2850/3485
Volts	380/230 or 460
Bearings	6307/6206

2-HP Pivot Booster Pump

2 1/2" suction x 2" discharge

BP2HP-X	XCAD Motor 2-HP, 130 GPM w/Stainless Impeller
BP2HP-X-FL	XCAD Motor 2-HP, 130 GPM Flanged Volute, w/Stainless Impeller
BP2HPXWOVC	XCAD Motor 2-HP, 130 GPM w/Stainless Impeller, Less Volute Case

5-HP Pivot Booster Pump

2 1/2" suction x 2" discharge

BP5HP-W	WEG Motor 5-HP, 6 GPM
BP5HPWWOVC	WEG Motor 5-HP, 6 GPM Impeller, Less Volute Case

Pivot Booster Pump Components

BPVC	Volute Case
BPVCFL	Flanged Volute Case
BPMBKT	Motor Bracket
BPIMP-SS	Stainless-Steel Impeller
BPMGSKT-P	Polyethelene Motor Gasket
BPCGSKT	Paper Motor Case Gasket
BPIMPSPC-X	Impeller Spacer
BPIMPSPC3	Impeller Spacer (Bluffton)
BPSEAL	Shaft Seal
BP5VC	Volute Case
BP5MBKT	Motor Bracket
BP5IMP	Impeller
BP5GSKT	Motor Gasket
BP5STUD	Stud
BP5SEAL	Shaft Seal
BPJNUT	Left Hand Jam Nut

Irrigation Booster Pump Motors

2-HP (TEFC)

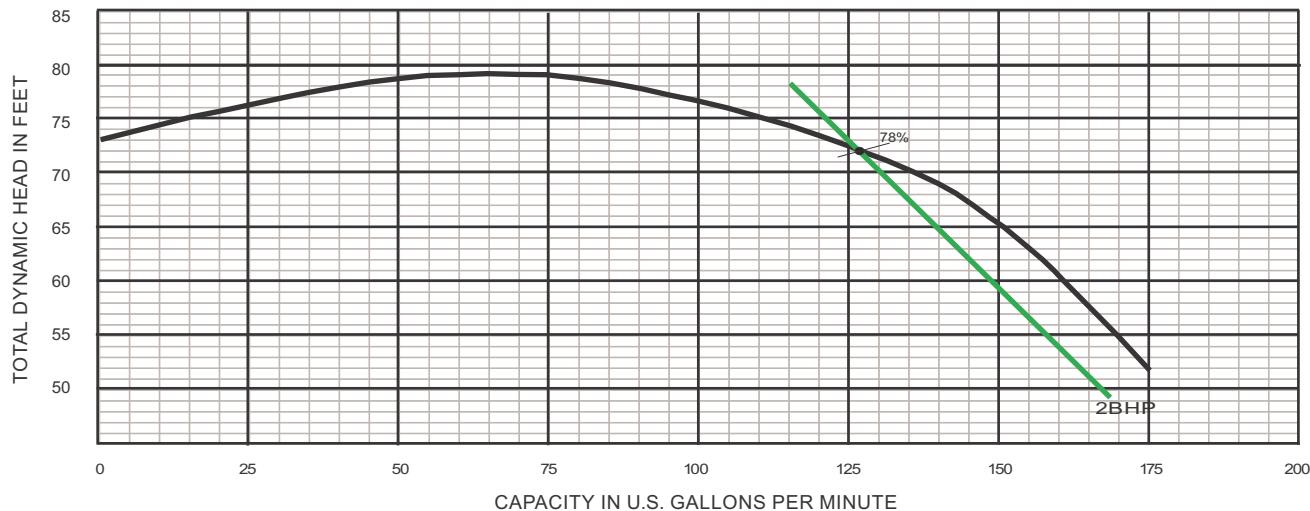
Thermally Protected

BPM2HP-X	XCAD 2-HP, 3-phase
BPM5HP-W	WEG 5-HP, 3-phase

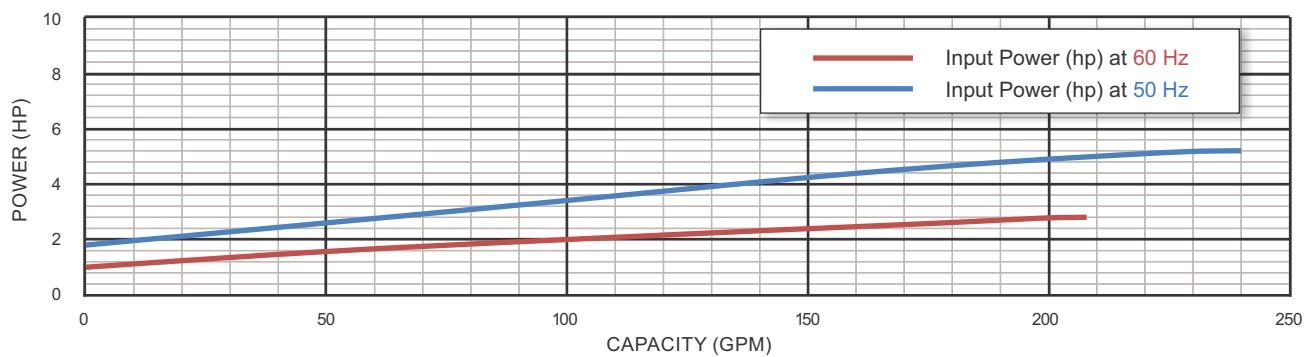
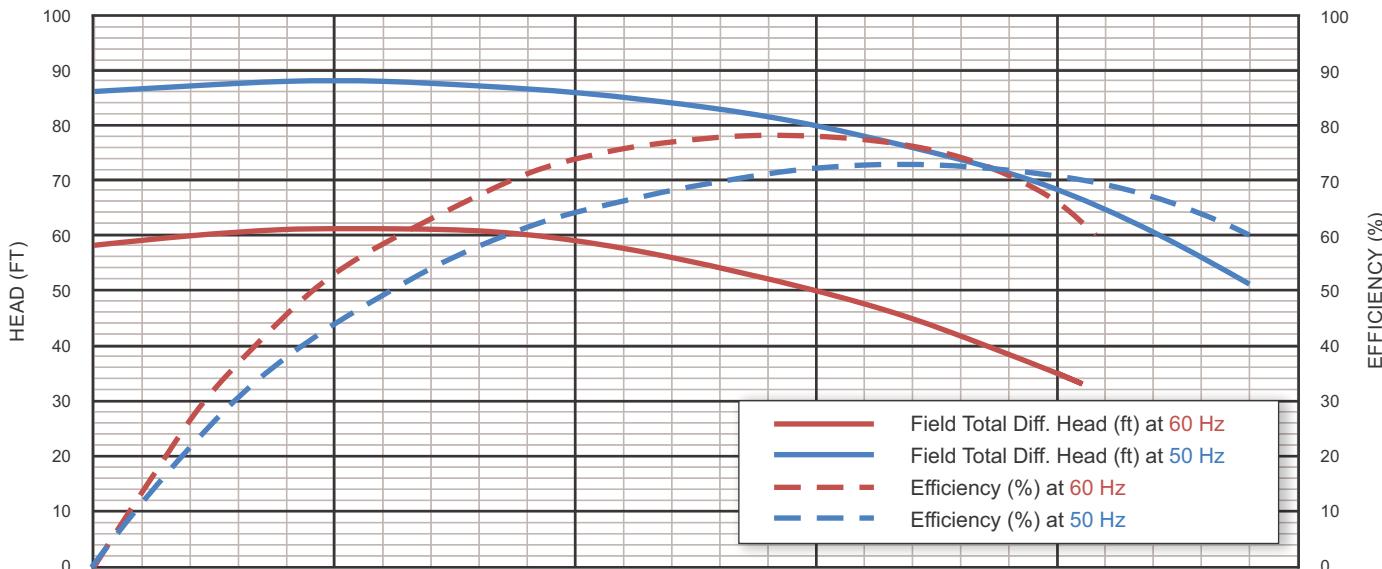
BOOSTER PUMP CURVES - PRESSURE LOSS DATA

2-HP Booster Pump - BPM2HP

Nominal RPM: 3600
 Based on Fresh Water @ 80°F
 Maximum Working Pressure: 100 psi



5-HP Booster Pump - BPM5HP



RISER VALVE PRODUCTS



VOE4X3-W

Aluminum Valve Opening Elbows

VOE4X3-W 4" x 3" Aluminum VOE w/ Wheel

VOE4X4-W 4" x 4" Aluminum VOE w/ Wheel

VOE4X3X3-W 4" x 3" x 3" Aluminum VOE w/ Wheel

VOE4X4X4-W 4" x 4" x 4" Aluminum VOE w/ Wheel



VOE4X4-W



VOE4X4-W
Back View

Handle Sold Separately

VOEHDL58 - Pg. 46



VOE4X4X4-W

Features

- ◆ 3/4" Auxiliary outlet
- ◆ Large latch pad reduces blowouts
- ◆ Easy serviceability with bolt-on wheel
- ◆ Large wheel for easy opening & closing
- ◆ Replaceable brass wear bushing
- ◆ Brass connection clutch
- ◆ 5/8" Stainless steel shafts
- ◆ 5/8" chevron tire
- ◆ Rubber grommet

RISER VALVE PRODUCTS



VOEST4X3



VOEST4X4

Steel Valve Opening Elbows

VOEST4X3 4" x 3" Galvanized Steel VOE

VOEST4X4 4" x 4" Galvanized Steel VOE

VOEST4X3X3 4" x 3" x 3" Galvanized Steel VOE

VOEST4X4X4 4" x 4" x 4" Galvanized Steel VOE



VOEST4X3X3



VOEST4X4X4

Features

- ◆ 3/4" Auxiliary outlet
- ◆ Large latch pad reduces blowouts
- ◆ Easy serviceability with bolt-on handle
- ◆ Replaceable brass wear bushing
- ◆ Brass connection clutch
- ◆ 5/8" Stainless steel shafts
- ◆ 5/8" chevron tire
- ◆ Rubber grommet

RISER VALVE PRODUCTS



VOEH4X3



VOEH4X4

High-Flow Valve Opening Elbows

VOEH4X3 4" x 3" High Flow Aluminum VOE

VOEH4X3-W 4" x 3" High Flow Aluminum VOE w/ Wheel

VOEH4X4 4" x 4" High Flow Aluminum VOE

VOEH4X4-W 4" x 4" High Flow Aluminum VOE w/ Wheel

VOEH4X3X3 4" x 3" x 3" High Flow Aluminum VOE

VOEH4X3X3-W 4" x 3" x 3" High Flow Aluminum VOE w/ Wheel

VOEH4X4X4 4" x 4" x 4" High Flow Aluminum VOE

VOEH4X4X4-W 4" x 4" x 4" High Flow Aluminum VOE w/ Wheel



VOEH4X3X3



VOEH4X4X4

Features

- ◆ High Flow Design
- ◆ 3/4" Auxiliary outlet
- ◆ Large latch pad reduces blowouts
- ◆ Easy serviceability with bolt-on wheel
- ◆ Brass wear-bushing with packing gland tire
- ◆ Brass connection clutch
- ◆ 5/8" Stainless steel shafts
- ◆ Rubber grommet

RISER VALVE PRODUCTS

Clamps



4RLC	4" Ring Lock Clamp
WHLC	5" Wheel Line Clamp Heavy Duty Western Style
6RLC	6" Ring Lock Clamp Fits Wade Round Wheel Line Coupler and Most 6" Ring Lock Couplers
8RLC	8" Ring Lock Clamp
10RLC	10" Ring Lock Clamp Not Pictured
12RLC	12" Ring Lock Clamp Not Pictured

VALVE OPENING ELBOW REPLACEMENT PARTS

VOE Replacement Components

- ◆ High-quality universal replacement parts
- ◆ Fit most brands
- ◆ Both 5/8" and 3/4" components



4RLVOE



VOEHDLS34



VOEHDLS58

4RLVOE 4" VOE Clamp

VOEHDLS34 3/4" Aluminum Handle



VOETTCLT



VOEHDLS34



VOEHDLS58

VOEHDLS34 3/4" Steel Handle

VOEHDLS58 5/8" Zinc-Plated Shaft



VOEWHL58



VOESEAL34



VOESEAL58

VOESEAL34 3/4" Chevron Seal

VOESEAL58 5/8" Chevron Seal



VOECLTGR34



VOECLTGR58

VOECLTGR34 5/8" Steel Handle

VOECLTGR58 5/8" Zinc-Plated Shaft



VOESHFT34



VOERCLT34



VOERCLT58

VOERCLT34 5/8" Brass Connection Clutch

VOERCLT58 5/8" Brass Connection Clutch



VOESHFT58



VOESHFT58-SS

VOESHFT58 5/8" Stem Green-style

VOESHFT58-SS 5/8" Stainless-Steel Shaft



VOECLTGS34



VOECLTGS58

VOECLTGS34 3/4" Stem Green-style

VOECLTGS58 5/8" Stem Green-style



VOETTCLT34



VOETTCLT58

VOETTCLT34 3/4" Stem w/ Taco Style Clutch

VOETTCLT58 5/8" Stem w/ Taco Style Clutch

RISER VALVE PRODUCTS

EZ-Latch™ Fittings



MHLHE3



FHLHE3



MHLHE4



FHLHE4

Hook & Latch Hose Ends with Round-Back Gasket

FHLHE3 3" Female Hook & Latch Hose End

MHLHE3 3" Male Hook & Latch Hose End

FHLHE4 4" Female Hook & Latch Hose End

MHLHE4 4" Male Hook & Latch Hose End



SEA4-45



SRA3-ENDT

SEA3-22 3" Steel 22° Elbow Assembly

SEA3-45 3" Steel 45° Elbow Assembly

SEA3-90 3" Steel 90° Elbow Assembly

SEA4-22 4" Steel 22° Elbow Assembly

SEA4-45 4" Steel 45° Elbow Assembly

SEA4-90 4" Steel 90° Elbow Assembly



SEA4-90



SRA4-RUNT

SRA3-ENDT 3" Steel End (Branch) Tee Receiver Assembly

SRA3-RUNT 3" Steel Run (Line) Tee Receiver Assembly

SRA4-ENDT 4" Steel End (Branch) Tee Receiver Assembly

SRA4-RUNT 4" Steel Run (Line) Tee Receiver Assembly

RISER VALVE PRODUCTS



EZ-Latch™ Fittings

Aluminum Hook & Latch Pipe Fittings

with Square-Style Gasket



ARA3-ENDT



ARA3-RUNT

AEA3-90 3" Aluminum 90° Elbow Assembly
ARA3-ENDT 3" Aluminum End (Branch) Tee Receiver Assembly
ARA3-RUNT 3" Aluminum Run (Line) Tee Receiver Assembly



BL3-ASSY



HLLP3

3" Hand Line Fittings



HLPE3



HLWO3

BL3-ASSY 3" Universal Band & Latch Assembly
HLLP3 3" Universal Hook & Latch Pad (Weld-On)
HLPE3 3" Universal Hook & Latch Female Press End (Gasket Not Included)
HLWO3 3" Universal Hook & Latch Weld-On End (Gasket Not Included)



RCG4



RWG4

Gaskets

RCG3 3" Round Back Style
RCG4 4" Round Back Style
RWG3 3" XCAD Square Style
RWG4 4" XCAD Square Style

RISER VALVE PRODUCTS



ALVSC43



ALVSC44



ALVSBRSP



ALVSBRSP-L



ALVSBRSP-R



ALVSBRSP-H

Threaded Aluminum Riser Valve Stubs

ALVX43	4" X 3" Stainless-Steel Stem
ALVX44	4" X 4" Stainless-Steel Stem
ALVSC43	4" x 3" Plated Stem
ALVSC44	4" x 4" Plated Stem
ALVSBRSP	Replacement Brass Spider (Wade-Style)
ALVSBRSP-H	Weld-in Replacement Spider-Heavy
ALVSBRSP-L	Weld-in Replacement Spider-Standard
ALVSBRSP-R	Weld-in Removable Spider

Features

- Heavy-duty cast aluminum body
- Cast-in-place, threaded brass insert
- Available with either plated zinc or stainless-steel stems
- Universal rubber cap

UNVSPS
PlatedUNVSTS
Stainless SteelUNVSPS8
PlatedUNVPS8TPI
PlatedUNVSPS9
Plated

Brass

UNVSPS 6 3/4" x 5/8" 7TPI Plated

UNVSPS8 8" Plated Stem 7TPI

UNVSPS9 9" Plated Stem 7TPI

UNVSTS 6 3/4" x 5/8" 7TPI **Stainless**UNVSTS8 8" **Stainless** Stem 7TPIUNVSTS9 9" **Stainless** Stem 7TPI

UNVRRBS 5" x 5/8" 8 TPI Brass (Redi Rain)

UNVPS8TPI 6 3/4" X 5/8" 8 TPI Plated
(Shur Rain/Felco)

Riser Valve Stems

 SUPERIOR THREAD QUALITY
HEAVY-DUTY PLATING

Rubber Valve Stem Caps



UNVSRC

UNVSRC

4" Universal Cap

RISER VALVE PRODUCTS



EPS3



EPS4



EP3-X



EP3OUT-75



EP3OUT-1



EP3OUT-1.5



EP3OUT-2



HOOK3



HOOK-S

3" Hand Line Fittings

EPS3	3" Universal Steel Hook & Latch End Plug
EPS4	4" Universal Steel Hook & Latch End Plug
EP3-X	3" Universal Aluminum Hook & Latch End Plug
EP3OUT-.75	3" End Plug with 3/4" NPT Outlet and Long Hook
EP3OUT-1	3" End Plug with 1" NPT Outlet and Long Hook
EP3OUT-1.5	3" End Plug with 1 1/2" NPT Outlet and Long Hook
EP3OUT-2	3" Steel End Plug with 2" Outlet and Long Hook
HOOK3	Hook Only for 3" Lake Type B&L Assy
HKSPR3	Spring Only for 3" B&L Assy (Not shown)
HKBN3	Bolt and Nut Only for 3" B&L Assy (Not Shown)
EPFER	Ferrule for EPS3 Steel End Plug (Not Shown)
HOOK-S	Hook Only for Pierce Type H&L Assy



CRO3

Center Riser Outlet

CRO3	3" Center Riser Outlet Assembly (12 per box)
CRO3FT	Replacement Foot for CRO3
CRO3GSKT	Replacement Gasket for CRO3
CRO3TOP	Replacement Top for CRO3



CRO3

PRESS SLEEVES AND PRESS BANDS

EZ-Press™

Galvanized Long-Style Steel Press Sleeves



PRSL3

PRSL4

PRSL5

PRSL3 3" Press Sleeve

PRSL4 4" Press Sleeve

PRSL5 5" Press Sleeve



APB5

APB4

APB3

EZ-Press™

Aluminum Press Bands

APB3 3" Aluminum Press Band

APB4 4" Aluminum Press Band

APB5 5" Aluminum Press Band

WHEEL LINE COUPLERS

Heat-Treated Aluminum Wheel Line Torque Couplers



RWTCB5 RWTC5

RWTC4	4" Round Male
RWTB4	4" Round Female
RWTC5	5" Round Male
RWTB5	5" Round Female



SWTCB5 SWTC5

SWTC4	4" Square Male
SWTCB4	4" Square Female
SWTC5	5" Square Male
SWTCB5	5" Square Female
SWC4	4" Square Clamp
SWC5	5" Square Clamp



SWC5

WSTC4	4" Western Round Female
WSTCB4	4" Western Round Male
WSTC5	5" Western Round Female
WSTCB5	5" Western Round Male

Wheel Line Torque Couplers Do Not Include Gaskets or Drains



WSTCB5 WSTC5

Features

- All **XCAD USA®** aluminum wheel line couplers are heat-treated for maximum strength
- RW and SW couplers are universal with Wade Rain™ and Poweroll™ couplers
- High performance casting and machining
- WS coupler are universal with Western and Gheen



TSB3

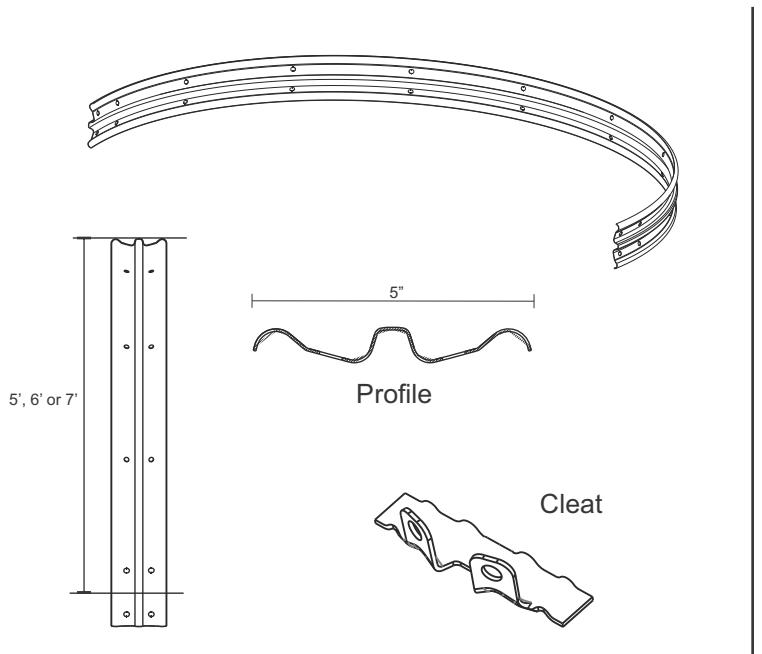
TSB3 Slide Band (over center clamp)

Telescoping Slide Band

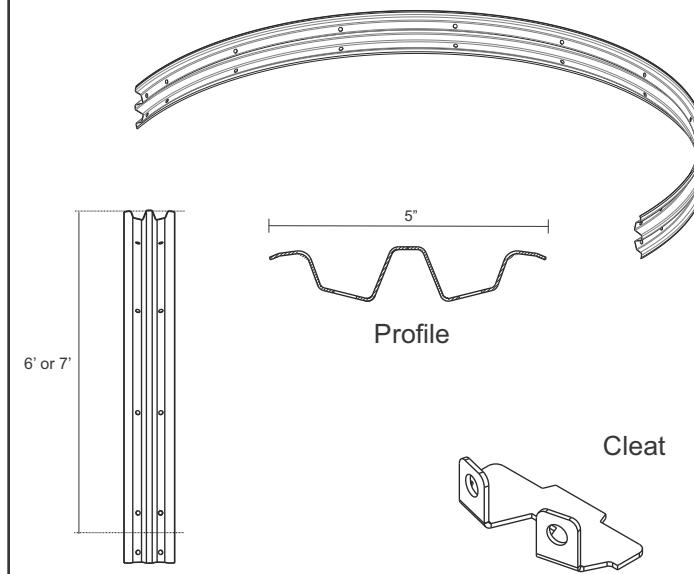
WHEEL LINE WHEELS

Rolled in the USA

WESTERN, AM, GHEEN STYLE



WADE STYLE



Wheel Half Rim

2 ea required per wheel

WLWR-WST58	58" (5') Western, AM, Gheen Style
WLWR-WST64	64" (6') Western, AM, Gheen Style
WLWR-WST76	76" (7') Western, AM, Gheen Style

Wheel Half Rim

2 ea required per wheel

WLWR-WD58	58" (5') Wade Style
WLWR-WD64	64" (6') Wade Style
WLWR-WD76	76" (7') Wade Style

Wheel Spoke

Wheel Size	Hub Size	Spoke Length	Spokes per wheel
WLWS-26P	58"	5"	26 7/8"
WLWS-27P	58"	4"	27 1/4"
WLWS-30P	64"	4", 5"	30 1/2"
WLWS-37P	76"	4", 5"	37"

Wheel Spoke

Wheel Size	Hub Size	Spoke Length	Spokes per wheel
WLWS-26P	58"	5"	26 7/8"
WLWS-27P	58"	4"	27 1/4"
WLWS-30P	64"	4", 5"	30 1/2"
WLWS-37P	76"	4", 5"	37"

1/2 Wheel Hub

4 per wheel

WLWH-WST-4	4"
WLWH-WST-5	5"

1/2 Wheel Hub

4 per wheel

WLWH-WD-4	4"
WLWH-WD-5	5"

Cleat

WLC-WST	Western, AM, Gheen Style
---------	--------------------------

Cleat

WLC-WD	Wade Style
--------	------------

WHEEL LINE WHEELS

Complete Wheel Line Wheel: Less Nuts and Bolts

Hardware Not Included

EXTRA Discount of 10% for complete wheel order over 300 pcs

Western Style

Quantities per Wheel				
	1/2 Rim	Spokes	Hubs	Cleats
WLW-WST-58-4	58" (5')	2	16	4
WLW-WST-64-4	64" (6')	2	16	4
WLW-WST-76-4	76" (7')	2	20	4
WLW-WST-58-5	58" (5')	2	16	4
WLW-WST-64-5	64" (6')	2	16	4
WLW-WST-76-5	76" (7')	2	20	4
				8
				8
				10
				8
				8
				10

Wade Style

Quantities per Wheel				
	1/2 Rim	Spokes	Hubs	Cleats
WLW-WD-58-4	58" (5')	2	16	4
WLW-WD-64-4	64" (6')	2	16	4
WLW-WD-76-4	76" (7')	2	20	4
WLW-WD-58-5	58" (5')	2	16	4
WLW-WD-64-5	64" (6')	2	16	4
WLW-WD-76-5	76" (7')	2	20	4
				8
				8
				10
				8
				8
				10

Wheel Does Not Come with Hardware

AUTOMATIC DRAINS

Universal 3-piece Design Eliminates Need for Jam Nut



FDC78



FDI78



FDR78



FDSN78

Drain-Fast™ Flapper Drain

High-Quality Zinc Construction

FDC78

Complete Flapper Drain

FDI78

Threaded Insert

FDR78

Rubber Flapper

FDSN78

Splash Nut

Heavy-Duty Star Drain



SDMBC-1



SDMB-1

SDMC-1



SDRS-1

SDMBC-1

Complete Metal Base Drain

SDMC-1

Metal Cap

SDRS-1

Neoprene Rubber Star Gasket

SDMB-1

Metal Base

Heavy-Duty – Built To Outperform and Outlast Powerroll™



WSSD

- Thicker body design with tapered seat
- Strongest, and smoothest-operating spring drain in the industry
- Heavy-duty design with tapered seat
- Designed to last longer and outperform other brands

 WSSD
 WSSD-PL
 WSSD-SPR
 WSSD-RW
 WSSD-SPL

 1" Spring Drain - Complete
 Plunger
 Spring
 Rubber Washer
 Splash Plate

Pivot Star Drains

Heavy-Duty Replaceable Rubber Star



SDPBC-1



SDPB-1



SDRS-1

 SDPBC-1
 SDMC-1
 SDRS-1
 SDPB-1

 Complete w/Plastic Base
 Metal Cap
 Neoprene Rubber Star
 Plastic Base

V-Drain™

1" NPT Replacement Drain
for Valley Pivot Systems

ZDCOMP



ZDGROM



SDRS-1

 ZDCOMP
 ZDBASE
 ZDGROM
 SDMC-1
 SDRS-1

 Complete Drain Assembly
 Base
 Rubber Grommet
 Metal Cap
 Neoprene Rubber Star Gasket

Z-Drain™

7/8" Hole Replacement Drain
For Lindsay Pivot Systems

MULTI-FUNCTION AIR VENT

AIR-O-MAX™

Air Vacuum and Air Relief

Continuous Acting Air
Vacuum and Air Relief



AVAR1



AVAR1.25



AVAR2



CAVAR1



CAVAR1.25



CAVAR2

The **XCAD USA**® Air-O-Max™ family of automatic air vents are an outstanding choice for relieving air in irrigation systems. Choose from the AVAR Air Vacuum and Air Relief or the CAVAR for Continuous Acting Air Vacuum and Air Relief under pressure.

AIR-O-MAX™ SERIES

Patented Anti Blow-Shut Sleeve

Features

- ◆ 1", 1.25" and 2" NPT
- ◆ Built entirely of corrosion resistant materials
- ◆ Glass-filled nylon body and base
- ◆ Polypropylene float
- ◆ Aerodynamic design resists blowing closed
- ◆ Working pressure 10 to 125 psi
- ◆ Discharge elbow with male connection thread and internal protection screen

Applications

- ◆ Pump start up high-capacity air venting
- ◆ Pump shut down vacuum relief
- ◆ Filter back flush
- ◆ Venting at pipeline high points
- ◆ Continuous acting air venting during system operation (CAVAR)

AIR VENTS / VACUUM RELIEF VALVES



AVP75



AVP1

X-SERIES™

Air Vent / Vacuum Relief Valves



VRV1.5X



VRV2X



VRV3X



VRCV4X



VRCV2X

AVP75

3/4" Plastic Air Vent

AVP1

1" Plastic Air Vent

VRV1.5X

1 1/2" X-Series

VRCV2X

2" Vacuum Relief Check Valve X-Series

VRV2X

2" X Series (15/box)

VRV3X

3" X Series (4/box)

VRCV4X

4" Vacuum Relief Check Valve X-Series

Features

X-SERIES™

- ◆ High-quality cast aluminum and plastic designs
- ◆ Unique ball-retention bridge
- ◆ Operates well at low and high pressures
- ◆ X-Series: 10 - 120 psi
- ◆ NRCS Cost Share Approved

PIPELINE SAFETY PRODUCTS

Superior Industry Quality

Pressure Lock™



PRV3B



PRV3YBA

Available Field or Factory Set

Pressure Guard™ Pressure Relief Valves are designed to provide maximum pressure surge protection for irrigation systems.

These high-quality spring-loaded valves can be either field set or factory preset to ensure accurate and dependable operation.

Built in the USA

Size	Pressure Range	Spring Color	Field Set (without Pressure Lock™)	Factory Preset (with Pressure Lock™)
2" Threaded NPT	0-25	Gray	PRV2G	PRV2GA
	10-65	Yellow	PRV2Y	PRV2YA
	45-80	Black	PRV2B	PRV2BA
	80-150	Yellow/Blue*	PRV2YB	PRV2YBA
2.5" Threaded NPT	0-25	Gray	PRV2.5G	PRV2.5GA
	10-65	Yellow	PRV2.5Y	PRV2.5YA
	45-80	Black	PRV2.5B	PRV2.5BA
	80-150	Yellow/Blue*	PRV2.5YB	PRV2.5YBA
3" Threaded NPT	0-25	Gray	PRV3G	PRV3GA
	10-65	Yellow	PRV3Y	PRV3YA
	45-80	Black	PRV3B	PRV3BA
	80-150	Yellow/Blue*	PRV3YB	PRV3YBA
4" Threaded NPT	0-25	Gray	PRV4G	PRV4GA
	10-65	Yellow	PRV4Y	PRV4YA
	45-80	Black	PRV4B	PRV4BA
	80-150	Yellow/Blue*	PRV4YB	PRV4YBA

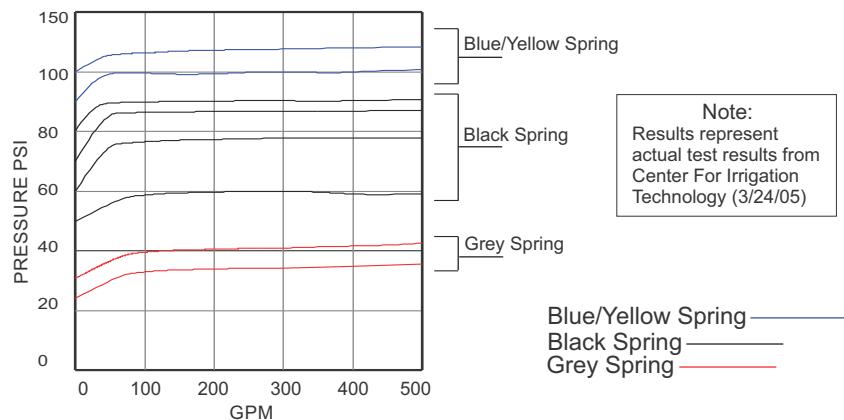
XCAD USA® Pressure Relief Valves were performance tested at CIT. Performance of Individual Valves May Vary Slightly Due to Spring Variations

See PRV Curves, Page 58

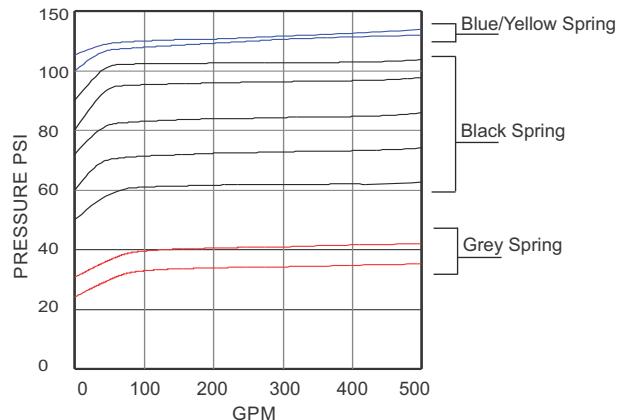
PIPELINE SAFETY PRODUCTS

2" AND 3" PRV DISCHARGE CURVES

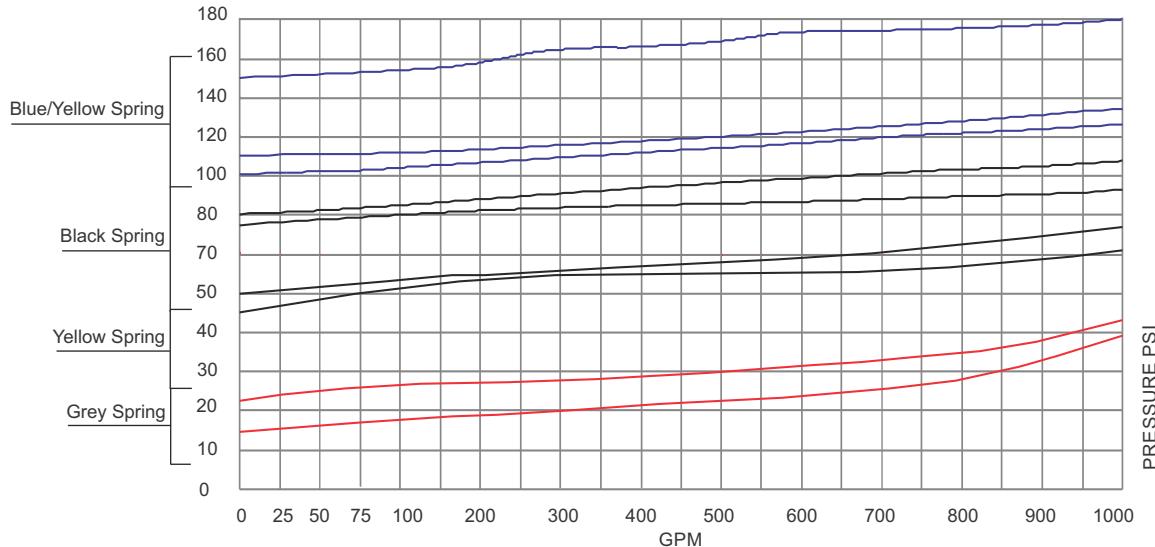
PRV2



PRV3



4" PRV DISCHARGE CURVES



Note:

 Results represent typical
 discharge volumes at
 designated pressures

BRASS BALL VALVES



BBVFP-1



Brass Ball Valves

Full Port

BBVFP-1/4	1/4" Full Port
BBVFP-1/2	1/2" Full Port
BBVFP-3/4	3/4" Full Port
BBVFP-1	1" Full Port
BBVFP-1.25	1.25" Full Port
BBVFP-1.5	1.5" Full Port
BBVFP-2	2" Full Port



BBVSP-1



Standard Port

BBVSP-1/4	1/4" Standard Port
BBVSP-1/2	1/2" Standard Port
BBVSP-3/4	3/4" Standard Port
BBVSP-1	1" Standard Port
BBVSP-1.25	1.25" Standard Port
BBVSP-1.5	1.5" Standard Port
BBVSP-2	2" Standard Port



BBVFP-2



BBVSP-2



Features

- Standard and full port models
- Forged brass body
- Teflon seat and stem packing
- Standard NPT threading

To winterize Seal-Matic ball valves and reduce chance of damaging valve from freezing:

Drain valve and leave 3/4 open, do not leave valve fully open or fully closed



SEAL-MATIC® GX-SERIES BUTTERFLY VALVES



BVLO8



BVGO8

Features

- Double seal seat design eliminates need for flange gaskets
- Two-piece stainless-steel stem design with floating disc
- Drive stem flattened for easy fit actuation
- Streamlined disc for maximum flow
- Locating lugs for easy installation



BVLO8-DI



BVGO8-DI

GX-Series

Gear-Op Stainless-Steel

BVGO2	2" Gear Op, Stainless-Steel Disc
BVGO2.5	2.5" Gear Op, Stainless-Steel Disc
BVGO3	3" Gear Op, Stainless-Steel Disc
BVGO4	4" Gear Op, Stainless-Steel Disc
BVGO5	5" Gear Op, Stainless-Steel Disc
BVGO6	6" Gear Op, Stainless-Steel Disc
BVGO8	8" Gear Op, Stainless-Steel Disc
BVGO10	10" Gear Op, Stainless-Steel Disc
BVGO12	12" Gear Op, Stainless-Steel Disc
BVGO14	14" Gear Op, Stainless-Steel Disc
BVGO16	16" Gear Op, Stainless-Steel Disc

Lever-Op Stainless-Steel

BVLO2	2" Lever Op, Stainless-Steel Disc
BVLO2.5	2.5" Lever Op, Stainless-Steel Disc
BVLO3	3" Lever Op, Stainless-Steel Disc
BVLO4	4" Lever Op, Stainless-Steel Disc
BVLO5	5" Lever Op, Stainless-Steel Disc
BVLO6	6" Lever Op, Stainless-Steel Disc
BVLO8	8" Lever Op, Stainless-Steel Disc
BVLO10	10" Lever Op, Stainless-Steel Disc

GX-Series

Gear-Op Ductile Iron

BVGO2-DI	2" Gear Op Ductile Iron Disc
BVGO2.5-DI	2.5" Gear Op, Ductile Iron Disc
BVGO3-DI	3" Gear Op, Ductile Iron Disc
BVGO4-DI	4" Gear Op, Ductile Iron Disc
BVGO5-DI	5" Gear Op, Ductile Iron Disc
BVGO6-DI	6" Gear Op, Ductile Iron Disc
BVGO8-DI	8" Gear Op, Ductile Iron Disc
BVGO10-DI	10" Gear Op, Ductile Iron Disc
BVGO12-DI	12" Gear Op, Ductile Iron Disc
BVGO14-DI	14" Gear Op, Ductile Iron Disc
BVGO16-DI	16" Gear Op, Ductile Iron Disc

Lever-Op Ductile Iron

BVLO2-DI	2" Lever Op, Ductile Iron Disc
BVLO2.5-DI	2.5" Lever Op, Ductile Iron Disc
BVLO3-DI	3" Lever Op, Ductile Iron Disc
BVLO4-DI	4" Lever Op, Ductile Iron Disc
BVLO5-DI	5" Lever Op, Ductile Iron Disc
BVLO6-DI	6" Lever Op, Ductile Iron Disc
BVLO8-DI	8" Lever Op, Ductile Iron Disc
BVLO10-DI	10" Lever Op, Ductile Iron Disc

For Butterfly Valve Dimensions see page 84

SEAL-MATIC® MONARCH SERIES BUTTERFLY VALVES



MBVLO3-DI

Features

- Double seal seat design eliminates need for flange gaskets
- Two-piece stainless-steel stem design with floating disc
- Drive stem flattened for easy fit actuation
- Streamlined disc for maximum flow
- Locating lugs for easy installation
- Extension and Gear Head universal with XCAD GX Series



MBVGO3-S

Monarch-Series Butterfly Valves

Lever-Op Ductile Iron Disc

MBVLO3-DI	3" Lever Op, Ductile Iron Disc
MBVLO4-DI	4" Lever Op, Ductile Iron Disc
MBVLO6-DI	6" Lever Op, Ductile Iron Disc
MBVLO8-DI	8" Lever Op, Ductile Iron Disc
MBVLO10-DI	10" Lever Op, Ductile Iron Disc

Gear-Op Ductile Iron Disc

MBVGO3-DI	3" Gear Op, Ductile Iron Disc
MBVGO4-DI	4" Gear Op, Ductile Iron Disc
MBVGO6-DI	6" Gear Op, Ductile Iron Disc
MBVGO8-DI	8" Gear Op, Ductile Iron Disc
MBVGO10-DI	10" Gear Op, Ductile Iron Disc
MBVGO12-DI	12" Gear Op, Ductile Iron Disc

Monarch-Series Butterfly Valves

Lever-Op Stainless-Steel Disc

MBVLO3-S	3" Lever Op, Stainless Steel Disc
MBVLO4-S	4" Lever Op, Stainless Steel Disc
MBVLO6-S	6" Lever Op, Stainless Steel Disc
MBVLO8-S	8" Lever Op, Stainless Steel Disc
MBVLO10-S	10" Lever Op, Stainless Steel Disc

Gear-Op Stainless-Steel Disc

MBVGO3-S	3" Gear Op, Stainless Steel Disc
MBVGO4-S	4" Gear Op, Stainless Steel Disc
MBVGO6-S	6" Gear Op, Stainless Steel Disc
MBVGO8-S	8" Gear Op, Stainless Steel Disc
MBVGO10-S	10" Gear Op, Stainless Steel Disc
MBVGO12-S	12" Gear Op, Stainless Steel Disc

For Monarch Valve Dimensions see page 86

BUTTERFLY VALVE PARTS

Fits Both GX and Monarch Series Valves



BVHDL8



BVLP8



BVBOX8



BVHW8



BVEXT36-8

Lever Handle

BVHDL2-6-B	Handle for 2"-6" Butterfly Valves (blue)
BVHDL2-6-G	Handle for 2"-6" Butterfly Valves (gray)
BVHDL8-12-B	Handle for 8"-12" Butterfly Valves (blue)
BVHDL8-12-G	Handle for 8"-12" Butterfly Valves (gray)

Lever Lock Plate

BVLP2-6	Lever lock plate for 2", 2.5", 3", 4", 5" and 6"
BVLP8-12	Lever lock plate for 8", 10" and 12"

Gear Box

BVBOX2-6-B	Gear Box for 2"-6" Butterfly Valves (blue)
BVBOX2-6-G	Gear Box for 2"-6" Butterfly Valves (gray)
BVBOX8-12-B	Gear Box for 8"-12" Butterfly Valves (blue)
BVBOX8-12-G	Gear Box for 8"-12" Butterfly Valves (gray)

Hand Wheel

BVHW2-6-B	Hand Wheel for 2"-6" Butterfly Valves (blue)
BVHW2-6-G	Hand Wheel for 2"-6" Butterfly Valves (gray)
BVHW8-12-B	Hand Wheel for 8"-12" Butterfly Valves (blue)
BVHW8-12-G	Hand Wheel for 8"-12" Butterfly Valves (gray)

Extensions

BVEXT24.2-6	24" extension for 2" to 6" valves
BVEXT24.8-12	24" extension for 8" to 12" valves
BVEXT36.2-6	36" extension for 2" to 6" valves
BVEXT36.8-12	36" extension for 8" to 12" valves
BVEXT48.2-6	48" extension for 2" to 6" valves
BVEXT48.8-12	48" extension for 8" to 12" valves
BVEXT60.2-6	60" extension for 2" to 6" valves
BVEXT60.8-12	60" extension for 8" to 12" valves
BVEXT72.2-6	72" extension for 2" to 6" valves
BVEXT72.8-12	72" extension for 8" to 12" valves

WELD ON REDUCER CONES

Heavy Duty Steel Weld Cones

5MM, 7 Gauge, OD



WCOD2X3-7	2" X 3" OD STEEL WELD ON REDUCER CONE
WCOD3X4-7	3" X 4" OD STEEL WELD ON REDUCER CONE
WCOD4X5-7	4" X 5" OD STEEL WELD ON REDUCER CONE
WCOD4X6-7	4" X 6" OD STEEL WELD ON REDUCER CONE
WCOD5X6-7	5" X 6" OD STEEL WELD ON REDUCER CONE
WCOD6X8-7	6" X 8" OD STEEL WELD ON REDUCER CONE
WCOD8X10-7	8" X 10" OD STEEL WELD ON REDUCER CONE
WCOD10X12-7	10" X 12" OD STEEL WELD ON REDUCER CONE
WCOD12X14-7	12" X 14" OD STEEL WELD ON REDUCER CONE
WCOD14X16-7	14" X 16" OD STEEL WELD ON REDUCER CONE
WCOD16X18-7	16" X 18" OD STEEL WELD ON REDUCER CONE

WCIPS8X10-7

5MM, 7 Gauge, IPS

WCIPS3X4-7	3" X 4" IPS STEEL WELD ON REDUCER CONE
WCIPS4X6-7	4" X 6" IPS STEEL WELD ON REDUCER CONE
WCIPS6X8-7	6" X 8" IPS STEEL WELD ON REDUCER CONE
WCIPS8X10-7	8" X 10" IPS STEEL WELD ON REDUCER CONE
WCIPS10X12-7	10" X 12" IPS STEEL WELD ON REDUCER CONE

3.5MM, 10 Gauge, OD

WCOD2X3-10	2" X 3" OD STEEL WELD ON REDUCER CONE
WCOD3X4-10	3" X 4" OD STEEL WELD ON REDUCER CONE
WCOD4X5-10	4" X 5" OD STEEL WELD ON REDUCER CONE
WCOD4X6-10	4" X 6" OD STEEL WELD ON REDUCER CONE
WCOD5X6-10	5" X 6" OD STEEL WELD ON REDUCER CONE
WCOD6X8-10	6" X 8" OD STEEL WELD ON REDUCER CONE
WCOD8X10-10	8" X 10" OD STEEL WELD ON REDUCER CONE
WCOD10X12-10	10" X 12" OD STEEL WELD ON REDUCER CONE

3.5MM, 10 Gauge, IPS

WCIPS3X4-10	3" X 4" IPS STEEL WELD ON REDUCER CONE
WCIPS4X6-10	4" X 6" IPS STEEL WELD ON REDUCER CONE
WCIPS6X8-10	6" X 8" IPS STEEL WELD ON REDUCER CONE
WCIPS8X10-10	8" X 10" IPS STEEL WELD ON REDUCER CONE
WCIPS10X12-10	10" X 12" IPS STEEL WELD ON REDUCER CONE

TOGGLE GATES

Toggle Gates

Bolts Included with CP Style



TG12-ODG

CP Style

Galvanized w/ Stainless Steel Slide
Fits Concrete Pipe

TG4-CPG	4" TOGGLE GATE, CP STYLE, GALVANIZED
TG6-CPG	6" TOGGLE GATE, CP STYLE, GALVANIZED
TG8-CPG	8" TOGGLE GATE, CP STYLE, GALVANIZED
TG10-CPG	10" TOGGLE GATE, CP STYLE, GALVANIZED
TG12-CPG	12" TOGGLE GATE, CP STYLE, GALVANIZED

Stainless Steel

TG4-CPS	4" TOGGLE GATE, CP STYLE, STAINLESS STEEL
TG6-CPS	6" TOGGLE GATE, CP STYLE, STAINLESS STEEL
TG8-CPS	8" TOGGLE GATE, CP STYLE, STAINLESS STEEL
TG10-CPS	10" TOGGLE GATE, CP STYLE, STAINLESS STEEL
TG12-CPS	12" TOGGLE GATE, CP STYLE, STAINLESS STEEL

OD Style

Galvanized w/ Stainless Steel Slide

TG4-ODG	4" TOGGLE GATE, OD STYLE, GALVANIZED
TG6-ODG	6" TOGGLE GATE, OD STYLE, GALVANIZED
TG8-ODG	8" TOGGLE GATE, OD STYLE, GALVANIZED
TG10-ODG	10" TOGGLE GATE, OD STYLE, GALVANIZED
TG12-ODG	12" TOGGLE GATE, OD STYLE, GALVANIZED

Stainless Steel

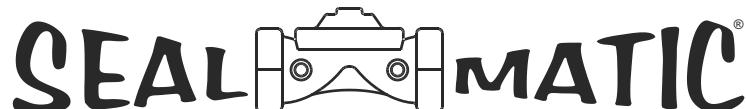
TG4-ODS	4" TOGGLE GATE, OD STYLE, STAINLESS STEEL
TG6-ODS	6" TOGGLE GATE, OD STYLE, STAINLESS STEEL
TG8-ODS	8" TOGGLE GATE, OD STYLE, STAINLESS STEEL
TG10-ODS	10" TOGGLE GATE, OD STYLE, STAINLESS STEEL
TG12-ODS	12" TOGGLE GATE, OD STYLE, STAINLESS STEEL

Features

- ◆ CP Style for concrete pipe
- ◆ OD Style for attachment to OD pipe
- ◆ All gates have full Stainless Steel slides
- ◆ Galvanized type are Hot Dipped with Stainless Steel slide

CONTROL VALVES

**Assembled
in the USA**
 from domestic and foreign parts



3-Year
Diaphragm
Guarantee

Seal Matic® 3/4", 1", 1 1/4" and 1 1/2"

Pivot Auxiliary & Corner Control Valve
 Raven Smart™ Diaphragm Technology

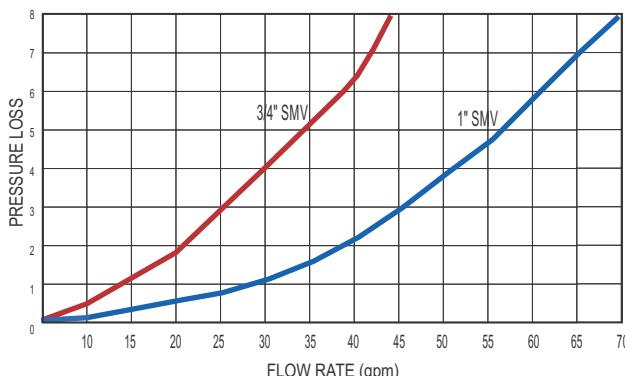
Features

- Fully galvanized, ductile iron body and bonnet
- Brass auto-drain included with PEG model
- One diaphragm for all working pressures
- 200 psi max working pressure
- Highly efficient high-flow, low head loss design
- Easy in-place maintenance
- Pressure reducing and pressure sustaining valves come with P-6000 brass pilot



SMV75PEG

3/4" and 1" SMV Valves



Seal Matic® valves are only guaranteed to perform optimally in accordance with the size and model of each valve's performance chart in standard irrigation use and practices.

Graphs Represent Results From CIT

Seal Matic® Pivot End Gun Valve

SMV75PEG	3/4" w/Auto-Drain and Plug
SMV1PEG	1" w/Auto-Drain and Plug
SMV1.25PEG	1 1/4" w/Auto-Drain and Plug
SMV1.5PEG	1 1/2" w/Auto-Drain and Plug

Seal Matic® Basic Valve

SMV75B	3/4" w/Plugs
SMV1B	1" w/Plugs
SMV1.25B	1 1/4" w/Plugs
SMV1.5B	1 1/2" w/Plugs

Seal Matic® Electric On/Off Valve

SMV75WS	3/4" w/Solenoid
SMV1WS	1" w/Solenoid
SMV1.25WS	1 1/4" w/Solenoid
SMV1.5WS	1 1/2" w/Solenoid

Seal Matic® Manual Pressure Reducing Valve

SMV75MPR	3/4" w/P-6000 Pilot
SMV1MPR	1" w/P-6000 Pilot
SMV1.25MPR	1 1/4" w/P-6000 Pilot
SMV1.5MPR	1 1/2" w/P-6000 Pilot

Seal Matic® Electric Pressure Reducing Valve

SMV75EPR	3/4" w/P-6000 Pilot/Solenoid
SMV1EPR	1" w/P-6000 Pilot/Solenoid
SMV1.25EPR	1 1/4" w/P-6000 Pilot/Solenoid
SMV1.5EPR	1 1/2" w/P-6000 Pilot/Solenoid

Seal Matic® Manual Pressure Sustaining Valve

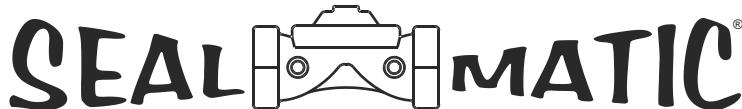
SMV75MPS	3/4" w/P-6000 Pilot
SMV1MPS	1" w/P-6000 Pilot
SMV1.25MPS	1 1/4" w/P-6000 Pilot
SMV1.5MPS	1 1/2" w/P-6000 Pilot

For SMV Installation Guide see page 87
 For SMV Dimensions see page 90

CONTROL VALVES

Assembled in the USA

from domestic and foreign parts



Seal Matic® 2" Pivot End Gun Valve

Raven Smart™ Diaphragm Technology

3-Year
Diaphragm
Guarantee

Features

- Fully galvanized, ductile iron body and bonnet
- Brass auto-drain included with PEG model
- One diaphragm for all working pressures
- 200 psi max working pressure
- Easy in-place maintenance
- Pressure sustaining and pressure reducing valves come with P-6000 pilot
- SMVX100PEG works with Aqua Burst® X100 and Nelson™ SR100 and SR75



SMV2PEG

SMVX100PEG

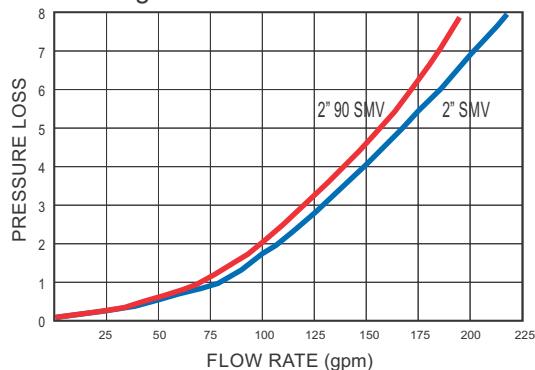


SMV902PEG



SMV3B

2" Straight and 2" 90° Seal Matic® Valves



$C_v = 2" 90^\circ = 110$
 $C_v = 2" Str = 90$

(control vented to atmosphere)

Seal Matic® valves are only guaranteed to perform optimally in accordance with the size and model of each valve's performance chart in standard irrigation use and practices.

Graphs Represent Results From CIT

Seal Matic Pivot End Gun Valve

SMV2PEG	2" w/Auto-Drain and Plug
SMV902PEG	2" 90° w/Auto-Drain and Plug
SMVX100PEG	2" X-100 End Gun Valve

Seal Matic Basic Valve

SMV2B	2" Basic w/Plugs
SMV902B	2" 90° Basic w/Plugs
SMV3B	3" Basic w/Plugs

Seal Matic Electric On/Off Valve

SMV2WS	2" w/Solenoid
SMV902WS	2" 90° w/Solenoid
SMVX100WS	2" X-100 End Gun Valve w/Solenoid
SMV3WS	3" w/Solenoid

Seal Matic Manual Pressure Reducing Valve

SMV2MPR	2" w/P-6000 Pilot
SMV902MPR	2" 90° w/P-6000 Pilot
SMV3MPR	3" w/P-6000 Pilot

Seal Matic Electric Pressure Reducing Valve

SMV2EPR	2" w/P-6000 Pilot/Solenoid
SMV902EPR	2" 90° w/P-6000 Pilot/Solenoid
SMV3EPR	3" w/P-6000 Pilot/Solenoid

Seal Matic Manual Pressure Sustaining Valve

SMV2MPS	2" w/P-6000 Pilot
SMV902MPS	2" 90° w/P-6000 Pilot
SMV3MPS	3" w/P-6000 Pilot

For SMV Installation Guide see page 87

For SMV Dimensions see page 90

CONTROL VALVES

**Assembled
in the USA**
 from domestic and foreign parts



3-Year
Diaphragm
Guarantee

Features

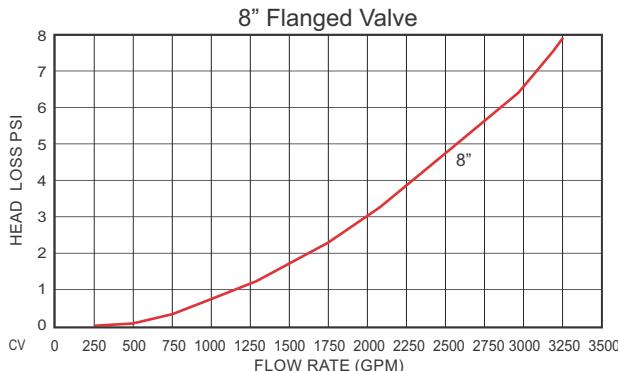
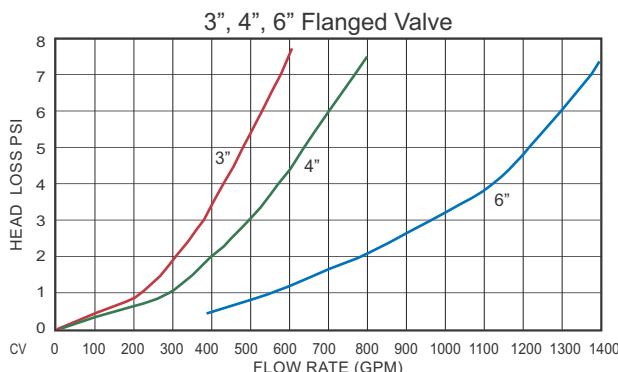
- New Super Flow design, available in 4", 6", 8"
- **Fully galvanized**, ductile iron body and bonnet
- One diaphragm for all pressures
- Easy in-place maintenance
- Fully open at 5 psi
- CIT tested flow rates
- Pilot Control Options: Pressure reducing, pressure sustaining, pressure relief
- Pressure reducing and pressure sustaining valves come with P-6000 brass pilot
- Solenoid available in 12v DC, 24v AC, 24v DC or 120v AC



SMV6MPR
 6" Dual-X™ Control Valve



SMV4WS



Seal Matic® valves are only guaranteed to perform optimally in accordance with the size and model of each valve's performance chart in standard irrigation use and practices.

Graphs Represent Results From CIT

Seal Matic Electric On/Off Valve

SMV4WS	4" w/Solenoid
SMV6WS	6" w/Solenoid
SMV8WS	8" w/Solenoid

Seal Matic Basic Valve

SMV4B	4" Basic w/Plugs
SMV6B	6" Basic w/Plugs
SMV8B	8" Basic w/Plugs

Seal Matic Manual Pressure Reducing Valve

SMV4MPR	4" w/P-6000 Pilot
SMV6MPR	6" w/P-6000 Pilot
SMV8MPR	8" w/P-6000 Pilot

Seal Matic Electric Pressure Reducing Valve

SMV4EPR	4" w/P-6000 Pilot/Solenoid
SMV6EPR	6" w/P-6000 Pilot/Solenoid
SMV8EPR	8" w/P-6000 Pilot/Solenoid

Seal Matic Manual Pressure Sustaining Valve

SMV4MPS	4" w/P-6000 Pilot
SMV6MPS	6" w/P-6000 Pilot
SMV8MPS	8" w/P-6000 Pilot

For SMV Installation Guide see page 89

For SMV Dimensions see page 92

CONTROL VALVES

Assembled in the USA

from domestic and foreign parts

X-Max Valve™

Where Function and Efficiency Meet

High-Flow Design

Features

- ◆ **Five-Year Diaphragm Warranty**
- ◆ Hot dipped galvanized and oven baked powder coatings
- ◆ Pilot control options: pressure reducing, pressure sustaining and pressure relief
- ◆ Electric on/off with Parker solenoid and manual three-way controller
- ◆ Solenoid available in 12v DC, 24v DC, 24v AC or 120v AC
- ◆ Available with P-6000 brass pilot
- ◆ **Bolt Kit Included**



XMAX4WS



XMAX6II-WS
SuperMax



XMAX8WS

X-MAX Electric On/Off Valve

XMAX4WS	4" w/Solenoid
XMAX6II-WS	6" w/Solenoid
XMAX8WS	8" w/Solenoid

X-MAX Basic Valve

XMAX4B	4" Basic w/Plugs
XMAX6II-B	6" Basic w/Plugs
XMAX8B	8" Basic w/Plugs

X-MAX Manual Pressure Reducing Valve

XMAX4MPR	4" w/P-6000 Pilot
XMAX6II-MPR	6" w/P-6000 Pilot
XMAX8MPR	8" w/P-6000 Pilot

X-MAX Electric On/Off Pressure Reducing Valve

XMAX4EPR	4" w/P-6000 Pilot/Solenoid
XMAX6II-EPR	6" w/P-6000 Pilot/Solenoid
XMAX8EPR	8" w/P-6000 Pilot/Solenoid

X-MAX Manual Pressure Sustaining Valve

XMAX4MPS	4" w/P-6000 Pilot
XMAX6II-MPS	6" w/P-6000 Pilot
XMAX8MPS	8" w/P-6000 Pilot

See Performance Charts (Pg. 70)

Designed and engineered to out-flow and out-control all other hydraulic control valves.
 X-MAX6II = 1150 gpm @ 1.0 cv

For XMAX Installation Guide see page 88

For XMAX Dimensions see page 92

CONTROL VALVES

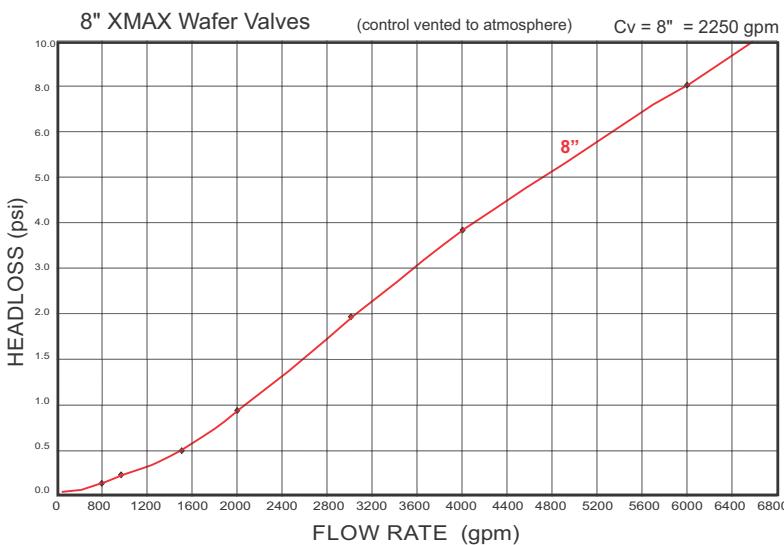
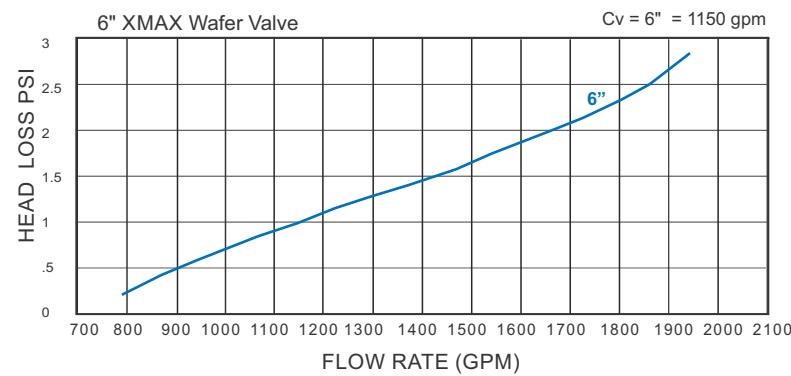
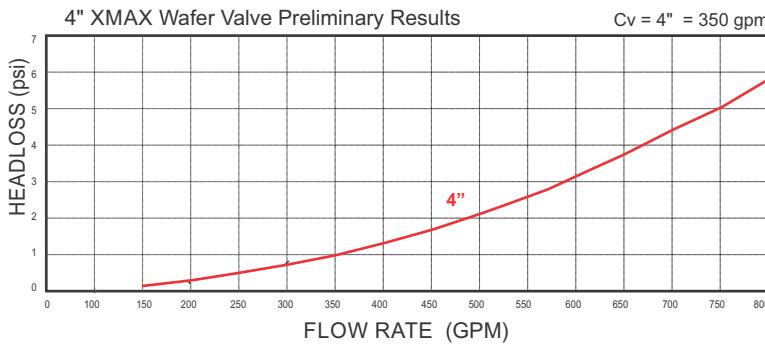
Assembled in the USA

from domestic and foreign parts

X-Max Valve™

Where Function and Efficiency Meet

High-Flow Design



Graphs Represent Results From CIT

XCON/XMAX Bolt Kits

XMAX4-BK	8 - 5/8" x 10 1/2" bolts, 16 - 5/8" nuts
XMAX6-BK	8 - 3/4" x 14" bolts, 16 - 3/4" nuts
XMAX8-BK	8 - 3/4" x 16" bolts, 16 - 3/4" nuts

Replacement Valve Diaphragms

XMAX4DIA	For 4" XMAX Valve
XMAX6DIA	For 6" XMAX Valve
XMAX8DIA	For 8" XMAX Valve
XCON4DIA	For 4" XCON Valve
XCON6DIA	For 6" XCON Valve
XCON8DIA	For 8" XCON Valve
SMV1.5DIA	For 1.25"/1.5" SMV Valve
SMV75-1DIA	For .75"/1" SMV Valve
SMV2DIA	For 2" SMV Valve
SMV46DIA	For 3"4"/6" SMV Valve
SMV8DIA	For 8" SMV Valve

Replacement End Cap O-rings

XMAX4OR	For 4" XMAX End Cap
XMAX6OR	For 6" XMAX End Cap
XMAX8OR	For 8" XMAX End Cap
SMV4OR	For 4" SMV End Cap
SMV6OR	For 6" SMV End Cap
SMV8OR	For 8" SMV End Cap

VALVE ACCESSORIES



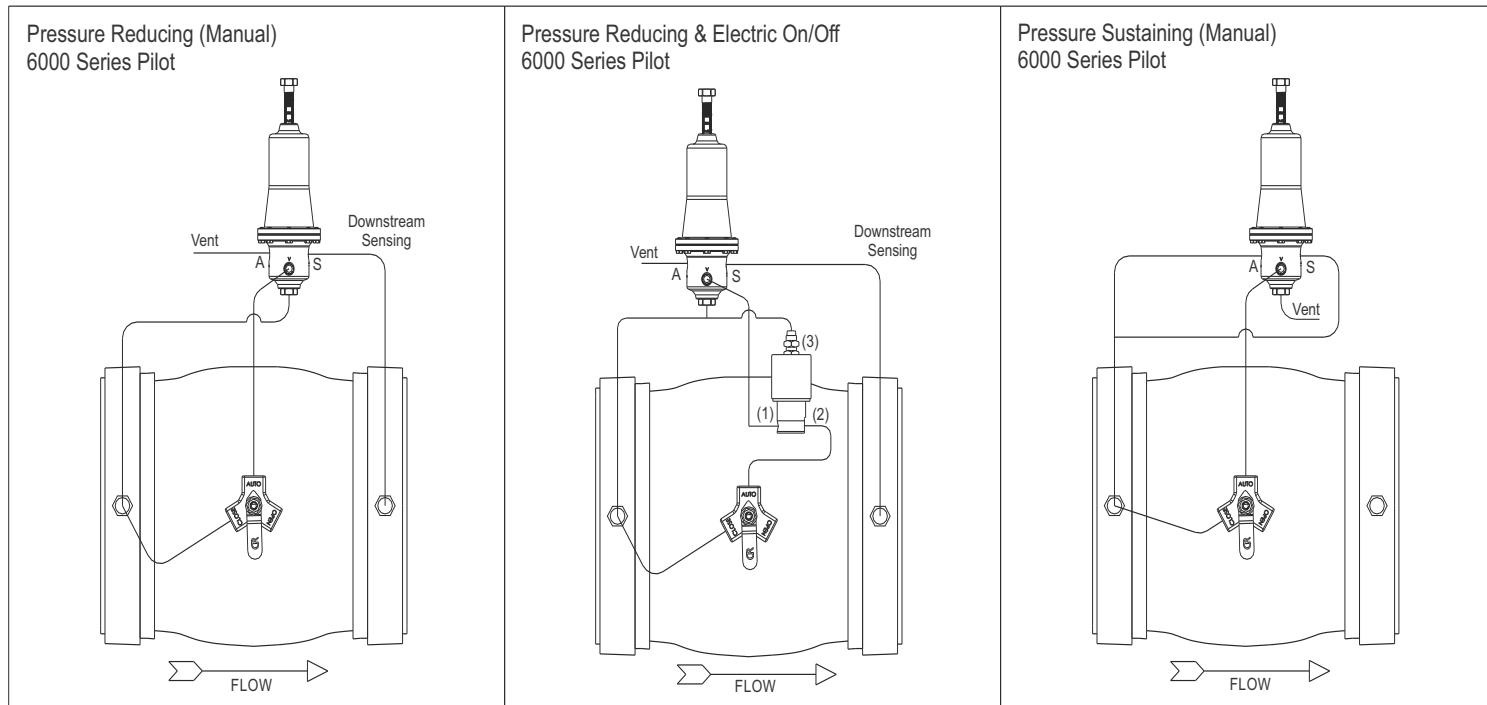
**Assembled
in the USA**

XCAD Pressure Control Pilot P-6000 Series

P-6000-H	Pressure Control Pilot High: 30-120 psi/Medium: 30-60 psi/ Low: 10-40 psi Includes vent and fittings
P-6000-M	
P-6000-L	
P6MPR-H	Manual Pressure Reduction Kit High: 30-120 psi/Medium: 30-60 psi/ Low: 10-40 psi Includes pilot and fittings
P6MPR-M	
P6MPR-L	
P6EPR-H	Electric On-Off Pressure Reduction Kit High: 30-120 psi/Medium: 30-60 psi/ Low: 10-40 psi Includes pilot, solenoid, 3-way selector and fittings
P6EPR-M	
P6EPR-L	
P6MPS-H	Manual Pressure Sustaining/Relief Kit High: 30-120 psi/Medium: 30-60 psi/ Low: 10-40 psi Includes pilot and fittings
P6MPS-M	
P6MPS-L	

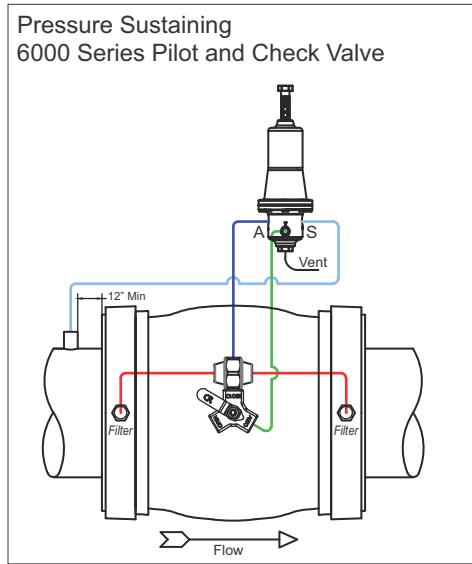
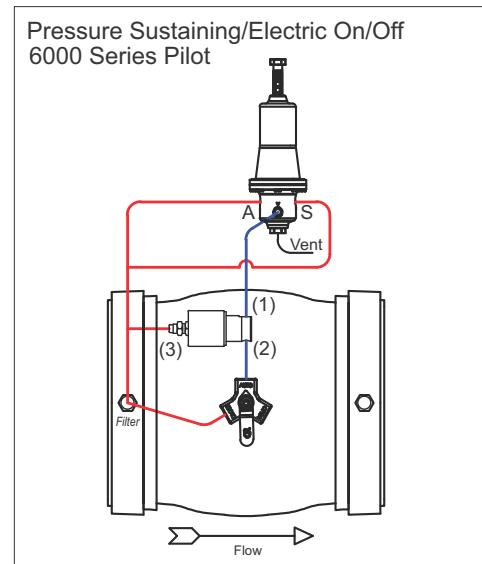
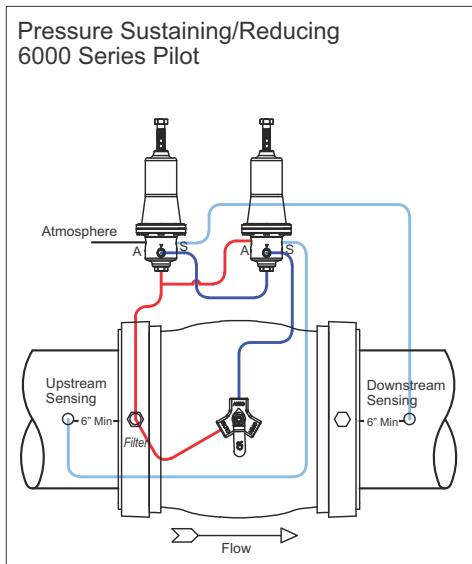
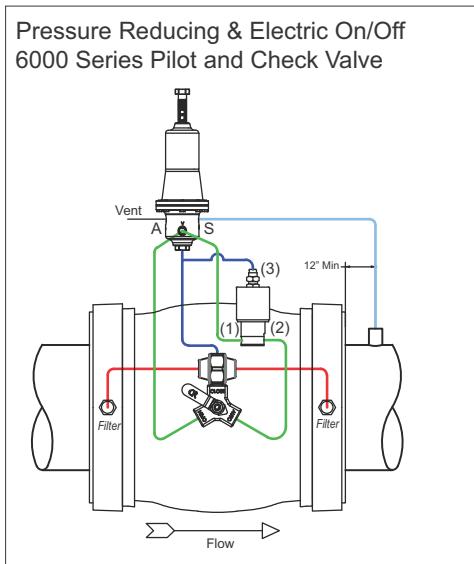
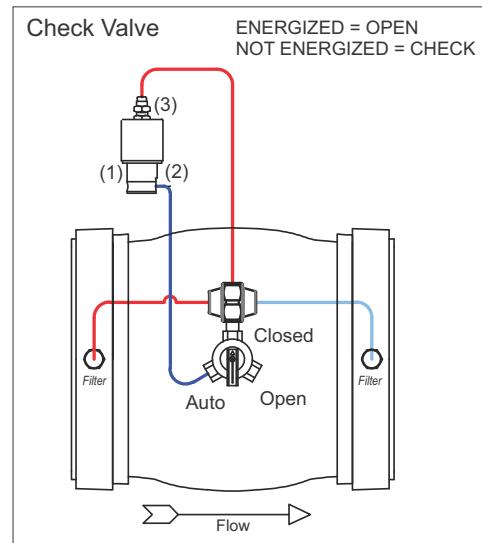
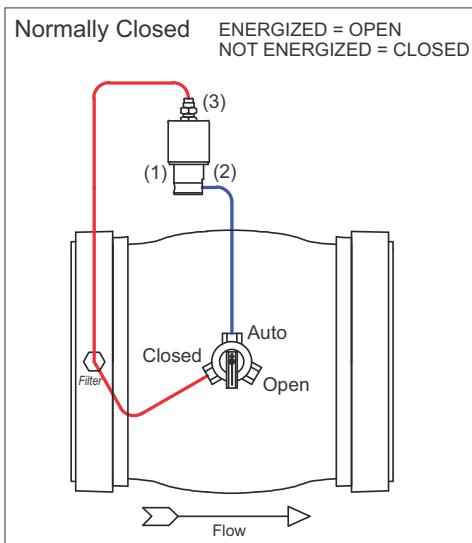
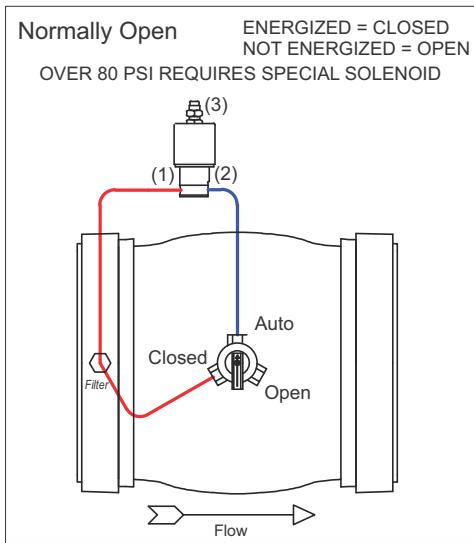
Features

- Maintenance free stainless-steel control springs **(No greasing required)**
- Calibrated pressure control (low and high)
- Both sustaining/relief and reducing function
- No pressure drop required to regulate
- Easy valve mounting bracket
- Universal design works with most control valves



Upstream and downstream sensing should be placed 24 inches away from valve.

PILOT PLUMBING CHARTS



VALVE ACCESSORIES

3-Way Solenoids



PKSOL-LO120



PKSOL-120AC

PKSOL-120UN	120v AC Solenoid, Unpotted
PKSOL-120AC	120v AC Solenoid, Potted
PKSOL-24DC	24v DC Solenoid, Unpotted
PKSOL-24AC	24v AC Solenoid, Unpotted
PKSOL-12DC	12v DC Solenoid, Unpotted
PKSOL-LO120AC	120v AC 5/32" Orifice Solenoid
PKSOL-LO24AC	24v AC 5/32" Orifice Solenoid



PKCOIL-12DC



PKPOT-120AC

Solenoid Coils

PKHS	Coil Housing (pot)
PKCOIL-120AC	120v AC Coil Only
PKPOT-120AC	120v AC Potted Coil
PKCOIL-24DC	24v DC Coil Only
PKCOIL-24AC	24v AC Coil Only
PKCOIL-12DC	12v DC Coil Only



3WSEL



SVB-4



PLTVENT

Selector Valves

(Large Ports)

3WSEL	1/4"x1/8"x1/8"x1/8" 3-way Selector
SVB-4	1/4" Brass Shuttle Valve
PLTVENT	Pilot Restrictor Vent



LBF25



SBF25



EXTFP



SMVBD-AV

Brass Filters and Drains

LBF25	1/4"x1/4" Internal Brass Filter, Long
SBF25	1/4"x1/4" Internal Brass Filter, Short
EXTFP	1/4"x1/4" External Plastic Filter
SMVBD-AV	1/4" Internal Brass Drain

CONTROL VALVE PARTS

Brass Valve Fittings

Plated Brass

				BHN2-2	1/8" NPT x 1/8" NPT Hex Nipple
BHN2-2	BHN4-2	BHN4-4	BFHN2-2	BHN4-2	1/4" NPT x 1/8" NPT Hex Nipple
				BHN4-4	1/4" NPT x 1/4" NPT Hex Nipple
BFHN4-4	SHH4-4	SSN4-2	SSN4-4	BFHN2-2	1/8" Female NPT x 1/8" Female NPT Brass Hex Nipple
				BFHN4-4	1/4" Female NPT x 1/4" Female NPT Brass Hex Nipple
				SHH4-4	1/4" Hose x 1/4" Hose Swivel Connector
SSN516-2	SSN516-4	SSN38-4	SSN12-4	SHH516	5/16" Hose x 5/16" Hose Swivel Connector
				SSN4-2	1/4" Hose x 1/8" NPT Swivel Straight Nipple
				SSN4-4	1/4" Hose x 1/4" NPT Swivel Straight Nipple
				SSN516-2	5/16" Hose x 1/8" NPT Swivel Straight Nipple
SE4-2	SE4-4	SE516-2	SE516-4	SSN516-4	5/16" Hose x 1/4" NPT Swivel Straight Nipple
				SSN38-4	3/8" Hose x 1/4" NPT Swivel Straight Nipple
				SSN12-4	1/2" Hose x 1/4" NPT Swivel Straight Nipple
				SE4-2	1/4" Hose x 1/8" NPT Swivel Elbow
SE38-4	SE12-4	SBT4-2	SBT4-4	SE4-4	1/4" Hose x 1/4" NPT Swivel Elbow
				SE516-2	5/16" Hose x 1/8" NPT Swivel Elbow
				SE516-4	5/16" Hose x 1/4" NPT Swivel Elbow
				SE38-4	3/8" Hose x 1/4" NPT Swivel Elbow
SBT516-2	SBT516-4	SBT38-4	SBT12-4	SE12-4	1/2" Hose x 1/4" NPT Swivel Elbow
				SBT4-2	1/4" Hose x 1/8" NPT Swivel Branch Tee
				SBT4-4	1/4" Hose x 1/4" NPT Swivel Branch Tee
				SBT516-2	5/16" Hose x 1/8" NPT Swivel Branch Tee
				SBT516-4	5/16" Hose x 1/4" NPT Swivel Branch Tee
				SBT38-4	3/8" Hose x 1/4" NPT Swivel Branch Tee
SRT4-2	SRT4-4	SRT516-2		SBT12-4	1/2" Hose x 1/4" NPT Swivel Branch Tee
				SRT4-2	1/4" Hose x 1/8" NPT Swivel Run Tee
				SRT4-4	1/4" Hose x 1/4" NPT Swivel Run Tee
				SRT516-2	5/16" Hose x 1/8" NPT Swivel Run Tee
SRT516-4	SRT38-4			SRT516-4	5/16" Hose x 1/4" NPT Swivel Run Tee
				SRT38-4	3/8" Hose x 1/4" NPT Swivel Run Tee
				SRT12-4	1/2" Hose x 1/4" NPT Swivel Run Tee (not shown)

CONTROL VALVE PARTS

Brass Valve Fittings

Plated Brass



SYC4-2



SYC4-4



SYC-4

SYC4-2	1/4" Hose x 1/8" NPT Swivel Divider Tee
SYC4-4	1/4" Hose x 1/4" NPT Swivel Divider Tee
SYC-4	1/4" x 1/4" x 1/4" Hose Swivel Tee
SC-4	1/4" x 1/4" x 1/4" Hoses Swivel Tee
SC-38	5/16" x 5/16" x 5/16" Hose Swivel Tee
SC-516	3/8" x 3/8" x 3/8" Hose Swivel Tee
SC-38	1/4" M x 1/4" F x 1/4" F NPT Brass Union Run Tee
SURT4-4	1/8" x 1/8" x 1/8" NPT (Female) Brass Union Tee
SUT2-2	1/4" x 1/4" x 1/4" NPT (Female) Brass Union Tee
SUT4-4	1/4" Hose x 1/8" NPT Swivel Speed Control
SSC4-2	1/4" Hose x 1/4" NPT Swivel Speed Control
SSC4-4	1/4" Hose x 1/8" NPT Swivel Splitter Tee
SST4-2	1/4" Hose x 1/4" NPT Swivel Splitter Tee
SST4-4	5/16" Hose x 1/8" NPT Swivel Splitter Tee
SSC4-2	1/4" Female NPT x 1/8" Female NPT Hex Reducer
SSC4-4	1/4" Male NPT x 1/8" Female NPT Hex Reducer
SST4-2	1/8" Female NPT x 1/8" Female NPT Union Elbow
SST4-4	Heavy Duty Nylon 1/4" Valve Tubing, per foot
SST516-2	Heavy Duty Nylon 5/16" Valve Tubing, per foot
FRED4-2	Heavy Duty Nylon 3/8" Valve Tubing, per foot
RED4-2	Heavy Duty Nylon 1/2" Valve Tubing, per foot
UEF2-2	
BVT14	
BVT16	
BVT38	
BVT12	



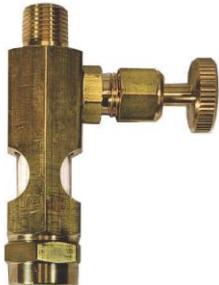
BVT14

CONTROL VALVE PARTS

Nylon Valve Fittings

Nylon and Plated Brass

				NE4-4	1/4" Hose x 1/4" NPT Elbow
NE4-4	NHH4-4	NSC-38	NSC-4	NHH4-4	1/4" Hose x 1/4" Hose Swivel Straight Nipple
				NSC-38	3/8" x 3/8" x 3/8" Hose Swivel Connector Tee
				NSC-4	1/4" x 1/4" x 1/4" Hose Swivel Connector Tee
				NSBT38-4	3/8" Hose x 1/4" NPT Swivel Branch Tee
NSBT38-4	NSBT4-2	NSBT4-4		NSBT4-2	1/4" Hose x 1/8" NPT Swivel Branch Tee
				NSBT4-4	1/4" Hose x 1/4" NPT Swivel Branch Tee
				NSE38-4	3/8" Hose x 1/4" NPT Swivel Elbow
				NSE4-2	1/4" Hose x 1/8" NPT Swivel Elbow
NSE38-4	NSE4-2	NSE4-4	NHHE4-4	NSE4-4	1/4" Hose x 1/4" NPT Swivel Elbow
				NHHE4-4	1/4" Hose x 1/4" Hose Swivel Elbow
				NSRT12-4	1/2" Hose x 1/4" NPT Swivel Run Tee (not shown)
				NSRT38-4	3/8" Hose x 1/4" NPT Swivel Run Tee
NSRT38-4	NSRT4-2	NSRT4-4		NSRT4-2	1/4" Hose x 1/8" NPT Swivel Run Tee
				NSRT4-4	1/4" Hose x 1/4" NPT Swivel Run Tee
				NSSN4-2	1/4" Hose x 1/8" NPT Swivel Straight Nipple
				NSSN4-4	1/4" Hose x 1/4" NPT Swivel Straight Nipple
NSSN4-2	NSSN4-4	NSSN12-4	NSSN38-4	NSSN12-4	1/2" Hose x 1/4" NPT Swivel Straight Nipple
				NSSN38-4	3/8" Hose x 1/4" NPT Swivel Straight Nipple
				NSYC-4	1/4" x 1/4" x 1/4" Hose Swivel Divider Tee
				NSYC4-2	1/4" Hose x 1/8" NPT Swivel Divider Tee
NSYC-4	NSYC4-2	NSYC4-4		NSYC4-4	1/4" Hose x 1/4" NPT Swivel Divider Tee
				NSSC4-2	1/4" Hose x 1/8" NPT Swivel Speed Control/Needle Valve
				NSSC4-4	1/4" Hose x 1/4" NPT Swivel Speed Control/Needle Valve
					
NSSC4-2	NSSC4-4				

OIL DRIPPER**Turbine Oil Dripper**

UNVOD Brass Universal Oil Dripper 1/8" NPT



UEF2-2 1/8" Female NPT x 1/8" Female NPT Union Elbow

UNVOD

UEF2-2

X-GATE™ LOW HEAD CANAL GATE PARTS

X-GATE™

Super Heavy-Duty

Features

- Heavy-duty galvanized 3" x 5" head rails and 2 1/2" guide rails standard
- Spigot back or flat back frame
- Two stainless steel stem configurations:
X-type, left and right-hand thread
- **Stainless-steel stems standard**
- Bronze lift nuts standard
- Standard Sizes 6", 8", 10", 12", 15", 18", 21", 24", 30", and 36"
See chart for maximum frame lengths
- Extension stem adapters for all sizes

All X-GATE™ Canal Gates are available in two stem configurations

Please specify desired stem package when ordering gates
(X-Type left-hand thread standard)

X-Type, Left Hand Thread
X-Type, Right Hand Thread

X-GATE™ Low Head Canal Gates are designed to XCAD's highest specifications. Frames, covers and wedges are not interchangeable with other brands.



FLAT BACK FRAME

Standard Sizes

Gate Size	Gate Length
6", 8", 10," 12"	24", 36", 48", 60", 72", 84", 96", 108", 120"
15", 18", 21"	36", 48", 60", 72", 84", 96", 108", 120"
24"	48", 60", 72", 84", 96", 108", 120"
30"	60", 72", 84", 96", 108", 120"
36"	72", 84", 96", 108", 120"

SPIGOT BACK FRAME

Standard Sizes

Gate Size	Gate Length
6", 8", 10," 12"	24", 36", 48", 60", 72", 84", 96", 108", 120"
15", 18", 21"	36", 48", 60", 72", 84", 96", 108", 120"
24"	48", 60", 72", 84", 96", 108", 120"
30"	60", 72", 84", 96", 108", 120"
36"	72", 84", 96", 108", 120"



X-GATE™ LOW HEAD CANAL GATE PARTS

FLAT BACK FRAME

CG6FB24	6" x 24"
CG6FB36	6" x 36"
CG6FB48	6" x 48"
CG6FB60	6" x 60"
CG6FB72	6" x 72"
CG6FB84	6" x 84"
CG6FB96	6" x 96"
CG6FB108	6" x 108"
CG6FB120	6" x 120"
CG8FB24	8" x 24"
CG8FB36	8" x 36"
CG8FB48	8" x 48"
CG8FB60	8" x 60"
CG8FB72	8" x 72"
CG8FB84	8" x 84"
CG8FB96	8" x 96"
CG8FB108	8" x 108"
CG8FB120	8" x 120"
CG10FB24	10" x 24"
CG10FB36	10" x 36"
CG10FB48	10" x 48"
CG10FB60	10" x 60"
CG10FB72	10" x 72"
CG10FB84	10" x 84"
CG10FB96	10" x 96"
CG10FB108	10" x 108"
CG10FB120	10" x 120"
CG12FB24	12" x 24"
CG12FB36	12" x 36"
CG12FB48	12" x 48"
CG12FB60	12" x 60"
CG12FB72	12" x 72"
CG12FB84	12" x 84"
CG12FB96	12" x 96"
CG12FB108	12" x 108"
CG12FB120	12" x 120"
CG15FB36	15" X 36"
CG15FB48	15" X 48"
CG15FB60	15" X 60"
CG15FB72	15" X 72"

Standard Sizes

CG15FB84	15" x 84"
CG15FB96	15" x 96"
CG15FB108	15" x 108"
CG15FB120	15" x 120"
CG18FB36	18" x 36"
CG18FB48	18" x 48"
CG18FB60	18" x 60"
CG18FB72	18" x 72"
CG18FB84	18" x 84"
CG18FB96	18" x 96"
CG18FB108	18" x 108"
CG18FB120	18" x 120"
CG21FB48	21" x 48"
CG21FB60	21" x 60"
CG21FB72	21" x 72"
CG21FB84	21" x 84"
CG21FB96	21" x 96"
CG21FB108	21" x 108"
CG21FB120	21" x 120"
CG24FB48	24" x 48"
CG24FB60	24" x 60"
CG24FB72	24" x 72"
CG24FB84	24" x 84"
CG24FB96	24" x 96"
CG24FB108	24" x 108"
CG24FB120	24" x 120"
CG30FB60	30" x 60"
CG30FB72	30" x 72"
CG30FB84	30" x 84"
CG30FB96	30" x 96"
CG30FB108	30" x 108"
CG30FB120	30" x 120"
CG36FB72	36" x 72"
CG36FB84	36" x 84"
CG36FB96	36" x 96"
CG36FB108	36" x 108"
CG36FB120	36" x 120"
CG36FB36	36" X 36"
CG36FB48	36" X 48"
CG36FB60	36" X 60"
CG36FB72	36" X 72"

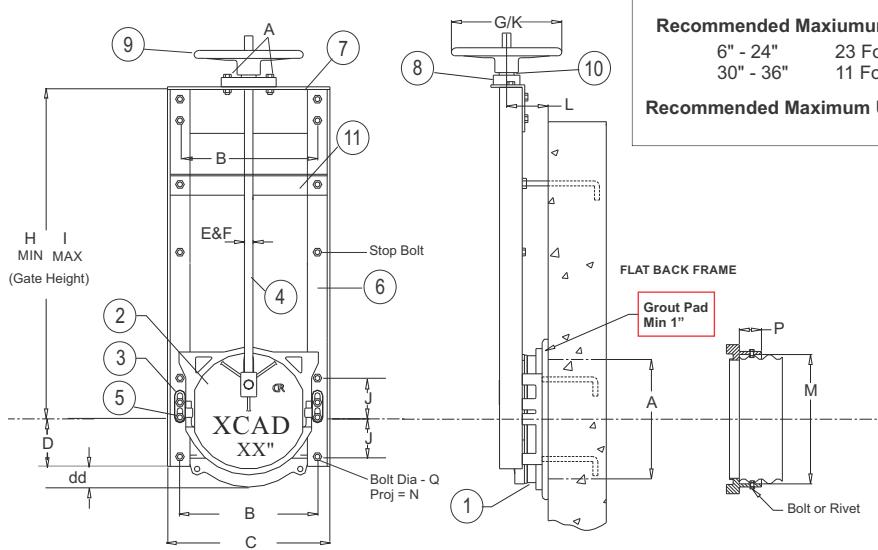
SPIGOT BACK FRAME

CG6SB24	6" x 24"
CG6SB36	6" x 36"
CG6SB48	6" x 48"
CG6SB60	6" x 60"
CG6SB72	6" x 72"
CG6SB84	6" x 84"
CG6SB96	6" x 96"
CG6SB108	6" x 108"
CG6SB120	6" x 120"
CG8SB24	8" x 24"
CG8SB36	8" x 36"
CG8SB48	8" x 48"
CG8SB60	8" x 60"
CG8SB72	8" x 72"
CG8SB84	8" x 84"
CG8SB96	8" x 96"
CG8SB108	8" x 108"
CG8SB120	8" x 120"
CG10SB24	10" x 24"
CG10SB36	10" x 36"
CG10SB48	10" x 48"
CG10SB60	10" x 60"
CG10SB72	10" x 72"
CG10SB84	10" x 84"
CG10SB96	10" x 96"
CG10SB108	10" x 108"
CG10SB120	10" x 120"
CG12SB24	12" x 24"
CG12SB36	12" x 36"
CG12SB48	12" x 48"
CG12SB60	12" x 60"
CG12SB72	12" x 72"
CG12SB84	12" x 84"
CG12SB96	12" x 96"
CG12SB108	12" x 108"
CG12SB120	12" x 120"
CG15SB36	15" X 36"
CG15SB48	15" X 48"
CG15SB60	15" X 60"
CG15SB72	15" X 72"

CG15SB84	15" x 84"
CG15SB96	15" x 96"
CG15SB108	15" x 108"
CG15SB120	15" x 120"
CG18SB36	18" x 36"
CG18SB48	18" x 48"
CG18SB60	18" x 60"
CG18SB72	18" x 72"
CG18SB84	18" x 84"
CG18SB96	18" x 96"
CG18SB108	18" x 108"
CG18SB120	18" x 120"
CG21SB48	21" x 48"
CG21SB60	21" x 60"
CG21SB72	21" x 72"
CG21SB84	21" x 84"
CG21SB96	21" x 96"
CG21SB108	21" x 108"
CG21SB120	21" x 120"
CG24SB48	24" x 48"
CG24SB60	24" x 60"
CG24SB72	24" x 72"
CG24SB84	24" x 84"
CG24SB96	24" x 96"
CG24SB108	24" x 108"
CG24SB120	24" x 120"
CG30SB60	30" x 60"
CG30SB72	30" x 72"
CG30SB84	30" x 84"
CG30SB96	30" x 96"
CG30SB108	30" x 108"
CG30SB120	30" x 120"
CG36SB72	36" x 72"
CG36SB84	36" x 84"
CG36SB96	36" x 96"
CG36SB108	36" x 108"
CG36SB120	36" x 120"

Additional Charge For Non-Standard Gate Lengths or Gates Over 120" in length
 All prices are subject to change without notice

X-GATE™ LOW HEAD CANAL GATES



Recommended Maximum Seating Heads

6" - 24" 23 Foot Head
 30" - 36" 11 Foot Head

Recommended Maximum Unseating Head - 0

Parts List & Standard Features			
No.	Description	Qty.	Material
1	Frame	1	Cast Iron
2	Cover	1	Ductile Iron
3	Wedge (Rt. & Lft.)	1 ea	Cast Iron
4	Stem	1	Stainless Steel
5	Wedge Bolts	4	Zinc Plated
6	Guide Rail	2	Galv. Structural Steel
7	Head Rail	1	Galv. Structural Steel
8	Lift Collar	1	Cast Iron
9	Handwheel	1	Cast Iron
10	Lift Nut	1	Bronze
11	Stem Support	1-2	Galv. Structural Steel

Cover: Cast Iron ASTM A 126 class B
Frame: Ductile Iron ASTM 65-45-120
Nut: Bronze ASTM B-584
Stem: Stainless Steel
Fasteners/Hardware: Zinc Plated
Railing: Galvanized

Flat Back
 for Headwall and Flange Mounting

Spigot Back
 for Mounting to Corrugated Pipe

Dimensions For X-GATE™ Low-Head Canal Gates

(All Measurements in Inches)

A	B	C	D	dd	E XCAD	F Fresno	G XCAD	H Min	I Max	J	K Fresno	L	M	N	P	Q
8"	10"	13"	4"	7/8"	7/8" (.875)	7/8" (.875)	10"	25 1/2"	121 1/2"	3"	10"	2.5"	9 1/8" (9.125)	3.5"	2.25"	1/2" x 12"
10"	12"	14 7/8" (14.875)	4 1/2"	1 1/2"	7/8" (.875)	7/8" (.875)	10"	26 1/4"	122 1/4"	3.5"	10"	2.5"	11 1/4" (11.25)	3.5"	2.25"	1/2" x 12"
12"	14"	16 7/8" (16.875)	5"	2"	7/8" (.875)	7/8" (.875)	10"	26 3/4"	122 3/4"	4"	10"	3"	13 1/8" (13.125)	4"	2.25"	1/2" x 12"
15"	17"	18 7/8" (18.875)	6"	2 1/2"	7/8" (.875)	7/8" (.875)	10"	39 1/2"	123 1/2"	5"	10"	3.5"	16"	4"	2.25"	1/2" x 12"
18"	21"	22 7/8" (22.875)	7"	3 1/2"	1"	1 1/8" (1.125)	12"	40 1/4"	124 1/4"	6"	14"	4.25"	19 1/8" (19.125)	4.5"	2.25"	5/8" x 12"
24"	27 1/4" (27.25)	29 1/8" (29.125)	9"	4 3/4"	1"	1 1/8" (1.125)	12"	53 1/2"	125 1/2"	8"	14"	4.125"	25"	4.5"	2.25"	5/8" x 12"
30"	33 3/4" (33.75)	36 1/8" (36.125)	11"	6 3/4"	1 1/8" (1.125)	1 1/8" (1.125)	15"	67 1/2"	127 1/2"	10"	14"	4.5"	31 1/2" (31.5)	6"	2.25"	3/4" x 12"
36"	39 3/4" (39.75)	42 1/8" (42.125)	13"	7 1/2"	1 1/8" (1.125)	1 1/8" (1.125)	15"	80 1/4"	128 1/4"	12"	14"	5.375"	37"	6"	2.25"	3/4" x 12"

Gate Size	Gate Heights																
	Min.	Max.															
8	24"		36"		48"		60"		72"	78"	84"	90"	96"	102"	108"	114"	120"
10	24"		36"		48"		60"		72"	78"	84"	90"	96"	102"	108"	114"	120"
12	24"		36"		48"		60"		72"	78"	84"	90"	96"	102"	108"	114"	120"
15	36"		48"		60"		72"	78"	84"	90"	96"	102"	108"	114"	120"		
18	36"		48"		60"		72"	78"	84"	90"	96"	102"	108"	114"	120"		
24	48"		60"		72"	78"	84"	90"	96"	102"	108"	114"	120"				
30	60"		72"	78"	84"	90"	96"	102"	108"	114"	120"						
36	72"	78"	84"	90"	96"	102"	108"	114"	120"								

X-GATE™ Low Head Canal Gates are designed to XCAD USA's highest specifications. Frames, covers and wedges are not interchangeable with other brands.

X-GATE™ LOW HEAD CANAL GATE PARTS

WEDGE SET (2pcs)

X-Type

X8-15WEDGE 8"-15" gate
 X18-24WEDGE 18"-24" gate
 X30-36WEDGE 30"-36" gate

Fresno-Type

F6-15WEDGE 6"-15" gate
 F18-36WEDGE 18"-36" gate

LIFT NUT

X-Type Left-Hand Thread

XL78BNUT Fits 7/8" Stem
 XL1BNUT Fits 1" Stem
 XL118BNUT Fits 1 1/8" Stem

X-Type Right-Hand Thread

XR78BNUT Fits 7/8" Stem
 XR1BNUT Fits 1" Stem
 XR118BNUT Fits 1 1/8" Stem

Fresno-Type

FL78NUT Fits 7/8" Stem
 FL118NUT Fits 1 1/8" Stem

PLASTIC RING GASKET

CGGSKT8-15 Fits 7/8" Stem
 CGGSKT18-24 Fits 1" Stem
 CGGSKT30-36 Fits 1 1/8" Stem

WELD ON COUPLER

XL78WOC Fits 7/8" Stem
 XL1WOC Fits 1" Stem
 XL118WOC Fits 1 1/8" Stem

Replacement Parts

Wedges, Lift Collars, Bronze Lift Nuts, Stainless Steel Stems and Hand Wheels
 Available for X-GATE™ and Fresno® Brand Gates

STEEL EXTENSION COUPLER

CGEC6-15 7/8" for 6"-15" gate
 CGEC18-24 1" for 18"-24" gate
 CGEC30-36 1 1/8" for 30"-36" gate

HAND WHEELS

X-Type

X8-15WHL 8"-15" gate
 X18-24WHL 18"-24" gate
 X30-36WHL 30"-36" gate

Fresno-Type

F10WHL 6"-15" gate
 F14WHL 15"-36" gate

RING / LIFT COLLAR

X-Type

X8-15RING Fits 7/8" Stem
 X18-24RING Fits 1" Stem
 X30-36RING Fits 1 1/8" Stem

Fresno-Type

F-RING Fits 7/8" and 1 1/8" Stem

STAINLESS STEEL STEM

Stems Sold per Foot

X-Type Left-Hand Thread Stem

XL78ST 7/8"
 XL1ST 1"
 XL118ST 1 1/8"

X-Type Right-Hand Thread Stem

XR78ST 7/8"
 XR1ST 1"
 XR118ST 1 1/8"

Fresno-Type Left-Hand Thread Stem

FL78ST 7/8"
 FL118ST 1 1/8"



Contact XCAD USA® for Additional Replacement Part Pricing and Availability

STANDARD RAILING AND STEM LENGTHS

All Stems Are Stainless Steel Unless Otherwise Specified

Gate Size

(Rail Color Code)		8" (Red)		10" (Blue)		12" (Green)		15" (Yellow)		18" (Black)		24" (Brown)		30" (White)		36" (Pink)	
H,I Gate Height (In)	H,I Gate Height (Ft)	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length	H,I +D Total Rail Length (In)	Stem Length
"D" =		(4")		(4 1/2")		(5")		(6")		(7")		(9")		(11")		(13")	
"dd" =		(7/8")		(1 1/2")		(2")		(2 1/2")		(3 1/2")		(4 3/4")		(6 3/4")		(7 1/2")	
24"	2'	28 7/8"	30"	30"	31"	30"											
36"	3'	40 7/8"	42"	42"	43"	42"	44 1/2"	42"	46 1/2"	42"							
48"	4'	52 7/8"	54"	54"	55"	54"	56 1/2"	54"	58 1/2"	54"	61 3/4"	54"					
60"	5'	64 7/8"	66"	66"	67"	66"	68 1/2"	66"	70 1/2"	66"	73 3/4"	66"	77 3/4"	66"			
72"	6'	76 7/8"	78"	78"	79"	78"	80 1/2"	78"	82 1/2"	78"	85 3/4"	78"	89 3/4"	78"	92 1/2"	78"	
84"	7'	88 7/8"	90"	90"	91"	90"	92 1/2"	90"	94 1/2"	90"	97 3/4"	90"	101 3/4"	90"	104 1/2"	90"	
96"	8'	100 7/8"	102"	102"	103"	102"	104 1/2"	102"	106 1/2"	102"	109 3/4"	102"	113 3/4"	102"	116 1/2"	102"	
108"	9'	112 7/8"	114"	114"	114"	115"	114"	116 1/2"	114"	118 1/2"	114"	121 3/4"	114"	125 3/4"	114"	128 1/2"	114"
120"	10'	124 7/8"	126"	126"	127"	126"	128 1/2"	126"	130 1/2"	126"	133 3/4"	126"	137 3/4"	126"	140 1/2"	126"	

X-GATE™ LOW HEAD CANAL GATES

Low Head Flat Back Gate

Installation Guide for Attaching Flat Back Gate to Concrete Headwall

1 - Secure all specified anchor bolts in their proper position in concrete form, checking to see that anchor bolts, projections, perpendicular and horizontal alignments are all correct. Extra care is needed in this initial procedure to ensure that all bolts are properly set. Improperly set bolts will cause gate warpage and excess leakage between the seat surfaces. *Do Not Force Gate Onto Misaligned or Improperly Set Anchor Bolts.*

2 - Each anchor bolt needs to be supplied with two nuts to properly mount gate to headwall. It is also recommended that you provide sufficient access to the back side of the gate to allow for easy adjustment of the back nuts. Sufficient grout space must be left for adjustment of back nuts and proper alignment of gate.

3 - After the concrete has been poured and forms stripped, **place one nut on each anchor bolt and run them down so they are 1" from the headwall (See Detail Z).** Carefully place the closed gate onto the anchor bolts. *Do Not Force Gate onto Misaligned Anchor Bolts.* Place the second nut on each anchor bolt and bring front and back nuts into finger-tight contact with the gate frame, then align gate as necessary.

At this point of the installation, check all clearances between seating surfaces with a .004" feeler gauge. If there is proper seating at this point the gauge will not admit. In the event that the gate is not seated properly, check to see if the gate has been warped. If so, readjust nuts on anchor bolts to flatten gate. Adjustment of the wedges may also be necessary.

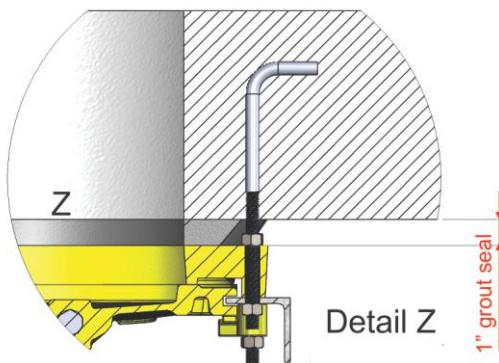
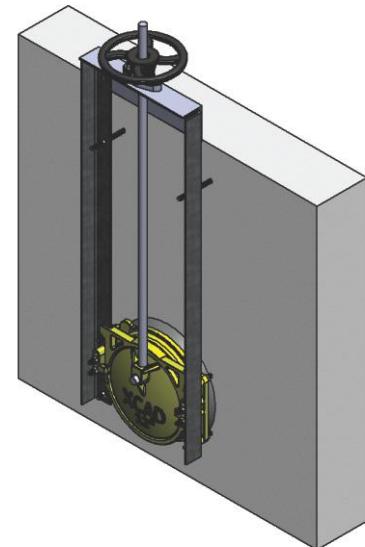
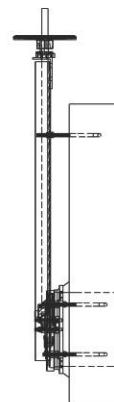
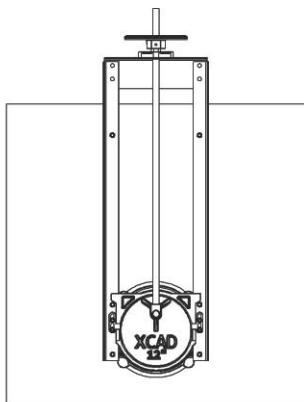
4 - After the gate is seated properly, carefully dry pack or grout in the 1" gap between frame ring and concrete headwall using a non-shrink material. Check voids and fill as necessary.

5 - Lightly tighten all exposed anchor bolt nuts uniformly so as not to warp gate to uneven surfaces.

6 - Gate is now ready for operation.

NOTE: Gates and Pipe Are Heavy! Use Care and Good Working Practice in Assembly and Installation.
WARNING: Do Not Bolt Flat Back Gate Directly Against Head Wall. Leave 1" Space for Grouting.

Low Head Flat Back Gate



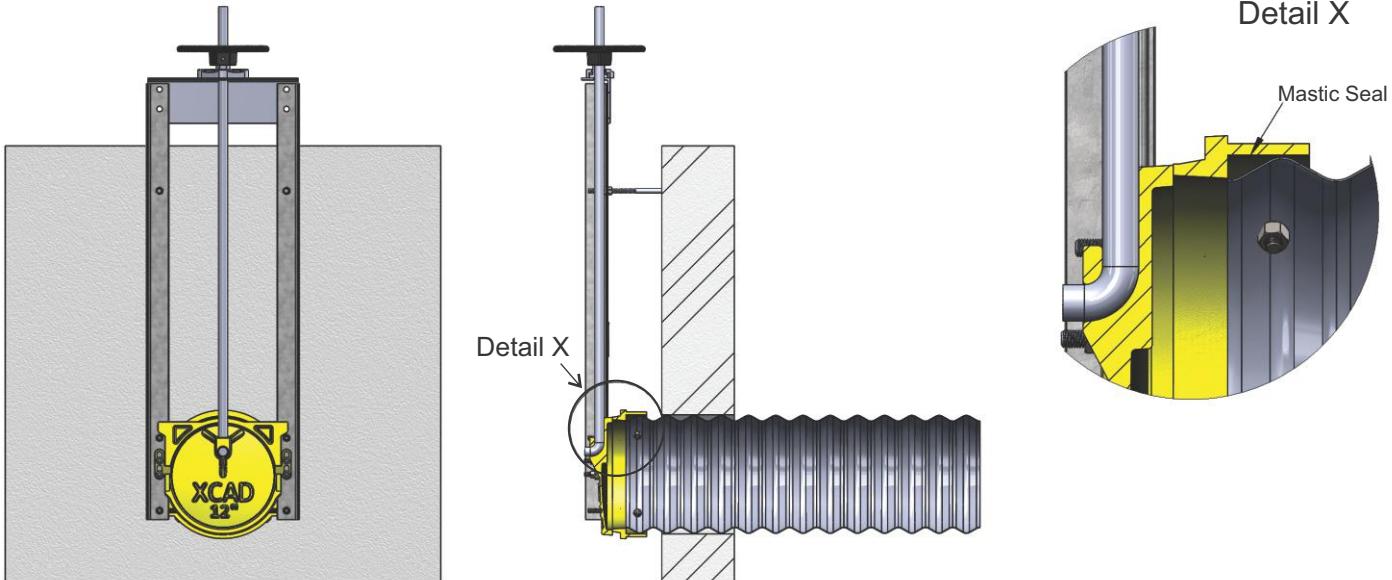
X-GATE™ LOW HEAD CANAL GATES

Low Head Spigot Back Gate

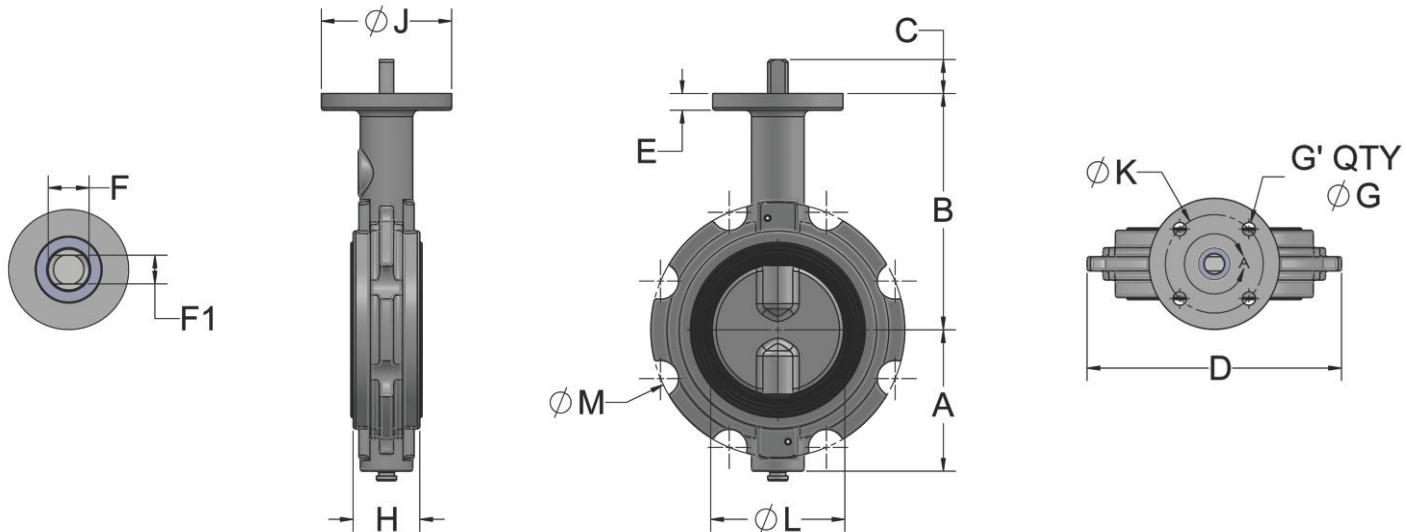
Installation Guide for Spigot Back Gate to Corrugated Pipe

- 1 - Place spigot back gate over corrugated pipe, making sure the pipe and gate are perpendicular.
- 2 - Drill holes through corrugated pipe using holes in spigot back gate as a template (13/32" or 7/16" drill bit).
- 3 - Secure the gate to corrugated pipe using either galvanized Grade 5 steel bolts or stainless 304 bolts and nuts. *Forcing Bolt May Cause Damage to Gate.*
- 4 - Apply a mastic sealant to joint in between corrugated pipe and gate (See Detail X).
- 5 - Brace both pipe and gate as necessary. Deflection and distortion of corrugated pipe may cause the gate to leak.
- 6 - Place braced coupled gate and corrugated pipe into ditch or trench, then back fill or pour as required ensuring that gate is vertical from the centerline opening.
- 7 - Remove bracing, check and clean gate seat to make sure proper full periphery seating is achieved. (Use .004 feeler gauge.)
- 8 - Check the gate for any type of damage or irregularities.
- 9 - Gate is now ready for operation.

NOTE: Gates and Pipe Are Heavy! Use Care and Good Working Practice in Assembly and Installation.



GX SERIES BUTTERFLY VALVE DIMENSIONS



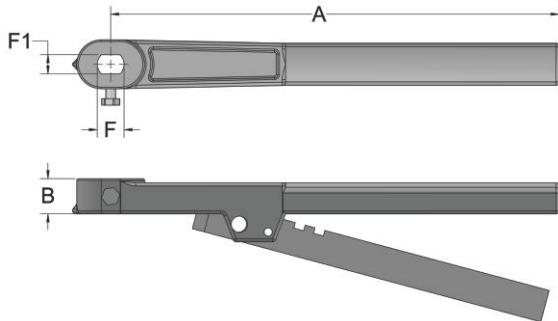
VALVE SIZE	A	B	C	D	E	F	F1	G'	G	H	J	K	L	M
2"	2.78	5.80	1.08	5.09	.54	.56	.44	4	.41	1.69	4	3	2.21	4.75
2.5"	3.03	6.30	1.06	5.73	.54	.56	.44	4	.41	1.81	4	3	2.67	5.50
3"	3.34	6.50	1.06	6.20	.54	.56	.44	4	.41	1.80	4	3	3.17	6.00
4"	4.32	7.25	1.16	7.78	.54	.64	.44	4	.41	2.06	4	3	4.18	7.50
5"	5.40	7.58	1.10	8.83	.54	.89	.44	4	.41	2.17	4	3	5.16	8.50
6"	5.60	8.38	1.06	9.38	.54	1.00	.44	4	.41	2.18	4	3	6.04	9.50
8"	7.65	9.63	1.63	11.90	.75	1.13	.75	4	.53	2.37	6	5	8.06	11.75
10"	9.03	11.05	1.63	14.69	.75	1.13	.75	4	.53	2.68	6	5	10.05	14.25
12"	10.30	12.50	1.63	17.19	.75	1.13	.75	4	.53	3.02	6	5	12.07	17.00

Material Specifications GX Series

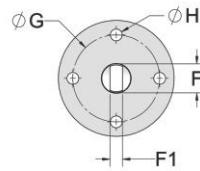
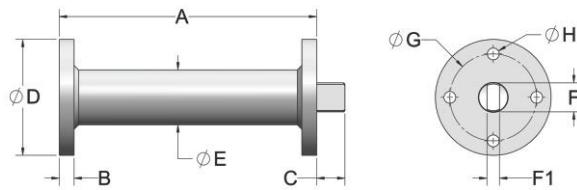
Part	Material
Body	Cast Iron
Seat	Phenolic Back Cartridge w/Buna-N Seat
Disc 2"-24"	Stainless-Steel
Disc 2"-24"	Ductile Iron
Stem Top/Bottom	Stainless-Steel
Spring Pin	Stainless-Steel
Top/Bottom Bearing	Nylon
O-Rings	Buna-N

For GX-Series Butterfly Valves see page 61

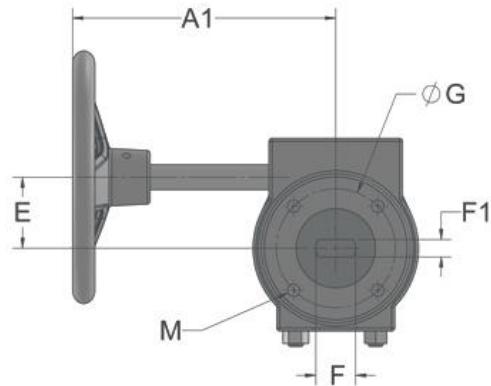
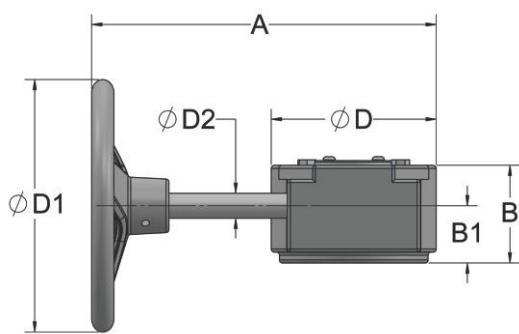
GX SERIES BUTTERFLY VALVE DIMENSIONS



Valve Size	A	B	F	F1
2"-3"	9	.86	.56	.44
4"	11	.86	.64	.44
5"	11	.86	.88	.44
6"	11	.86	1.00	.44
8"-11"	15	1.15	1.13	.75



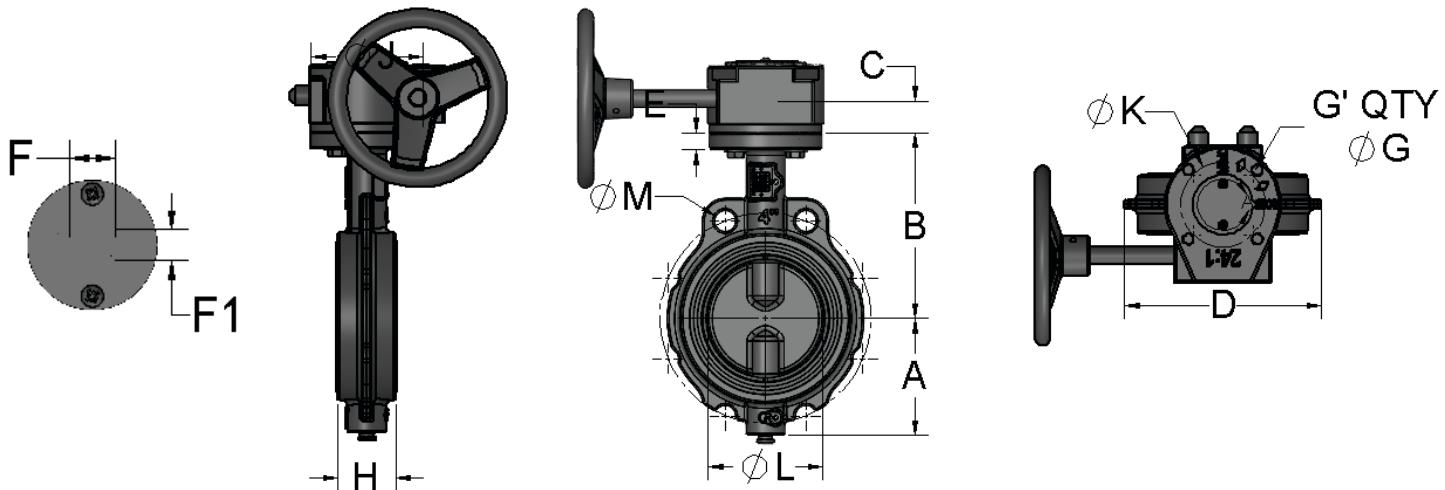
Valve Size	Extension Length A	B	C	D	E	F	F1	G	H
2" - 6"	24,36,48,60,72	.54	1.00	4	1.88	1.00	.44	3	.41
8" - 12"	24,36,48,60,72	.75	1.50	6	2.38	1.13	.75	5	.53



Valve Size	A	A1	B	B1	D	D1	D2	E	F	F1	G	M
2" - 3"	9.75	7.69	2.44	1.42	4.13	5.75	.63	1.88	1.00	.44	3	3/8"-16
4" - 6"	9.25	7.19	2.44	1.42	4.13	7.5	.63	1.88	1.00	.44	3	3/8"-16
8" - 12"	12.75	9.70	2.82	1.44	6.10	11.5	.75	2.63	1.13	.75	5	1/2"-13

For GX-Series Butterfly Valves see page 61

MONARCH BUTTERFLY VALVE DIMENSIONS



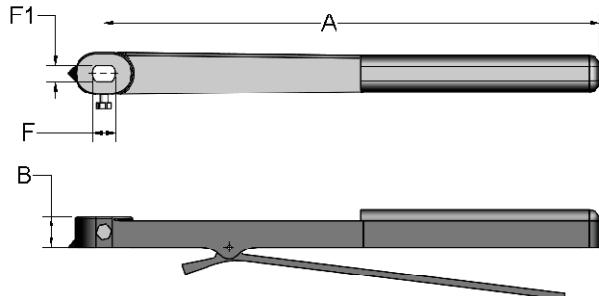
VALVE SIZE	A	B	C	D	E	F	F1	G'	G	H	J	K	L	M
3"	3.5	5.0	1.1	5.4	0.50	0.56	0.44	4	0.41	1.8	4	3	3.2	6.00
4"	4.1	6.6	1.1	6.9	0.50	0.64	0.44	4	0.41	2.1	4	3	4.2	7.50
6"	5.1	7.0	1.1	8.8	0.50	1.00	0.44	4	0.41	2.2	4	3	6.0	9.50
8"	6.4	9.6	1.6	10.9	0.68	1.13	0.75	4	0.53	2.4	6	5	8.1	11.75
10"	7.7	11.0	1.6	13.4	0.75	1.13	0.75	4	0.53	2.7	6	5	10.1	14.25
12"	9.3	12.0	1.6	16.2	0.75	1.13	0.75	4	0.53	3.0	6	5	12.1	17.00

Material Specifications Monarch Series

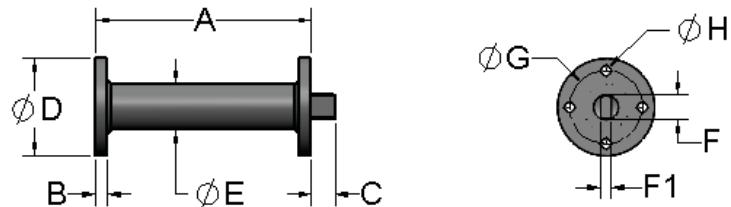
Part	Material
Body	Cast Iron
Seat	Phenolic Back Cartridge w/Buna-N Seat
Disc 2"-24"	Stainless-Steel
Disc 2"-24"	Ductile Iron
Stem Top/Bottom	Stainless-Steel
Spring Pin	Stainless-Steel
Top/Bottom Bearing	Nylon
O-Rings	Buna-N

For Monarch Series Butterfly Valves see page 62

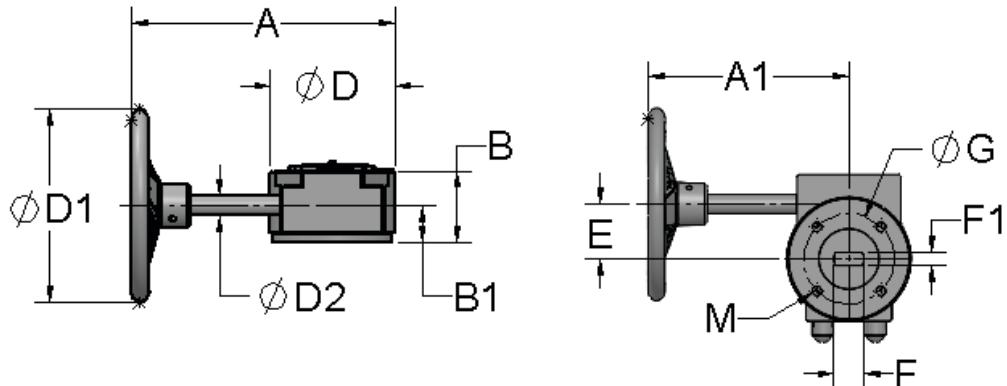
MONARCH BUTTERFLY VALVE DIMENSIONS



Valve Size	A	B	F	F1
3"-6"	11.75	1.00	0.87	0.44
8"-12"	13.75	1.15	1.13	0.75



Valve Size	Extension Length	A	B	C	D	E	F	F1	G	H
2" - 6"	24,36,48,60,72	.54	1.00	4	1.88	1.00	.44	.44	3	.41
8" - 12"	24,36,48,60,72	.75	1.50	6	2.38	1.13	.75	.75	5	.53



Valve Size	A	A1	B	B1	D	D1	D2	E	F	F1	G	M
2"-6"	7.8	5.7	2.5	1.40	4.1	7.25	0.63	1.88	1.00	0.44	3	3/8"-16
8"-12"	11.2	8.1	3.0	1.65	6.1	11.25	0.75	3.00	1.13	0.75	5	1/2"-13

For Monarch Series Butterfly Valves see page 62

INSTALLATION AND STORAGE GUIDELINES

SEAL-MATIC® Control Valves

- Always flush pipelines before installation of the valve as debris may plug and/or damage valve.
- Arrow on valve housing **must** match actual flow direction. If there is no arrow on valve, make sure **line filter is upstream** in pipeline.
- Seal-Matic® valves can be mounted either vertically or horizontally, but they must be mounted to allow the control chamber to be drained in freezing conditions.

TIGHTEN FLANGE BOLTS TO 30 FT LBS TORQUE

Tighten bolts alternately 180° apart. Repeat 3 times in a star pattern.

- If the valve is to be installed and operated in ambient temperatures below freezing, consult with your nearest **XCAD USA**® distributor.
- If valve is shut down during cold or freezing weather, the valve control space and control system **must be drained**.
- Connect solenoid control and pressure switch to control circuit according to local electrical codes.

Optimal Flow Rate for Electric On/Off Valves - GPM

3/4" Seal-Matic®	–	5 to 40	2" 90° Seal-Matic®	–	25 to 175
1" Seal-Matic®	–	5 to 70	3" Seal-Matic®	–	100 to 500
1 1/4" Seal-Matic®	–	15 to 120	4" Seal-Matic®	–	200 to 800
1 1/2" Seal-Matic®	–	18 to 135	6" Seal-Matic®	–	400 to 1400
2" Seal-Matic®	–	25 to 175	8" Seal-Matic®	–	1000 to 3500

Specifications: Fixed Diaphragm Style.
 Mounts between all standard flanges.

Max Pressure: 125 psi

Water Temp Range: 33°F to 130°F

Valve Length (End to End) – (Flange to Flange)

3/4" and 1"	–	5 1/8"	3"	–	11 7/8"
1 1/4" and 1 1/2"	–	6 1/2"	4"	–	12 1/4"
2"	–	7 3/4"	6"	–	12 3/8"



For Reactive/Piloted Control Valves see page 66

INSTALLATION AND STORAGE GUIDELINES

X-MAX Inline Control Valves

- Always flush pipelines before installation of the valve as debris may plug and/or damage valve.
- Arrow on valve housing **must** match actual flow direction. If there is no arrow on valve, make sure **line filter is upstream** in pipeline.
- Tighten bolts to the recommended torque for specific size and model of valve.

4" X-MAX Inline Wafer Valve – 15 Ft. Lbs. Torque
 6" X-MAX Inline Wafer Valve – 20 Ft. Lbs. Torque
 8" X-MAX Inline Wafer Valve – 20 Ft. Lbs. Torque

Tighten bolts alternately 180° apart. Repeat 3 times in a star pattern.

- If the valve is to be installed and operated in ambient temperatures below freezing, consult with your nearest **XCAD USA** distributor.
- If valve is shut down during cold or freezing weather, the valve control space and control system **must be drained**.
- Connect solenoid control and pressure switch to control circuit according to local electrical codes.

Optimal Flow Rate for Electric On/Off Valves - GPM

4" XMAX Inline Wafer Valve -- 200 - 800
 6" XMAX Inline Wafer Valve -- 500 - 2250
 8" XMAX Inline Wafer Valve -- 1200 - 4000

Specifications:

Wafer Style.
 Mounts between all standard flanges.
 ANSI B16.1 125 and 250
 Valve Length 4" - 7 5/8"
 6" - 10 1/4"
 8" - 12 1/4"



XMAX6WS
SuperMax

Max Pressure: 140 psi

Water Temp Range: 33°F to 130°F

For Reactive/Piloted Control Valves see page 69

CONTROL VALVE SIZING

Reactive Control Valve Sizing

Pressure Reducing and Sustaining

Choosing the correct valve size is critical when designing a pressure reducing or sustaining reactive control valve system. Valves must be sized correctly for the reactive control function to work properly. Control valve system designers need to avoid the most common problems while designing and sizing a control valve system.

Problem #1 – “Over-Sizing The Valve”. An over-sized reactive pressure regulating control valve may lead to severe problems such as pressure cycling, cavitation and water hammering. Valves at the same diameter as the pipe may allow for simplified installation, however they often lead to severe throttling problems.

Problem #2 – Size Selection. When selecting the size of the reactive control valve from valve flow graph minimum and maximum rates, keep in mind that such graphs do not take into account pressure drop across the valve. Since both rate of flow and pressure drop determine the diaphragm/sleeve position, both must be taken into account for proper reactive valve sizing. In order to make the control valve react correctly, the diaphragm/sleeve position should be in the middle of the fully-open and fully-closed positions.

Installation Suggestions for Reactive Valve Control

To Improve Reactive Control Accuracy

- 1 - Avoid installing a pressure trap in a turbulent flow area
- 2 - Avoid air in system
- 3 - For pressure reducing control, installing the downstream pressure trap at the end of a 24" to 30" long straight pipe will help the accuracy of the reactive control
- 4 - To be the most effective, the upstream and downstream pipe length should be a minimum of five pipe diameters long

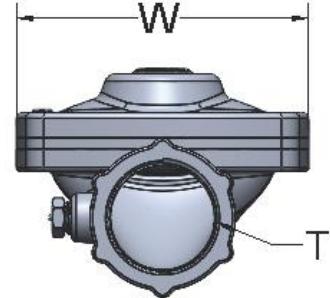
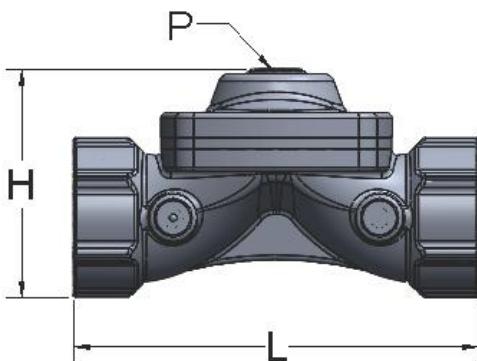
Minimum optimal flow for reactive/piloted control valve sizing (Pressure reducing/sustaining)

Seal-Matic				XMAX	
3/4"	25 gpm	2" 90°	125 gpm	4"	450 gpm
1"	28 gpm	3"	400 gpm	6"	800 gpm
1 1/4"	43 gpm	4"	500 gpm	8"	2250 gpm
1 1/2"	45 gpm	6"	800 gpm		
2"	125 gpm	8"	1500 gpm		

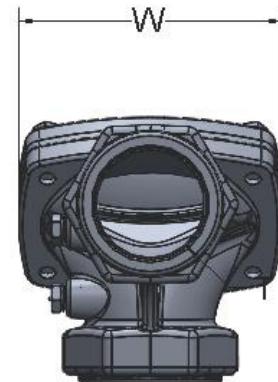
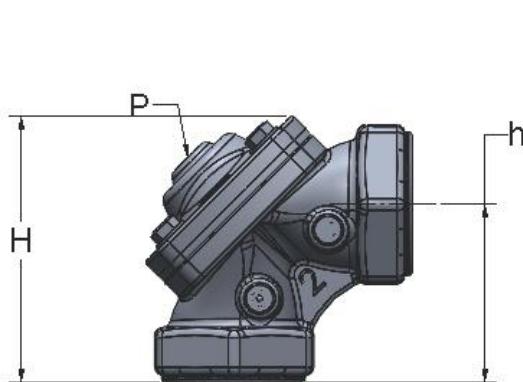


SMV6MPR
 Super Flow

SMV DIMENSIONS



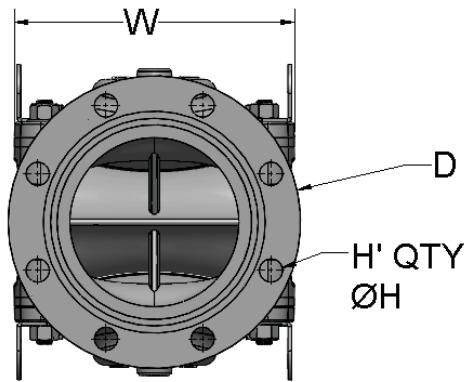
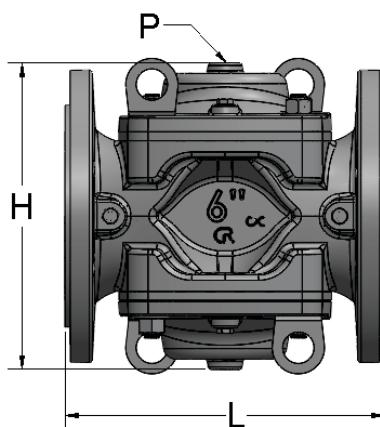
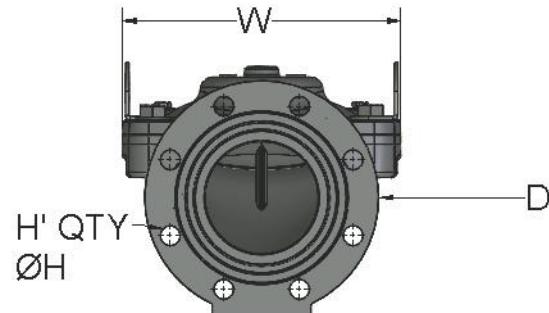
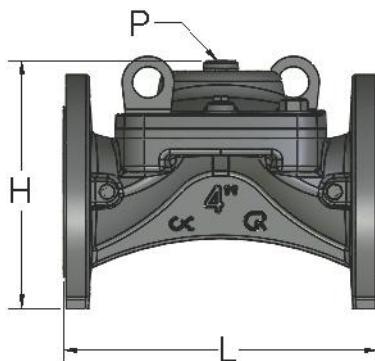
Part #	Length	Height	Bonnet Width	Thread Size	Port Size
	L	H	W	T	P
SMV75	5.1	2.7	4.0	3/4" NPT	1/4" NPT
SMV1	5.1	2.7	4.0	1" NPT	1/4" NPT
SMV1.25	6.5	3.7	4.7	1-1/4" NPT	1/4" NPT
SMV1.5	6.5	3.7	4.7	1-1/2" NPT	1/4" NPT
SMV2	7.3	4.2	5.4	2" NPT	1/4" NPT



Part #	Overall Height	Center Height	Bonnet Width	Thread Size	Port Size
	H	h	W	T	P
SMV902	5.6	3.6	5.4	2" NPT	1/4" NPT

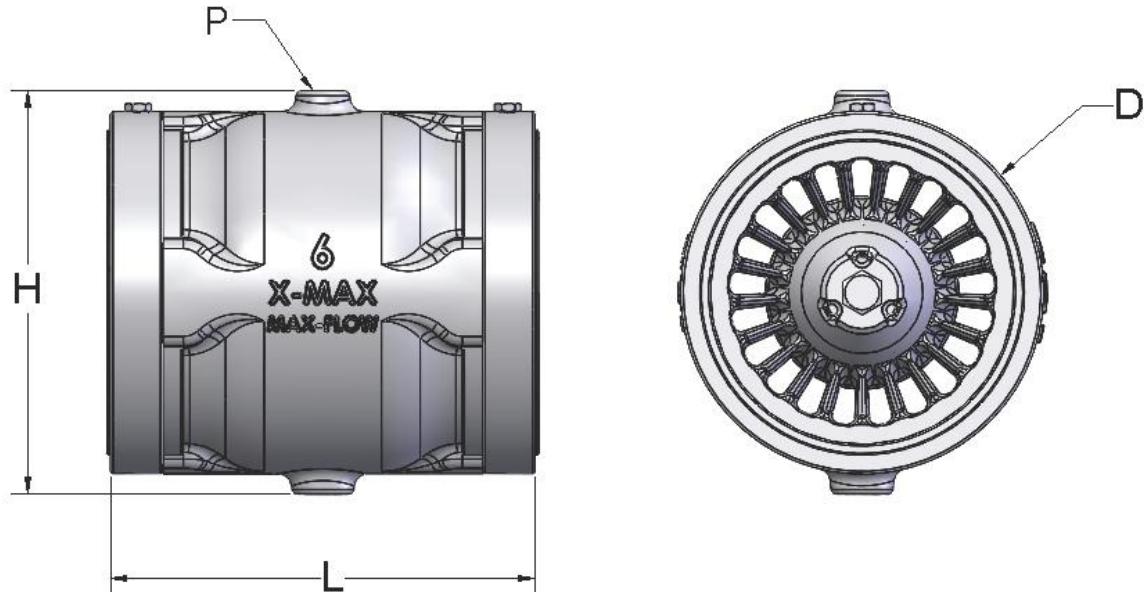
For SMVs see page 66

SMV DIMENSIONS



Part #	Length	Height	Bonnet Width	Flange Diameter	Bolt Qty	Bolt Hole Dia	Port Size
	L	H	W	D	H'	OH	P
SMV3	11.7	8.4	10.6	7.8	4	3/4"	1/4" NPT
SMV4	11.9	9.4	10.6	9.0	8	3/4"	1/4" NPT
SMV6	12.1	11.8	10.6	11.0	8	7/8"	1/4" NPT
SMV8	14.0	15.7	12.0	13.5	8	7/8"	1/4" NPT

X-MAX DIMENSIONS



Part #	Length	Height	Diameter	Port Size
	L	H	D	P
XMAX4	7.8	7.2	6.5	1/4" NPT
XMAX6	10.1	9.6	8.6	1/4" NPT
XMAX8	12.1	11.9	10.9	1/4" NPT

For X-MAX Valves see pg 69

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Select Aqua Burst® Brass Impact Sprinklers carry a three-year bearing limited warranty. This warranty applies to the Aqua-Burst™ brass impact sprinkler bearings and bearing components which are installed as specified and used for normal irrigation purposes. This warranty applies only to cataloged brass impact sprinkler bearings which have not been altered, converted, damaged, misused or misapplied. This warranty does not cover products adversely affected by the system into which the sprinkler bearings are incorporated; including system failure, improperly designed, installed, operated or maintained systems, or systems using water containing corrosive chemicals, electrolytes, sand, dirt, silt, rust, oil, petroleum or hard water deposits. This warranty does not cover component failures caused by use of additional lubricants such as oil, grease, anti-seize, pipe dope or any other petroleum or non-petroleum based lubricant. This warranty does not cover failure caused by lightning strikes, electrical surges, freezing or any "Acts of God". Bearings on, or intended for all other Aqua Burst™ brass, plastic and zinc sprinklers are not included in this extended warranty. The **XCAD USA®** reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

Aqua Burst™ X-Series Full/Part Circle Brass Impact 2-Year Warranty on Select Models X25ED, X25EDS, X35ED, X65ED, X65EDS, X85ED18, X85ED24, X75 Black Bird™

Select Aqua Burst™ X-Series Full/Part Circle Brass Impact Sprinklers carry a two-year extended limited warranty. This warranty applies only to X-Series Full/Part Circle sprinklers listed above which are installed as specified and are used for normal irrigation uses and purposes. This warranty does not cover products adversely affected by the system into which the sprinklers are incorporated including, system failure, improperly designed, installed, operated or maintained systems, or systems using water containing corrosive chemicals, electrolytes, sand, dirt, rust, oil, petroleum or hard water. This warranty does not cover component failures caused by use of additional lubricants such as but not limited to oil, grease, anti-seize, pipe dope or any other petroleum or non-petroleum lubricant. This warranty does not cover failure caused by lightning strikes, wind damage, electrical surge, pivot and wheel line crashes, industrial accidents, freezing or any "Acts of God". The **XCAD USA®** reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

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All Seal Matic® valves and Seal Matic® OEM name plate valves are warranted to be free of defects in materials and workmanship for a period of one year or one season whichever is less from the date of delivery unless otherwise specified in writing. Specific OEM warranties may supersede this warranty. No warranty will extend beyond the description of goods sold on the "Company" invoice except as expressly provided herein. All warranties express or implied, including any implied warranty of mechanical ability or suitability for a particular purpose or use, are hereby excluded and disclaimed. The Buyer assumes all risk and liability resulting from use of "Company" products purchased. Any misuse, neglect, modifications or use for purposes not approved by standard practice of the "Company" shall be completely void of any warranty claims. The "Company" at its sole discretion shall have the option to determine whether to warranty, repair or replace, part or all of the defective product or provide full or partial refund for same. Any warranty claim must be made in writing within the applicable warranty period and postmarked within 30 days after the discovery of the defect. Warranty does not under any circumstances include any installation, attorney fees, or transportation costs which must be borne by the purchaser of "Company" product. Seal-Matic® valve diaphragms have a limited warranty for three years for replacement diaphragms only. The **XCAD USA®** reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

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XCAD USA®/Aqua Burst® X100 End Gun™ and SX100 End Gun™ sprinklers are warranted for one year from date of original sale to be free of defective materials and workmanship when used within the working specifications for which the product was designed and intended and under normal use and service. This warranty includes an additional three (3) year service plan from the date of purchase for repair of any non-functioning X100 End Gun™ and/or SX100 End Gun™ due to defective materials and workmanship or excessive wear when used in normal working conditions. Dated receipt with serial number required as proof of purchase. The manufacturer's liability under this warranty is limited solely to repair of defective parts and labor and the manufacturer will not be liable for any freight, crop loss or other consequential damages resulting from defects, excessive wear or breach of warranty. This warranty is expressly in lieu of all other warranties, express or implied, including the warranties of merchantability and or liabilities of the manufacturer. No agent, employee or representative of the manufacturer has the authority to waive, alter or add to the provisions of this warranty, nor make any representations or warranty not contained herein. The **XCAD USA®** reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

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