


2014

Pricing effective 1/2/2014

XCAD USA™

AQUA BURST 

Pressure Guard™ 

SEAL  **MATIC**™

X-GATE™

Creopluology™

The Science of Making Rain™

CXD

Innovation Through Design,
Engineering and Experience™

AQUA BURST

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COMING SOON

AQUA BURST

X-100 End Gun™

★ *Irr*i ★ *Star* ★

Nelson 100 Series Big Gun®
Aftermarket Replacement Parts



XCAD USA™

XCAD USA™

A BETTER CHOICE

AQUA BURST

Torque Driven™

Innovation
Through Design,
Engineering and Experience™

Multi-Composite™

Raven-Smart™

Technology of Modern Design™

Precision Channel Spoon™

X SERIES BRASS™ - MADE TO LAST™

Advanced Flow Nozzles™

Hammerhead HH™

Creopluology™

The Science of Making Rain™

All XCAD® Products Are Designed and Engineered in the USA
From Materials Made in the USA, Germany, India and Other Foreign Sources

INSTALLATION, MAINTENANCE & USER GUIDE

Installation, Maintenance and User Guide for Aqua Burst® Full Circle Impact Sprinklers

Operation of the Spoon-Driven Sprinkler

- ◆ Pressurized water passes through the bearing and sprinkler body exiting through the nozzle onto the sloping vane. The water is then directed through the arm window into the curve of the spoon creating a reactionary force.
- ◆ The reactionary force of the pressurized water leaving the spoon forces the arm out of the stream and away from the nozzle.
- ◆ The tension of the arm spring then pulls the arm back into its original position. During this process the impact is accelerated by the angle of the leading edge of the sloping vane causing the sprinkler to move a small degree of travel so that the rotation of the sprinkler is relatively slow and uniform (one-half to three minutes per revolution, depending on the model, pressure and nozzle size).

Common Causes of Impact Sprinkler Failure

1 - Foreign objects in water causing nozzle to become plugged

Remove and clean nozzle, then reinstall. Brass nozzles plugged with soft materials may be removed by inserting a wire to dislodge plug as long as care is used not to scratch the internal bore of the nozzle.

2 - Oils or Pipe Dope

Most Aqua Burst sprinklers come with **pre-applied XC-33 thread sealant** and require no other sealant during installation. All Aqua Burst impact sprinklers are water-lubricated. Never use additional lubricants such as oil, grease, anti-seize or pipe dope on bearing assembly or arm. Doing so will damage sprinkler and will *void warranty*. **Teflon tape, properly installed is the only other recommended thread sealant.**

3 - Improper Pressure

Always operate sprinkler within its recommended normal pressure range. Operation of sprinkler outside of its intended performance range may cause premature wear or crop damage and will *void warranty*. (See Aqua Burst nozzle performance charts for working pressure ranges).

4 - Worn and Improper Nozzle Sizes

Aqua Burst Impact Sprinklers are only guaranteed to function optimally with recommended nozzle sizes and types for each individual model. Only use recommended nozzle sizes and types for each model. Using improper size and type may cause excessive wear or sprinkler failure, inaccurate water distribution and/or crop damage and will void warranty. (See Aqua Burst nozzle performance charts for proper nozzle selection).

5 - Crushed Bearing Sleeve

Avoid over-tightening sprinkler into riser or fitting during installation. Most Aqua Burst sprinklers come with **pre-applied XC-33 thread sealant**. Over-tightening can cause the outer bearing sleeve to crush into the inner bearing spindle causing the bearing to bind and fail to rotate. In addition, over-tightening makes removal and replacement difficult and may require professional assistance.☺

6 - Avoid Incompatible Fittings

Avoid fittings that can come into contact with sprinkler bearing spindle. Some fittings have a shoulder that can interfere with the bearing spindle and cause the sprinkler to seize and fail.

7 - Over-tightening

Avoid over-tightening nozzle and sprinkler bearing nut during installation. Over-tightened nozzle will be very difficult to remove and replace. Never use a wrench or sprinkler wrench that can crush the bearing while installing or removing the sprinkler. Most Aqua Burst sprinklers come with **pre-applied XC-33 thread sealant** and do not require sprinkler to be over-tightened during installation.

AQUA BURST 2014 Product Line-Up

Innovation Through Design, Engineering, and Experience™



Torque Driven™

AquaBurst® 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.
Thread Sealant XC-33
 Most models come with preapplied thread sealant XC-33. XC-33 forms an elastic gasket for easy assembly, removal and reuse.
Teflon® tape is the only other recommended thread sealant.



**Raven-Smart™
Multi-Composite™**

Designed and Engineered in the USA
Made with Domestic and Foreign Parts

Part #	Base	Coverage	Recommended Nozzles	Material	Qty
HF20	1/2"	Adjustable	NOZ5R-	Brass	100/case
X25EDS	1/2"	Adjustable	NOZ5R-	Multi-Composite™	100/case
X25ED	1/2"	Adjustable	NOZ5R-	Multi-Composite™	100/case
AL1023	1/2"	10° or 23° Full Circle	NOZ5R-	Multi-Composite™	100/case
AL1023W	1/2"	10° or 23° FC Wedge	NOZ5R-	Multi-Composite™	80/case
AL30	3/4"	Full Circle	NOZ75- or NOZPL75-	Multi-Composite™	60/case
HF30	3/4"	23° Full Circle	NOZ75- or NOZPL75-	Brass	60/case
HF30AL	3/4"	Full Circle	NOZ75- or NOZPL75-	Brass/Aluminum	60/case
X35ED	3/4"	Adjustable	NOZ75- or NOZPL75-	Brass	20/case
X65F-S	1"	Full Circle	NOZ1-	Brass	each
X65ED-S	1"	Adjustable	NOZ1-	Brass	each
X85F24	1 1/4"	Full Circle	NOZ125-	Brass	each
X85ED18	1 1/4"	Adjustable	NOZ125-	Brass	each
X85ED24	1 1/4"	Adjustable	NOZ125-	Brass	each

1/2" BRASS IMPACT SPRINKLER

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



**FIVE-YEAR
LIMITED BEARING
WARRANTY**

HF20

HF20

100 /case

- Features**
- ◆ Full-circle impact - 23° trajectory
 - ◆ 1/2" male NPT base.
 - ◆ Single nozzle
 - ◆ 3/8 - 24 UNF nozzle threads
 - ◆ **Sprinkler does not come with 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
 - ◆ Wide range of nozzles - 3/32", 7/64", 1/8" and 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	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

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

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

Raven-Smart™ Technology

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



**TWO-YEAR
WARRANTY**

X25EDS

100/case

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



**TWO-YEAR
WARRANTY**

X25ED

100/case

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

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MULTI-COMPOSITE™ 1/2" BASE IMPACT SPRINKLERS

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

Raven-Smart™ Technology

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



AL1023

100/case

Standard Spoon Arm

- ◆ Full-circle, dual angle, 2 in 1 impact sprinkler
- ◆ **Use as either 10° or 23° trajectory**
- ◆ 1/2" male N.P.T. base
- ◆ Wide range of brass nozzles
- ◆ 3/8-24 UNF nozzle threads

Sprinkler Head Does Not Include Nozzle



AL1023W

80/case

Wedge Arm

- ◆ Full-circle, dual angle, 2 in 1 impact sprinkler
- ◆ **Use as either 10° or 23° trajectory wedge**
- ◆ 1/2" male N.P.T. base
- ◆ Wide range of brass nozzle
- ◆ 3/8-24 UNF nozzle thread

Sprinkler Head Does Not Include Nozzle

- ◆ 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

- ◆ Excellent frost protection sprinkler for both overhead and low angle under tree situations
- ◆ Anodized aluminum wedge drive arm
- ◆ Composite body is super-strong and impact resistant
- ◆ All brass bearing
- ◆ Stainless steel fulcrum pin, arm spring, and bearing spring
- ◆ Ideal for low precipitation rates
- ◆ Built-in vane straightener for improved performance
- ◆ Highly efficient water distribution
- ◆ Made from domestic and foreign parts

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

AQUA BURST® Performance Chart

Normal Stream Height At 2.5' Above Nozzle at Normal Pressure

Radius - GPM

PSI	1/16" nozzle	5/64" nozzle	3/32" nozzle	7/64" nozzle
35	30 - 0.69	32 - 1.08	34 - 1.55	37 - 2.02
40	30 - 0.74	33 - 1.14	35 - 1.67	37 - 2.15
45	31 - 0.79	33 - 1.21	36 - 1.72	38 - 2.32
50	31 - 0.83	34 - 1.29	36 - 1.85	38 - 2.47
55	32 - 0.86	35 - 1.33	37 - 1.93	39 - 2.59
60	32 - 0.90	35 - 1.39	37 - 2.00	39 - 2.65

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

All Prices Subject To Change Without Notice

3/4" MULTI-COMPOSITE™ IMPACT SPRINKLER Raven-Smart™

3/4" Full-Circle Multi-Composite™ Impact Precision Channel™ Aluminum Arm
Raven-Smart™ Technology

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



AL30

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

- Advantages**
- ◆ Anodized diecast 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**
- Sprinkler Head Does Not Include Nozzle

AL30
AL30-C (w/chrome bearing)
AL30SP (w/plastic spindle)
60/case

AQUA BURST® Performance Chart

Normal Stream Height At 9' Above Nozzle at Normal Pressure

PSI	Single Nozzle Radius - GPM				
	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

PSI	Dual Nozzle Radius - GPM				
	1/8" x 3/32" nozzles	9/64"x3/32" nozzles	5/32"x3/32" nozzles	11/64"x3/32" nozzles	3 1/16"x1/8" 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	99 - 9.2	52 - 12.6

Aqua Burst™ impact sprinklers are only guaranteed to function optimally with nozzle type and sizes from each individual model's performance chart.
All Prices Subject To Change Without Notice

3/4" BRASS IMPACT SPRINKLER

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



**FIVE-YEAR
LIMITED BEARING
WARRANTY**

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)

- 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**
- Sprinkler Head Does Not Include Nozzle

HF30 (single)
HF30-C (single w/chrome bearing)
HF30D (dual)
HF30D-C (dual w/chrome bearing)
60/case

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 - 2.2	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	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
30	39 - 3.8	41 - 4.4	43 - 5.3	44 - 6.0	44 - 7.0
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

Aqua Burst™ impact sprinklers are only guaranteed to function optimally with nozzle type and sizes from each individual model's performance chart.
All Prices Subject To Change Without Notice

3/4" BRASS/ALUMINUM IMPACT SPRINKLER

Precision Channel™ Aluminum Arm



**FIVE-YEAR
LIMITED BEARING
WARRANTY**

HF30AL

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

- Advantages**
- ◆ Anodized diecast 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**
- Sprinkler Head Does Not Include Nozzle

HF30AL (single)
HF30AL-C (single w/chrome bearing)
60/case

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

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

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1/2/14

3/4" BRASS IMPACT SPRINKLERS X SERIES BRASS - MADE TO LAST™

3/4" Adjustable Brass Impact Sprinkler



**TWO-YEAR
 WARRANTY**

X35ED

Features

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

Advantages

- ◆ Cast brass drive arm with triple bridge construction
- ◆ Super 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**

Sprinkler Head Does Not Include Nozzle

X35ED
 20/case

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
30	40 - 3.20	41 - 3.83	42 - 4.59	43 - 5.35
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 - 4.73	47 - 6.50	48 - 7.72

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

All Prices Subject To Change Without Notice

1" BRASS IMPACT SPRINKLERS X SERIES BRASS - MADE TO LAST™

1" Adjustable Brass Impact Sprinkler



TWO-YEAR WARRANTY

X65ED-S

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

- 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, waste water 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**

Sprinkler Head Does Not Include Nozzle

X65F-S (FC w/spoon)
X65ED-S (Adjustable w/spoon)
sold individually

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	21/64" nozzle	11/32" nozzle	23/64" nozzle	3/8" nozzle
30	50 - 7.5	53 - 10.1	57 - 12.3	58 - 15.4	60 - 16.6	61 - 18.2	62 - 19.5	63 - 21.1
35	52 - 8.1	54 - 10.8	58 - 13.5	59 - 16.5	61 - 17.9	62 - 19.5	64 - 21.2	64 - 22.7
40	54 - 8.7	56 - 11.5	61 - 14.5	62 - 17.8	64 - 19.3	65 - 21.3	65 - 22.8	68 - 24.5
45	56 - 9.2	58 - 12.2	63 - 15.2	64 - 18.8	66 - 20.4	67 - 22.2	67 - 24.0	71 - 25.9
50	59 - 9.9	61 - 12.9	64 - 16.0	67 - 19.9	68 - 21.4	69 - 23.4	69 - 25.3	72 - 27.2
55	61 - 10.2	63 - 13.4	66 - 16.9	69 - 20.8	71 - 22.5	72 - 24.5	72 - 26.4	74 - 28.4
60	62 - 10.7	65 - 14.2	67 - 17.6	71 - 21.9	72 - 23.4	73 - 25.6	74 - 27.8	76 - 29.5
65	64 - 11.2	66 - 14.8	69 - 18.4	73 - 22.8	74 - 24.3	75 - 26.5	76 - 28.7	79 - 30.8
70	65 - 11.8	67 - 15.4	70 - 19.2	74 - 23.7	76 - 25.4	77 - 27.7	79 - 29.9	81 - 32.1

AQUA BURST

1-208-438-9223
Fax: 1-208-438-4468

E-mail: xcad@pmt.org
Toll Free: 1-866-438-9223

1/2/14

1 1/4" BRASS IMPACT SPRINKLERS

X SERIES BRASS - MADE TO LAST™

Features

- ◆ Full- or part-circle impact
- ◆ 18° or 24° trajectory
- ◆ 1 1/4" male N.P.T. base
- ◆ Dual nozzle - NOZ125 Series

Advantages

- ◆ Chrome bearing standard
- ◆ Heavy-duty stainless steel and brass construction
- ◆ Easy to use and adjust locking brass trip collars
- ◆ Internal vane straightener standard
- ◆ Removable stainless steel spoon 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 part
- ◆ **Preassembled with XC-33 thread sealant**

Sprinkler Head Does Not Include Nozzle



X85ED18

TWO-YEAR WARRANTY

X85ED18

X85ED24

X85F24 (full circle)
sold individually



X85ED24

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"
30	63 - 24.9	64 - 28.5	67 - 31.7	68 - 35.4	71 - 39.4
35	66 - 27.1	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 13](#)

1 1/4" BRASS IMPACT SPRINKLERS

X SERIES BRASS - MADE TO LAST™

AQUA BURST® Performance Charts

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

X85ED18

Radius - GPM

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
30	56 - 18.2	58 - 21.8	61 - 24.3	63 - 28.6	65 - 32.0	66 - 36.5	65 - 40.1	66 - 45.7	66 - 55.7	67 - 66.9
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

X85ED24

Radius - GPM

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
30	63 - 18.0	64 - 21.7	67 - 24.1	68 - 28.4	71 - 32.2	71 - 36.2	72 - 39.9	72 - 45.2	72 - 55.5	73 - 67.2
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 - 32.4	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 - 32.0	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

IMPACT SPRINKLER NOZZLES

Better Water Distribution Without Plugging

- ◆ Use where high performance and distribution is needed
- ◆ Color coded for easy identification
- ◆ Built-in no-clog vane straightener for maximum reach
- ◆ Made with high quality wear resistant plastic
- ◆ Hand-tight fit for easy in and out installation
- ◆ Fits 3/4" Aqua Burst™, Rain Bird, and Nelson (hand tighten only)

Not for use with Non-Coined Sprinkler such as Wade Rain™, Weather-Tec™ or V-Rain™ brand Impact Sprinklers

Advanced Flow Nozzles™ w/Built-In No-Clog Vane Straightener

1/4" NPT Straight-Bore Nozzle

NOZPL75-18	Purple	1/8"
NOZPL75-964	Grey	9/64"
NOZPL75-532	Blue	5/32"
NOZPL75-1164	Yellow	11/64"
NOZPL75-316	Red	3/16"



Brass 1/8" Straight-Bore Nozzle

Fits 1/2" Impact Sprinkler
Or 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
Or 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-332	3/32"
NOZ5W-18	1/8"
NOZ5W-532	5/32"
NOZ5W-764	7/64"
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"
NOZ1-14	1/4"
NOZ1-932	9/32"
NOZ1-516	5/16"
NOZ1-1132	11/32"
NOZ1-38	3/8"

IMPACT SPRINKLER NOZZLES/REPLACEMENT PARTS

Brass Straight-Bore Nozzle

Fits 1 1/4" Impact Sprinkler

Fits AquaBurst™, Nelson™ and RainBird™



NOZ125-11/32	11/32"
NOZ125-38	3/8"
NOZ125-1332	13/32"
NOZ125-7/16	7/16"
NOZ125-15/32	15/32"

NOZ125-12	1/2"
NOZ125-17/37	17/37"
NOZ125-916	9/16"
NOZ125-58	5/8"
NOZ125-1116	11/16"

Brass Plug Nozzle

Brass Spreader Nozzle

1/8" NPT thread fits Aqua Burst®,
Weathertec™ and Storm™



NOZ-PLG18	1/8" NPT
NOZ-PLG25	1/4" NPT



NOZ-BKSPRD	3/32" or 1/8" NPT
------------	-------------------

Plastic Plug Nozzle



NOZ-PLPLG18	1/8" NPT
NOZ-PLPLG25	1/4" NPT

Sprinkler Bearing Assembly

Bearing Assembly includes spindle, housing, spring and washers



HF30BRNG



HF20BRNG



X65BRNG



X85BRNG

AL30BRNG

Fits Aqua Burst®
3/4" Adjustable 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

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" Impact Sprinklers

For wear washers and other AquaBurst™ sprinkler parts
contact XCAD for price and availability

IMPACT SPRINKLER ACCESSORIES

AQUA BURST™ NOZZLEMULTI-TOOL



NOZTOOL



NOZTOOL.5



Nozzle Tool For 3/4" Sprinkler

Features

- ◆ All stainless steel construction
- ◆ EZ grip handles
- ◆ Fits nozzles with 3/8", 7/16", 1/2" and 3/4" hex heads
- ◆ Fits 3/4" and 13/16" spark plugs
- ◆ Stainless steel nozzle plug wire

Nozzle Tool For 1/2" Sprinkler

Features

- ◆ All stainless steel construction
- ◆ EZ grip handles
- ◆ Fits nozzles with 3/8", 7/16" hex heads
- ◆ Stainless steel nozzle plug wire

AQUA BURST™ YARD ART



ST50B



ST75H

Features

- ◆ Unique base design adds artistic flair to your yard and garden
- ◆ Heavy-duty brass female hose connector
- ◆ Available for either 1/2" or 3/4" npt sprinklers
- ◆ Solid steel rod and maleable iron base construction
- ◆ Epoxy coated in multiple colors

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

XCAD USA™

XCAD VALVE & IRRIGATION

A BETTER CHOICE



Innovation
Through Design,
Engineering and Experience™

X-Max Valve™

XCON Valve™



SEAL MATIC™

Pressure Guard™

X-GATE™ Canal Gates

Pressure Lock™ (Patent Pending)

X-Spandable™
Expandable Drive Line

Raven Smart™
Diaphragm Technology

All XCAD® Products Are Designed and Engineered in the USA

RISER VALVE PRODUCTS

3" Hand Line Fittings



- EP3 3" Universal Aluminum Hook & Latch End Plug
18 per box
- EPS3 3" Universal Steel Hook & Latch End Plug
(Pierce-type) 12 per box
- EPS4 4" Universal Steel Hook & Latch End Plug
- 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)
- HOOK-S Hook Only for Pierce Type H&L Assy
- BL3-ASSY 3" Universal Band & Latch Assembly
12 per box
- HLLP3 3" Universal Hook & Latch 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)

Center Riser Outlet



CRO3

- CRO3 3" Center Riser Outlet Assembly
- CRO3FT Replacement Foot for CRO3
- CRO3GSKT Replacement Gasket for CRO3
- CRO3TOP Replacement Top for CRO3

Clamps



6RLC

WHLC

- 4RLC 4" Ring Lock Clamp 16 per box
- 6RLC 6" Ring Lock Clamp 10 per box
*Fits Wade Round Wheel Line Coupler
and Most 6" Ring Lock Couplers*
- WHLC 5" Wheel Line Clamp 10 per box
Heavy Duty Western Style
- 8RLC 8" Ring Lock Clamp 10 per box

RISER VALVE PRODUCTS



ALVSC44



ALVSC43



ALVSBRSR



ALVSBRSR-H



ALVSBRSR-R



ALVSBRSR-L

Threaded Aluminum Riser Valve Stubs

ALVSC43	4" X 3" Plated Stem	8 per box
ALVSC44	4" X 4" Plated Stem	8 per box
ALVSBRSR	Replacement Brass Spider (Wade-Style)	
ALVSBRSR-L	Weld-in Replacement Spider-Standard	
ALVSBRSR-H	Weld-in Replacement Spider-Heavy	
ALVSBRSR-R	Weld-in Removable Spider	

Features

- ◆ Heavy-duty cast aluminum body
- ◆ Cast-in-place threaded brass insert on ALVSC43 and ALVSC44
- ◆ Available with either plated zinc or all-brass stems
- ◆ Universal rubber cap



UNVSPS



UNVSBS



UNVRRBS



UNVPS8TPI

SUPERIOR THREAD QUALITY

Riser Valve Stems

UNVSPS	6 3/4" x 5/8" 7TPI Plated	70/Box
UNVSBS	6 3/4" x 5/8" 7TPI Brass	70/Box
UNVRRBS	5" x 5/8" 8TPI Brass (<i>Redi Rain</i>)	
UNVPS8TPI	6 3/4" X 5/8" 8 TPI Plated	70/Box <i>(Shur Rain/Felco)</i>



UNVSRC



UNVSFC



UNVSWRC

Rubber Valve Stem Caps

UNVSRC	4" Universal Cap	50/Box
UNVSFC	4" Universal Flat Cap	50/Box
UNVSWRC	4" Wade-Style	50/Box

RISER VALVE PRODUCTS**Valve Opening Elbows**
Heavy-Duty Aluminum

VOE4X3



VOE4X4

VOE4X3 4X3 Aluminum VOE
3 per boxVOE4X4 4x4 Aluminum VOE
3 per box**Features**

- ◆ 3/4" Auxiliary outlet
- ◆ Large latch pad reduces blow outs
- ◆ Easy serviceability
- ◆ Large handle for easy opening & closing
- ◆ Brass wear bushing
- ◆ Brass connection clutch
- ◆ 3/4" Plated plated shaft



PRSL3



PRSL4



PRSL5

Galvanized Steel Press Sleeves

PRSL3 3"

PRSL4 4"

PRSL5 5"

HIGH QUALITY REPLACEMENT PARTS

VOE Replacement Components

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



4RLVOE



VOEHDL34



VOEHDLST34

4RLVOE

4" VOE Clamp

VOEHDL34

3/4" Aluminum Handle
16 per box

VOEHDLST34

3/4" Steel Handle



VOESHFT34



VOESEAL34



VOECLT34

VOESHFT34

3/4"x10" Zinc-Plated Shaft

VOECLT34

3/4" Brass Connection Clutch



VOEHDL58



VOEHDLST58

VOESEAL34

3/4" Chevron Seal

VOEHDL58

5/8" Aluminum Handle

VOEHDL58ST

5/8" Steel Handle



VOESHFT58



VOESEAL58



VOECLT58

VOESHFT58

5/8"x10" Zinc-Plated Shaft

VOESEAL58

5/8" Chevron Seal

VOECLT58

5/8" Brass Connection Clutch



VOECLTGR34



VOECLTGR58

VOECLTGR34

3/4" Receiver Gheen-style

VOECLTGR58

5/8" Receiver Gheen-style



VOECLTGS34



VOECLTGS58

VOECLTGS34

3/4" Stem Gheen-style

VOECLTGS58

5/8" Stem Gheen-style

Clamp Fits: XCAD, A&M, Western, and Pierce

AUTOMATIC DRAINS**Universal 3-piece Design**

Eliminates Need for Jam Nut



FDC-78



FDI-78



FDR-78



FDSN-78

Drain-Fast™ Flapper Drain

High Quality Zinc Construction

FDC-78

Complete Flapper Drain

FDI-78

Threaded Insert

FDR-78

Rubber Flapper

FDSN-78

Splash Nut

Heavy-Duty Replaceable Rubber Star



SDMBC-1



SDMC-1

SDMB-1



SDRS-1

Star Drain™High Quality Zinc Construction
(1" Male NPT)

SDMBC-1

Complete Metal Base Drain

SDMC-1

Metal Cap

SDRS-1

Rubber Star Gasket

SDMB-1

Metal Base

Spring Drain™

High Quality Zinc Construction



WSSD

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

WSSD

1" Spring Drain - Complete

WSSD-PL

Plunger ^{100/Box}

WSSD-SPR

Spring

WSSD-RW

Rubber Washer

WSSD-SPL

Splash Plate

Pivot Star Drains

Heavy-Duty Replaceable Rubber Star



SDPBC-1

SDPB-1



SDMC-1



SDRS-1

V-Drain™Replacement Drain for Valley Pivot Systems
1" NPT

SDPBC-1

Complete w/Plastic Base

SDMC-1

Metal Cap

SDRS-1

Rubber Star

SDPB-1

Plastic Base

Converts Mushroom-Type to Star-Drain Type

Easy External Installation



ZDCOMP

ZDBASE



ZDGROM

SDMC-1



SDRS-1

Z-Drain™7/8" Hole Replacement Drain
For Lindsay Pivot Systems

ZDCOMP

Complete Drain Assembly

ZDBASE

Base

ZDGROM

Rubber Grommet

ZDBSG

Base & Grommet Set

SDMC-1

Metal Cap

SDRS-1

Rubber Star Gasket

MISCELLANEOUS PARTS

**Built To A
Higher Standard**



LEV75

**More Weight
For Your Dollar**

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 waterpassage
- ◆ Powder coated finish

Universal Leveler Repair Components

LEV01	Stainless Bearing Spring
LEV02	Neoprene Washer
LEV03	Teflon Washer
LEV04	Brass Spindle
LEV05	O-Ring
LEV06	Retaining Washer
LEV07	Snap Ring

Leveler Rebuild Kit

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		

Standard



HYB1

Heavy-Duty



HYB1-CH

Water Master Hydro Bearing

Replacement Bearing for Water Master

HYB1

1" NPT Base - Brass

HYB1-CH

1" NPT Base - Chrome Plate

AIR VENTS/VACUUM RELIEF VALVES



AVP75



AVP1



VRV1.5X



VRV2X



VRV3X



VRV4X

Air Vent/Vacuum Relief Valves

AVP75	3/4" Plastic Air Vent
AVP1	1" Plastic Air Vent
VRV1.5X	1 1/2" X Series
VRV2X	2" X Series
VRV3X	3" X Series
VRV4X	4" X Series

Features

X SERIES

- ◆ Industry's only deep seated, oblong blow-out-proof o-ring
- ◆ High quality cast aluminum and plastic designs
- ◆ Unique ball retention bridge
- ◆ Operates well at low and high pressures
- ◆ Most models are NRCS approved



VRV2C



AVCA3

Continuous Acting Air Vents

VRV2C	2" Plastic
AVCA2	2" Aluminum
AVCA3	3" Aluminum
AVCA4	4" Aluminum

Features

- ◆ Air Vent/Vacuum Relief
- ◆ Exhausts large volumes of trapped air from pipelines
- ◆ Provides continuous air release during system operation
- ◆ Standard 2", 3" and 4" NPT forease of installation

Assembled in the USA
from domestic and foreign parts

PIPELINE SAFETY PRODUCTS

Superior Industry Quality

Pressure Lock™
(Patent Pending)



PRV2YB



PRV4B

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.

Assembled in the USA from domestic and foreign parts

Pressure Guard™

Pressure Relief Valve

(External Spring Surge Plug)
4 per box

Features

- ◆ Sizes: 2", 2.5", 3" and 4"
- ◆ Brass linear bearing to ensure smooth function
- ◆ Laminated Teflon seat gasket prevents seat sticking even after long periods of inactivity
- ◆ Cast iron base, stainless stem, painted spring
- ◆ Available In four spring configurations to meet varied pressure and surge requirements
- ◆ Available as either field or factory set
- ◆ **Pressure Guard™** pressure relief valves are designed for years of dependable, reliable service
- ◆ NRCS cost share approved

Size	Pressure Range	Spring Color	For Factory Preset (Add 'A' to Part#, ie. PRV2GA)	Factory Preset
2" Threaded NPT	0-25	Gray	PRV2G	PRV2GA
	30-40	Yellow	PRV2Y	PRV2YA
	45-85	Black	PRV2B	PRV2BA
	85-150	Yellow/Blue*	PRV2YB	PRV2YBA
2.5" Threaded NPT	0-25	Gray	PRV2.5G	PRV2.5GA
	30-40	Yellow	PRV2.5Y	PRV2.5YA
	45-85	Black	PRV2.5B	PRV2.5BA
	85-150	Yellow/Blue*	PRV2.5YB	PRV2.5YBA
3" Threaded NPT	0-25	Gray	PRV3G	PRV3GA
	30-40	Yellow	PRV3Y	PRV3YA
	45-85	Black	PRV3B	PRV3BA
	85-150	Yellow/Blue*	PRV3YB	PRV3YBA
4" Threaded NPT	0-25	Gray	PRV4G	PRV4GA
	30-40	Yellow	PRV4Y	PRV4YA
	45-85	Black	PRV4B	PRV4BA
	85-150	Yellow/Blue*	PRV4YB	PRV4YBA

*85 -150 PSI set takes two springs, yellow and blue
For Individual PRV Parts, Contact XCAD

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

Cost Share Approved

[See PRV Curves, Page 27](#)

PIPELINE SAFETY PRODUCTS**Pressure Guard™****3" Internal Spring Pressure Relief Valve**(Internal Spring Surge Plug)
5 per box

ISPRV3

3" NPT, 25 to 100 psi

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.

Features

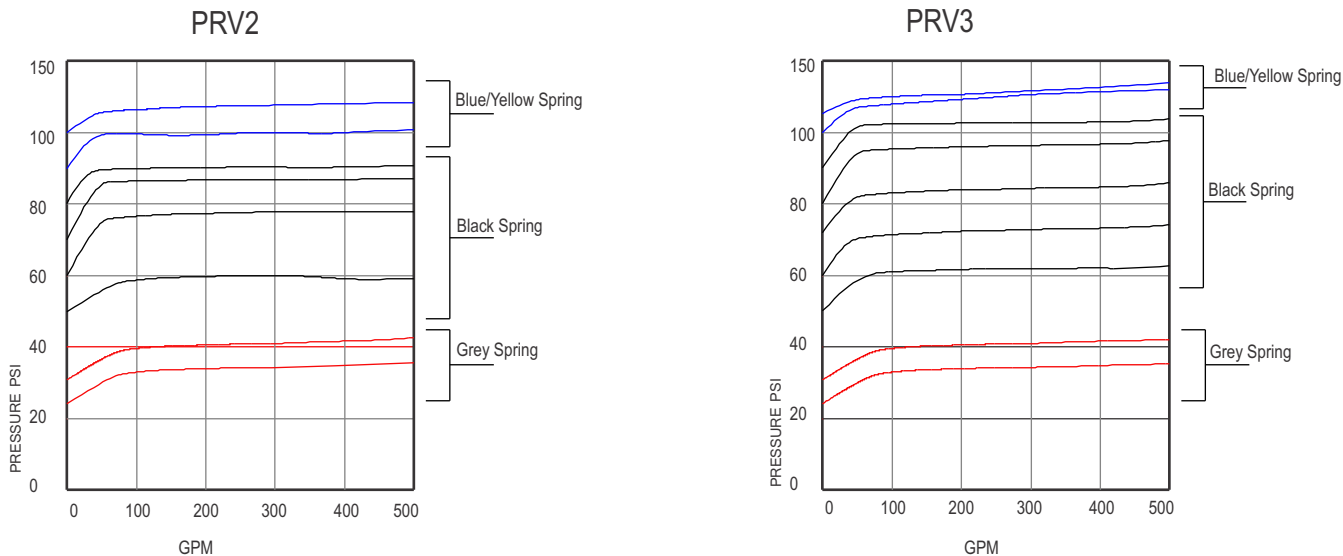
- ◆ 1" and 1/4" multiple porting for addition of air vent and psi gauges
- ◆ Cast iron body with 3" NPT male threading
- ◆ PSI range: 25 to 100 psi
- ◆ Replaceable rubber seat
- ◆ Stainless stem and brass bushings for long life
- ◆ Splash guard for ease of adjustment
- ◆ Only internal spring PRV that is field adjustable without removal



ISPRV3

PRV DISCHARGE CURVES

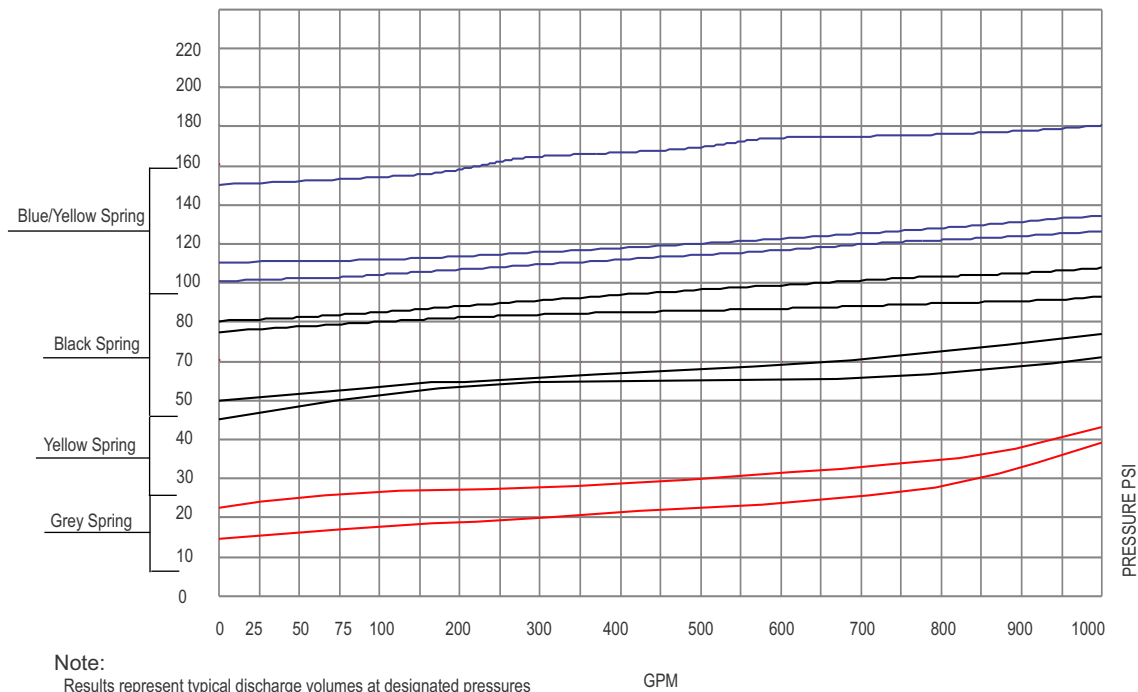
2" AND 3" PRV DISCHARGE CURVES



Note:
Results represent actual test results from Center For Irrigation Technology (3/24/05)

Blue/Yellow Spring ————
Black Spring ————
Grey Spring ————

4" PRV DISCHARGE CURVES



Note:
Results represent typical discharge volumes at designated pressures

PIVOT ACCESSORIES -- PIVOT BOOSTER PUMPS

Highest Specifications In The Industry

Standard Stainless Steel Impeller
Domestic Motor and Seal



BP2HP-I



BP2HP-D

Pump assembled in the USA
from domestic and foreign parts

2-HP Pivot Booster Pump

2 1/2" suction x 2" discharge
(See Pump Curve, Page 29)

- BP2HP-I 2-HP, 130 GPM w/Stainless Impeller
 Motor made in Mexico
- BP2HP-D 2-HP, 130 GPM w/Stainless Impeller
 Motor made in USA
- BP2HPWOVC-I 2-HP, 130 GPM, Less Volute Case
 Motor made in Mexico
- BP2HPWOVC-D 2-HP, 130 GPM, Less Volute Case
 Motor made in USA

Pivot Booster Pump Components

- BPVC Volute Case
- BPMBKT Motor Bracket
- BPIMP-SS Stainless Steel Impeller
- BPMGSKT Mylar Motor Gasket
- BPCGSKT Paper Motor Case Gasket
- BPIMPSPC Impeller Spacer
- BPSEAL Shaft Seal

All Parts Are Interchangeable With Berkley Model #C2MPS Booster Pumps



BPM2HP-I



BPM2HP-D

Specifications	
Model	#112991
Frame	56CZ
Phase	Three
Insul. Class	F4
Serv. Factor	1.5
Hertz	60
RPM	3450
Volts	460
Bearings	6203/6205

Irrigation Booster Pump Motor

Leeson Imported 2-HP

Thermally Protected
(Made in Mexico)

- BPM2HP-I 2-HP, 130 GPM, Motor Only

Leeson 2-HP (TEFC)

Thermally Protected
(Made in USA)

- BPM2HP-D 2-HP, 130 GPM, Motor Only

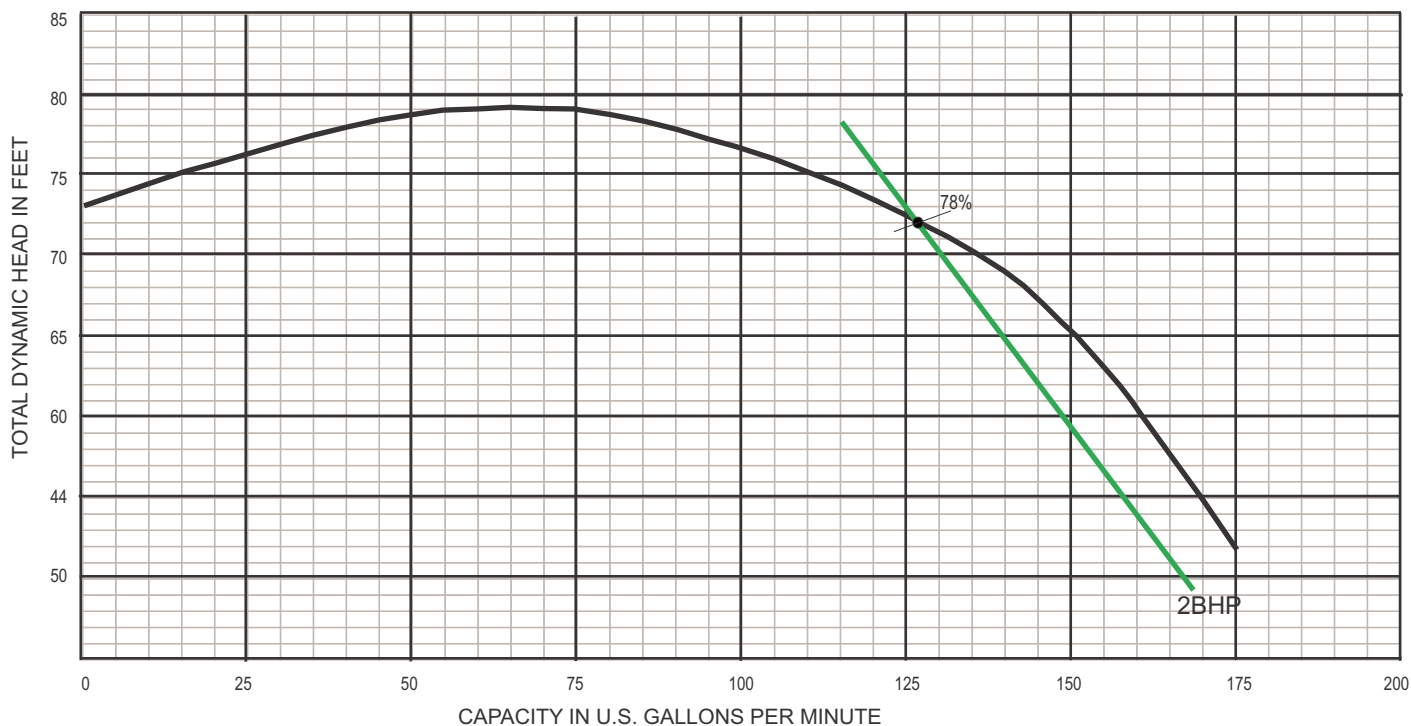
Motor Fits Berkley Model #C2MPS Booster Pump
and Paco Model #2050-1 Booster Pump

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



Pivot Booster Pump Components



DRIPSTR

Oil Dripper

- | | |
|---------|-----------------------|
| DRIP90 | Oil Dripper, 90° |
| DRIPSTR | Oil Dripper, Straight |

PIVOT ACCESSORIES



PDLEXP-L



PDLEXP-S

Small Disc Fits Under Most Driveline Shields

X-Spandable™ Expandable Drive Line

(With SSF Disc)

PDLEXP-L Universal w/Large Disc

PDLEXP-S Universal w/Small Disc

Features

- ◆ X-Spandable™ drive line systems with SSF disc
- ◆ Strongest and most versatile in the industry
- ◆ Heavy duty telescoping design
- ◆ SSF disc (Super Strong Flexible)
- ◆ Quickly attaches with just two bolts
- ◆ Replacement SSF discs available for competitive brands
- ◆ Small disc fits under most pivot manufacturers driveline covers
- ◆ Zinc plated finish



PDLVBLT



PDLUNIV

Heavy Duty Universal U-Joint

Quickly Attaches to Both 3/4" and 7/8" Shafts

(With SSF Disc)

PDLUNIV Universal 7/8" or 3/4"
12/Box

PDLVBLT Universal 7/8" or 3/4"
12/Box



PDLDISC-L



PDLDISC-S

Replacement SSF Disc

SSF - Superior Strength and Flexibility

PDLDISC-L Large Replacement SSF Disc
(4 1/2")

PDLDISC-S Small Replacement SSF Disc
(3 5/8")



PVTRNG

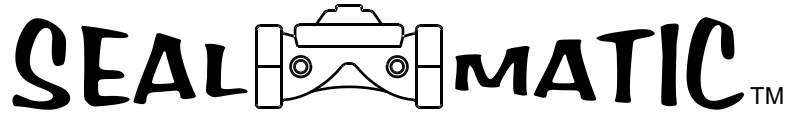
Weld-In Pivot Rim Repair Ring

PVTRNG Universal
8/Box

CONTROL VALVES

**Assembled
in the USA**

from domestic and foreign parts



**5-Year
Diaphragm
Guarantee**

SealMatic™ 3/4" and 1" Pivot Auxiliary & Corner Control Valve Raven Smart™ Diaphragm Technology

Features

- ◆ 3/4" and 1" npt with 1/4" porting
- ◆ Ductile iron body and bonnet
- ◆ One moving part, spring-less design
- ◆ Brass auto-drain included with PEG model
- ◆ One diaphragm for all working pressures
- ◆ Diaphragm is **made in USA**
- ◆ Valve opens fully under 5 psi
- ◆ 200 psi max working pressure
- ◆ Valve design will pass more trash
- ◆ Highly efficient high-flow, low head loss design
- ◆ Easy in-place maintenance
- ◆ Pressure reducing and pressure sustaining valves come with P3000 plastic pilot

Seal Matic™ Pivot End Gun Valve

SMV75PEG 3/4" w/Auto Drain and Plug
SMV1PEG 1" w/Auto Drain and Plug

Seal Matic™ Basic Valve

SMV75B 3/4" Basic w/Plugs
SMV1B 1" Basic w/Plugs

Seal Matic™ Electric On/Off Valve

SMV75WS 3/4" w/Solenoid
SMV1WS 1" w/Solenoid

Seal Matic™ Manual Pressure Reducing Valve

SMV75MPR 3/4" w/P-3000 Pilot
SMV1MPR 1" w/P-3000 Pilot

Seal Matic™ Electric Pressure Reducing Valve

SMV75EPR 3/4" w/P-3000 Pilot/Solenoid
SMV1EPR 1" w/P-3000 Pilot/Solenoid

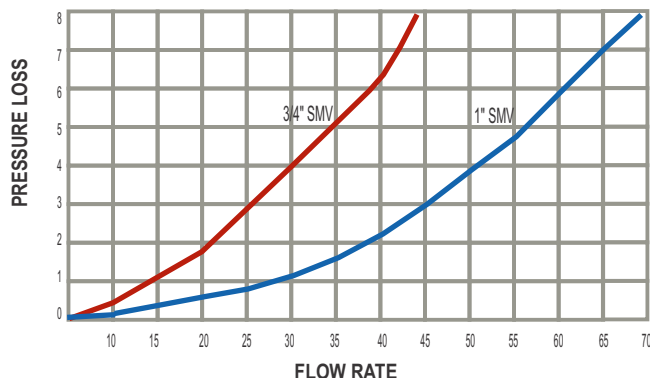
Seal Matic™ Manual Pressure Sustaining Valve

SMV75MPS 3/4" w/P-3000 Pilot
SMV1MPS 1" w/P-3000 Pilot



SMV75PEG

3/4" and 1" SMV Valves



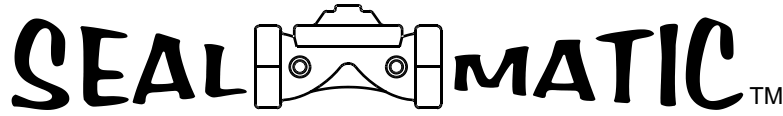
Seal Matic valves are only guaranteed to perform optimally in accordance with the size and model of each valve's performance chart in standard irrigation use and practices.

Graphs Represent Results From CIT

CONTROL VALVES

**Assembled
in the USA**

from domestic and foreign parts



Seal Matic™ 2" Pivot End Gun Valve Raven Smart™ Diaphragm Technology

**5-Year
Diaphragm
Guarantee**

Features

- ◆ 2" npt straight or 90° with 1/4" porting
- ◆ Ductile iron body and bonnet
- ◆ Brass auto-drain included with PEG model
- ◆ One diaphragm for all working pressures
- ◆ Diaphragm is **made in USA**
- ◆ Valve opens fully under 5 psi
- ◆ 200 psi max working pressure
- ◆ Valve design will pass more trash
- ◆ Highly efficient high flow low head loss design
- ◆ Easy in-place maintenance
- ◆ Pressure sustaining and pressure reducing valves come with P3000 pilot

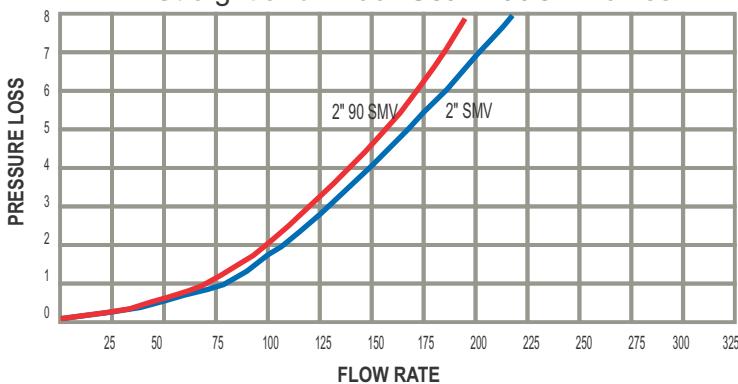


SMV2PEG



SMV902PEG

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 valves 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

Seal Matic™ Basic Valve

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

Seal Matic™ Electric On/Off Valve

SMV2WS	2" w/Solenoid
SMV902WS	2" 90° w/Solenoid

Seal Matic™ Manual Pressure Reducing Valve

SMV2MPR	2" w/P-3000 Pilot
SMV902MPR	2" 90° w/P-3000 Pilot

Seal Matic™ Electric Pressure Reducing Valve

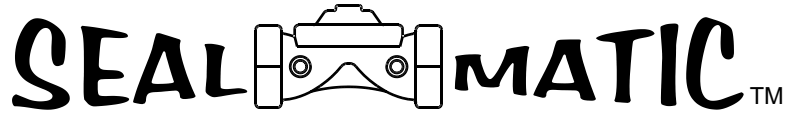
SMV2EPR	2" w/P-3000 Pilot/Solenoid
SMV902EPR	2" 90° w/P-3000 Pilot/Solenoid

Seal Matic™ Manual Pressure Sustaining Valve

SMV2MPS	2" w/P-3000 Pilot
SMV902MPS	2" 90° w/P-3000 Pilot

CONTROL VALVES

Assembled in the USA
from domestic and foreign parts



Raven Smart™ Diaphragm Technology

5-Year
Diaphragm
Guarantee

Features

- ◆ Diaphragm is **made in USA**
- ◆ One diaphragm for all pressures, 5 - 200 psi
- ◆ Easy in-place maintenance
- ◆ Fully open at 5 psi
- ◆ CIT tested flow rates
- ◆ Money-saving operation with low friction loss (see graph below)
- ◆ 3" and 4" valves available with either P6000 or P-3000 pilot
- ◆ Pilot Control Options: Pressure reducing, pressure sustaining, pressure relief
- ◆ 6" and 8" Dual-X™ double-diaphragm valve available with P-6000 pilot only
- ◆ Solenoid available in 12v DC, 24v AC, 24v DC or 120 v AC

Seal Matic™ Electric On/Off Valve

SMV3WS	3" w/Solenoid
SMV4WS	4" w/Solenoid
SMV6WS	6" w/Solenoid
SMV8WS	8" w/Solenoid

Seal Matic™ Basic Valve

SMV3B	3" Basic w/Plugs
SMV4B	4" Basic w/Plugs
SMV6B	6" Basic w/Plugs
SMV8B	8" Basic w/Plugs

Seal Matic™ Manual Pressure Reducing Valve

SMV3MPR-P3	3" w/P-3000 Pilot
SMV3MPR-P6	3" w/P-6000 Pilot
SMV4MPR-P3	4" w/P-3000 Pilot
SMV4MPR-P6	4" w/P-6000 Pilot
SMV6MPR	6" w/P-6000 Pilot
SMV8MPR	8" w/P-6000 Pilot

Seal Matic™ Electric Pressure Reducing Valve

SMV3EPR-P3	3" w/P-3000 Pilot/Solenoid
SMV3EPR-P6	3" w/P-6000 Pilot/Solenoid
SMV4EPR-P3	4" w/P-3000 Pilot/Solenoid
SMV4EPR-P6	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

SMV3MPS-P3	3" w/P-3000 Pilot
SMV3MPS-P6	3" w/P-6000 Pilot
SMV4MPS-P3	4" w/P-3000 Pilot
SMV4MPS-P6	4" w/P-6000 Pilot
SMV6MPS	6" w/P-6000 Pilot
SMV8MPS	8" w/P-6000 Pilot

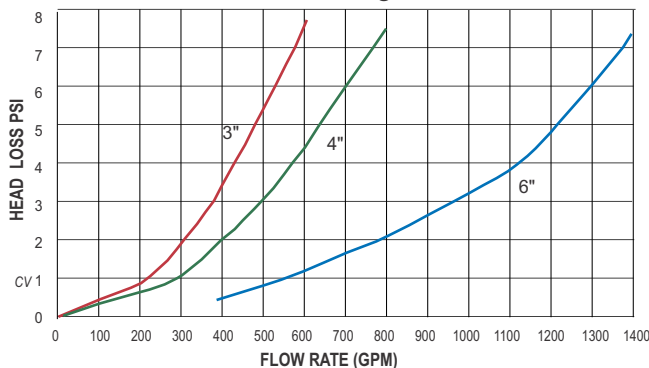


SMV6MPR
6" Dual-X™ Control Valve



SMV4WS

3", 4" 6" Flanged Valve



Graphs Represent Results From CIT

CONTROL VALVES

Assembled in USA
From Domestic and Foreign Parts

X-Max Valve™

Where Function and Efficiency Meet

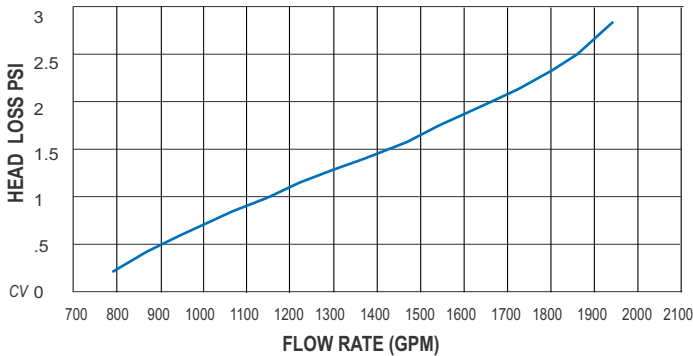
New
High-Flow
Design

Features

- ◆ **Five-Year Diaphragm Warranty**
- ◆ Ductile iron construction
- ◆ Hot dipped galvanized and oven baked powder coatings
- ◆ Money saving operation with low friction loss
- ◆ CIT tested flow rates
- ◆ Pilot control options: Pressure reducing, pressure sustaining and pressure relief
- ◆ Electric on/off with Parker Skinner solenoid and manual three-way controller
- ◆ Solenoid available in 12 v DC, 24v AC, 24v DC or 120v AC
- ◆ Available with P-6000 brass pilot only
- ◆ **Bolt Kit Included**



6" X-MAX™ Valve



Graphs Represent Results From CIT

X-MAX 6" Electric On/Off Valve

XMAX6WS 6" w/Solenoid

X-MAX Basic Valve

XMAX6B 6" Basic w/Plugs

X-MAX Manual Pressure Reducing Valve

XMAX6MPR 6" w/P-6000 Pilot

X-MAX Electric On/Off Pressure Reducing Valve

XMAX6EPR 6" w/P-6000 Pilot/Solenoid

X-MAX Manual Pressure Sustaining Valve

XMAX6MPS 6" w/P-6000 Pilot

Designed and engineered to out-flow and out-control all other hydraulic control valves.

1150 gpm @ 1.0 cv

CONTROL VALVES

Assembled in USA
From Domestic and Foreign Parts

XCON Valve™

Where Function and Efficiency Meet

**5-Year
Diaphragm
Guarantee**

Features

- ◆ Money saving operation with low friction loss
- ◆ CIT tested flow rates
- ◆ Pilot control options: Pressure reducing, pressure sustaining and pressure relief
- ◆ Electric on/off with Parker Skinner solenoid and manual three-way controller
- ◆ Solenoid available in 12 v DC, 24v AC, 24v DC or 120v AC
- ◆ 6" and 8" available with P-6000 brass pilot only
- ◆ **Bolt Kit Included**



XCON6WS

XCON Electric On/Off Valve

XCON4WS	4" w/Solenoid
XCON6WS	6" w/Solenoid
XCON8WS	8" w/Solenoid

XCON Basic Valve

XCON4B	4" Basic w/Plugs
XCON6B	6" Basic w/Plugs
XCON8B	8" Basic w/Plugs

XCON Manual Pressure Reducing Valve

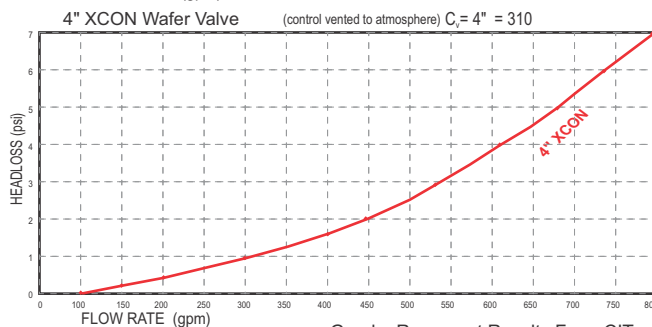
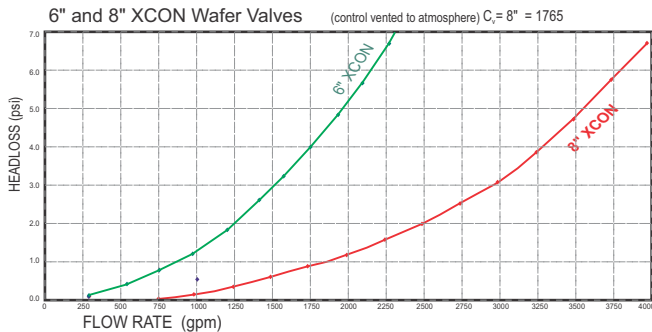
XCON4MPR-P3	4" w/P-3000 Pilot
XCON4MPR-P6	4" w/P-6000 Pilot
XCON6MPR	6" w/P-6000 Pilot
XCON8MPR	8" w/P-6000 Pilot

XCON Electric On/Off Pressure Reducing Valve

XCON4EPR-P3	4" w/P-3000 Pilot/Solenoid
XCON4EPR-P6	4" w/P-6000 Pilot/Solenoid
XCON6EPR	6" w/P-6000 Pilot/Solenoid
XCON8EPR	8" w/P-6000 Pilot/Solenoid

XCON Manual Pressure Sustaining Valve

XCON4MPS-P3	4" w/P-3000 Pilot
XCON4MPS-P6	4" w/P-6000 Pilot
XCON6MPS	6" w/P-6000 Pilot
XCON8MPS	8" w/P-6000 Pilot



Graphs Represent Results From CIT

See Installation and Storage Guide for Bolt Torque Specification. (Pg 45)

CONTROL VALVE PARTS



XMAX6DIA

XMAX Replacement Diaphragm

XMAX6DIA 6" diaphragm



XCON6DIA

XCON Replacement Diaphragm

Fits XCAD,
Inbal and
Fresno

XCON4DIA 4" diaphragm
XCON6DIA 6" diaphragm
XCON8DIA 8" diaphragm



SMV346DIA



SMV2DIA



SMV75DIA

SMV Raven Smart™ Diaphragm

SMV75-1DIA 3/4" and 1" SMV
SMV2DIA 2", 2" 90° SMV
SMV346DIA 3", 4" and 6" SMV
SMV8DIA 8" SMV



XCON6-BK

See Installation and Storage Guide for Bolt Torque Specification. (Pg. 45)

XCON/XMAX Bolt Kits

XCON4-BK 8 - 5/8" X 10 1/2" bolts, 16 - 5/8" nuts
(O-Rings Standard on 4" XCAD Valve)
XCON6-BK 8 - 3/4" x 14" bolts, 16 - 3/4" nuts
(O-Rings Standard on 6" XCAD/XMAX Valves)
XCON8-BK 8 - 3/4" x 16" bolts, 16 - 3/4" nuts,
2 - flange gaskets



SBT4-2



SE4-4



SSN4-2



BHN2-2



SRT4-2



SE4-2



SSN4-4

Valve Fittings

Plated Brass

SSN4-2 1/4" x 1/8" NPT Swivel Straight Nipple
SSN4-4 1/4" x 1/4" NPT Swivel Straight Nipple
SE4-2 1/4" x 1/8" NPT Swivel Elbow
SE4-4 1/4" x 1/4" NPT Swivel Elbow
SRT4-2 1/4" x 1/8" NPT Swivel Run Tee
SBT4-2 1/4" x 1/8" NPT Swivel Branch Tee
BHN2-2 Brass Hex Nipple 1/8" x 1/8" NPT
BVT Blue Valve Tubing, per foot

VALVE ACCESSORIES -- PILOT



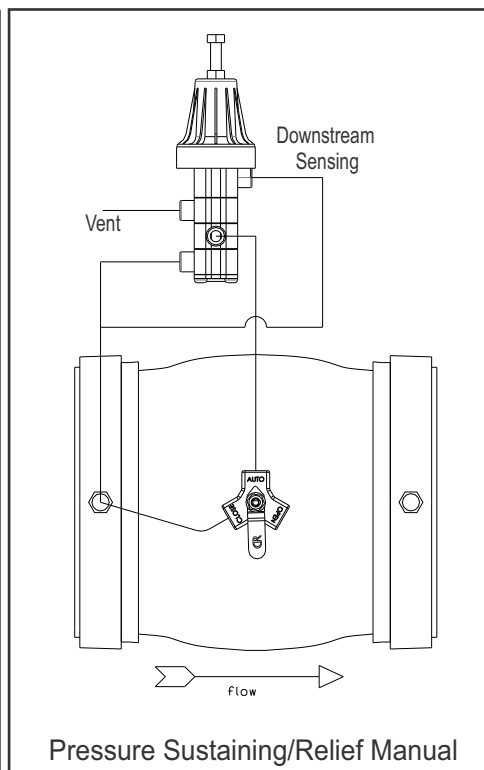
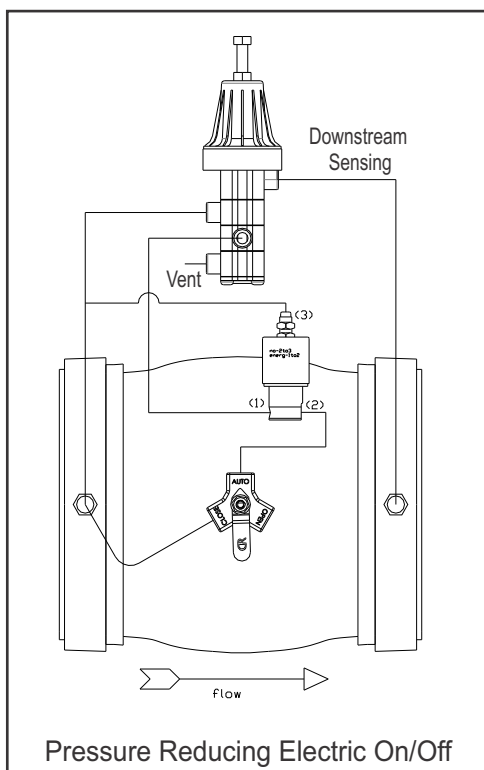
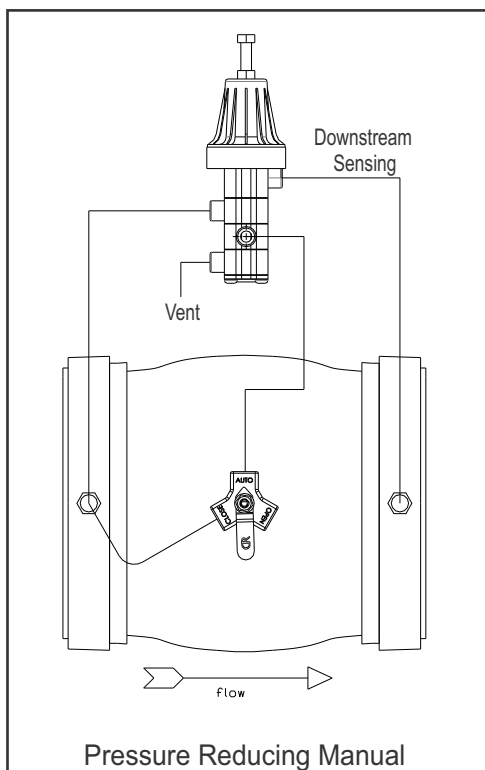
P-3000

P-3000 Pressure Control Pilot

- P-3000 Pressure Control Pilot
10-120 psi. Includes vent and fittings
- P3MPR Manual Pressure Reduction Kit
Includes P-3000 pilot and fittings
- P3EPR Electric On-Off Pressure Reduction Kit
Includes P-3000 pilot, solenoid,
3-way selector and fittings
- P3MPR Manual Pressure Sustaining/Relief Kit
Includes P-3000 pilot and fittings

Features

- ◆ Calibrated pressure control (low and high)
- ◆ Both sustaining/relief and reducing function
- ◆ No pressure drop required to regulate
- ◆ Universal design works with most control valves up to 4"
- ◆ Made in Israel



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

VALVE ACCESSORIES -- PILOT



P-6000

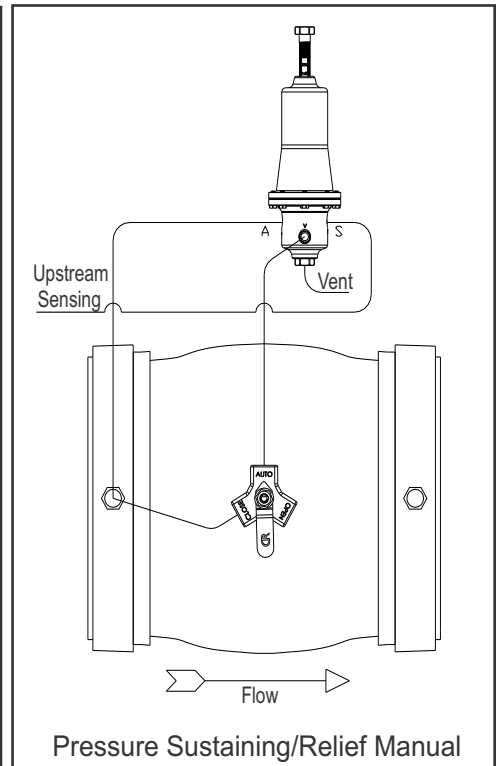
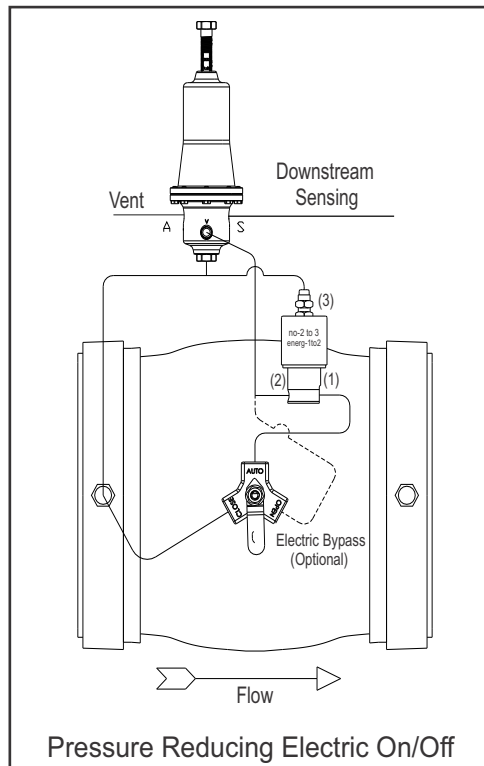
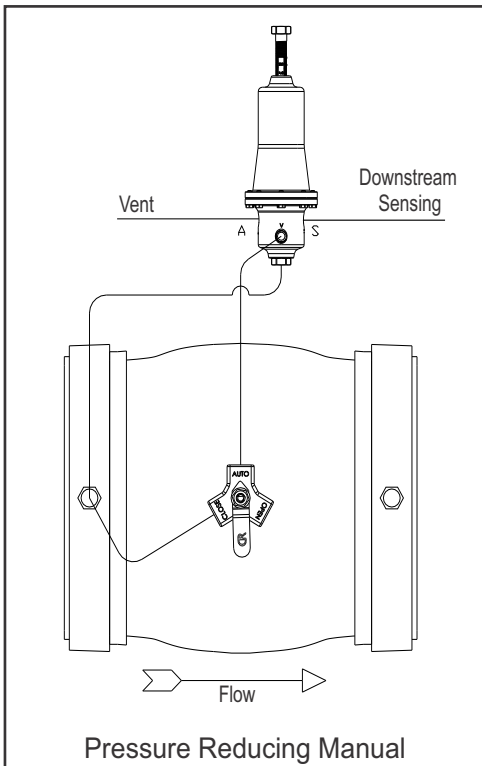
Assembled in USA
From Domestic and Foreign Parts

XCAD Pressure Control Pilot P-6000 Series

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



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

VALVE ACCESSORIES

Made in USA

3-Way Solenoids



PKSOL-LO120



PKSOL-120AC

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

Solenoid Coils



PKPOT-120AC



PKCOIL-12DC

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



Top View

3WSEL



Side View

3-Way Selector Valve (Large Ports)

3WSEL	1/4" x 1/8" x 1/8" x 1/8"
-------	---------------------------



LBF25



SBF25

Brass Filters and Drains

LBF25	1/4" x 1/4" Internal Brass Filter
SBF25	1/4" x 1/4" Internal Brass Filter
EXTFP	1/4" x 1/4" External Plastic Filer
TFDVBDL	1/4" Internal Brass Drain



EXTFP



TFDVBDL

X-GATE™ LOW HEAD CANAL GATE PARTS**X-GATE™****Features**

- ◆ Spigot back or flat back frame
- ◆ Three stem configurations:
W-type, left and right hand thread
Fresno-type, left hand thread
- ◆ Stems available in both zinc plated leaded steel and stainless steel
- ◆ Bronze lift nuts standard
- ◆ Standard Sizes: 8", 10", 12", 15", 18", 24", 30" and 36"
See chart for maximum frame lengths
- ◆ Extension stem adapters for all sizes
- ◆ **Heavy duty** galvanized 3"x5" head rails and 2 1/2" guide rails standard



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

Please specify desired stem package when ordering gates (W-Style standard)

W-Type, Left Hand Thread
W-Type, Right Hand Thread
Fresno-Type, Left Hand Thread

**For Gate Lengths in 6" Increments
Add Per 6"**

Additional	8"-16"	- \$50.00/6"
Additional	18"-24"	- \$60.00/6"
Additional	30"-36"	- \$80.00/6"

X-GATE™ Low Head Canal Gates are designed to XCAD's highest specifications and parts are not necessarily interchangeable with other brands.

X-GATE™ LOW HEAD CANAL GATES (W-TYPE)

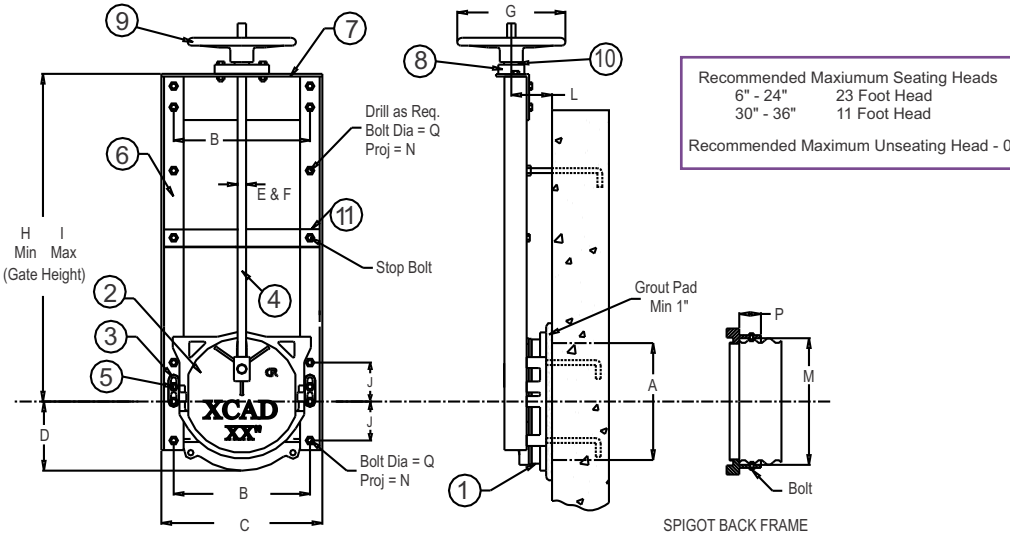
FLAT BACK FRAME

CG8FB24	8" Canal Gate w/24" Flat Back Frame
CG8FB36	8" Canal Gate w/36" Flat Back Frame
CG8FB48	8" Canal Gate w/48" Flat Back Frame
CG8FB60	8" Canal Gate w/60" Flat Back Frame
CG8FB72	8" Canal Gate w/72" Flat Back Frame
CG8FB84	8" Canal Gate w/84" Flat Back Frame
CG8FB96	8" Canal Gate w/96" Flat Back Frame
CG8FB108	8" Canal Gate w/108" Flat Back Frame
CG8FB120	8" Canal Gate w/120" Flat Back Frame
CG10FB24	10" Canal Gate w/24" Flat Back Frame
CG10FB36	10" Canal Gate w/36" Flat Back Frame
CG10FB48	10" Canal Gate w/48" Flat Back Frame
CG10FB60	10" Canal Gate w/60" Flat Back Frame
CG10FB72	10" Canal Gate w/72" Flat Back Frame
CG10FB84	10" Canal Gate w/84" Flat Back Frame
CG10FB96	10" Canal Gate w/96" Flat Back Frame
CG10FB108	10" Canal Gate w/108" Flat Back Frame
CG10FB120	10" Canal Gate w/120" Flat Back Frame
CG12FB24	12" Canal Gate w/24" Flat Back Frame
CG12FB36	12" Canal Gate w/36" Flat Back Frame
CG12FB48	12" Canal Gate w/48" Flat Back Frame
CG12FB60	12" Canal Gate w/60" Flat Back Frame
CG12FB72	12" Canal Gate w/72" Flat Back Frame
CG12FB84	12" Canal Gate w/84" Flat Back Frame
CG12FB96	12" Canal Gate w/96" Flat Back Frame
CG12FB108	12" Canal Gate w/108" Flat Back Frame
CG12FB120	12" Canal Gate w/120" Flat Back Frame
CG15FB36	15" Canal Gate w/36" Flat Back Frame
CG15FB48	15" Canal Gate w/48" Flat Back Frame
CG15FB60	15" Canal Gate w/60" Flat Back Frame
CG15FB72	15" Canal Gate w/72" Flat Back Frame
CG15FB84	15" Canal Gate w/84" Flat Back Frame
CG15FB96	15" Canal Gate w/96" Flat Back Frame
CG15FB108	15" Canal Gate w/108" Flat Back Frame
CG15FB120	15" Canal Gate w/120" Flat Back Frame
CG18FB36	18" Canal Gate w/36" Flat Back Frame
CG18FB48	18" Canal Gate w/48" Flat Back Frame
CG18FB60	18" Canal Gate w/60" Flat Back Frame
CG18FB72	18" Canal Gate w/72" Flat Back Frame
CG18FB84	18" Canal Gate w/84" Flat Back Frame
CG18FB96	18" Canal Gate w/96" Flat Back Frame
CG18FB108	18" Canal Gate w/108" Flat Back Frame
CG18FB120	18" Canal Gate w/120" Flat Back Frame
CG24FB48	24" Canal Gate w/48" Flat Back Frame
CG24FB60	24" Canal Gate w/60" Flat Back Frame
CG24FB72	24" Canal Gate w/72" Flat Back Frame
CG24FB84	24" Canal Gate w/84" Flat Back Frame
CG24FB96	24" Canal Gate w/96" Flat Back Frame
CG24FB108	24" Canal Gate w/108" Flat Back Frame
CG24FB120	24" Canal Gate w/120" Flat Back Frame
CG30FB60	30" Canal Gate w/60" Flat Back Frame
CG30FB72	30" Canal Gate w/72" Flat Back Frame
CG30FB84	30" Canal Gate w/84" Flat Back Frame
CG30FB96	30" Canal Gate w/96" Flat Back Frame
CG30FB108	30" Canal Gate w/108" Flat Back Frame
CG30FB120	30" Canal Gate w/120" Flat Back Frame
CG36FB 72	36" Canal Gate w/72" Flat Back Frame
CG36FB84	36" Canal Gate w/84" Flat Back Frame
CG36FB96	36" Canal Gate w/96" Flat Back Frame
CG36FB108	36" Canal Gate w/108" Flat Back Frame
CG36FG120	36" Canal Gate w/120" Flat Back Frame

SPIGOT BACK FRAME

CG8SB24	8" Canal Gate w/24" Spigot Back Frame
CG8SB36	8" Canal Gate w/36" Spigot Back Frame
CG8SB48	8" Canal Gate w/48" Spigot Back Frame
CG8SB60	8" Canal Gate w/60" Spigot Back Frame
CG8SB72	8" Canal Gate w/72" Spigot Back Frame
CG8SB84	8" Canal Gate w/84" Spigot Back Frame
CG8SB96	8" Canal Gate w/96" Spigot Back Frame
CG8SB108	8" Canal Gate w/108" Spigot Back Frame
CG8SB120	8" Canal Gate w/120" Spigot Back Frame
CG10SB24	10" Canal Gate w/24" Spigot Back Frame
CG10SB36	10" Canal Gate w/36" Spigot Back Frame
CG10SB48	10" Canal Gate w/48" Spigot Back Frame
CG10SB60	10" Canal Gate w/60" Spigot Back Frame
CG10SB72	10" Canal Gate w/72" Spigot Back Frame
CG10SB84	10" Canal Gate w/84" Spigot Back Frame
CG10SB96	10" Canal Gate w/96" Spigot Back Frame
CG10SB108	10" Canal Gate w/108" Spigot Back Frame
CG10SB120	10" Canal Gate w/120" Spigot Back Frame
CG12SB24	12" Canal Gate w/24" Spigot Back Frame
CG12SB36	12" Canal Gate w/36" Spigot Back Frame
CG12SB48	12" Canal Gate w/48" Spigot Back Frame
CG12SB60	12" Canal Gate w/60" Spigot Back Frame
CG12SB72	12" Canal Gate w/72" Spigot Back Frame
CG12SB84	12" Canal Gate w/84" Spigot Back Frame
CG12SB96	12" Canal Gate w/96" Spigot Back Frame
CG12SB108	12" Canal Gate w/108" Spigot Back Frame
CG12SB120	12" Canal Gate w/120" Spigot Back Frame
CG15SB36	15" Canal Gate w/36" Spigot Back Frame
CG15SB48	15" Canal Gate w/48" Spigot Back Frame
CG15SB60	15" Canal Gate w/60" Spigot Back Frame
CG15SB72	15" Canal Gate w/72" Spigot Back Frame
CG15SB84	15" Canal Gate w/84" Spigot Back Frame
CG15SB96	15" Canal Gate w/96" Spigot Back Frame
CG15SB108	15" Canal Gate w/108" Spigot Back Frame
CG15SB120	15" Canal Gate w/120" Spigot Back Frame
CG18SB36	18" Canal Gate w/36" Spigot Back Frame
CG18SB48	18" Canal Gate w/48" Spigot Back Frame
CG18SB60	18" Canal Gate w/60" Spigot Back Frame
CG18SB72	18" Canal Gate w/72" Spigot Back Frame
CG18SB84	18" Canal Gate w/84" Spigot Back Frame
CG18SB96	18" Canal Gate w/96" Spigot Back Frame
CG18SB108	18" Canal Gate w/108" Spigot Back Frame
CG18SB120	18" Canal Gate w/120" Spigot Back Frame
CG24SB48	24" Canal Gate w/48" Spigot Back Frame
CG24SB60	24" Canal Gate w/60" Spigot Back Frame
CG24SB72	24" Canal Gate w/72" Spigot Back Frame
CG24SB84	24" Canal Gate w/84" Spigot Back Frame
CG24SB96	24" Canal Gate w/96" Spigot Back Frame
CG24SB108	24" Canal Gate w/108" Spigot Back Frame
CG24SB120	24" Canal Gate w/120" Spigot Back Frame
CG30SB60	30" Canal Gate w/60" Spigot Back Frame
CG30SB72	30" Canal Gate w/72" Spigot Back Frame
CG30SB84	30" Canal Gate w/84" Spigot Back Frame
CG30SB96	30" Canal Gate w/96" Spigot Back Frame
CG30SB108	30" Canal Gate w/108" Spigot Back Frame
CG30SB120	30" Canal Gate w/120" Spigot Back Frame
CG36SB 72	36" Canal Gate w/72" Spigot Back Frame
CG36SB84	36" Canal Gate w/84" Spigot Back Frame
CG36SB96	36" Canal Gate w/96" Spigot Back Frame
CG36SB108	36" Canal Gate w/108" Spigot Back Frame
CG36SG120	36" Canal Gate w/120" Spigot Back Frame

X-GATE™ LOW HEAD CANAL GATES



Parts List & Standard Features			
No.	Description	Qty.	Material
1	Frame	1	Cast Iron
2	Cover	1	Cast Iron
3	Wedge (Rt. & Lft)	1 ea	Cast Iron
4	Stem	1	Stainless Steel
5	Wedge Bolts	4	Stainless Steel
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		Galv. Structural Steel

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	E	F	G	H	I	J	K	L	M	N	P	Q
				XCAD	Fresno	XCAD				Fresno					
8	10	13	4 7/8" (4.875)	7/8" (.875)	7/8" (.875)	10	24	120	3	10	2.5	9 1/8" (9.125)	3.5	2.25	1/2 x 12
10	12	14 7/8" (14.875)	6"	7/8" (.875)	7/8" (.875)	10	24	120	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)	7"	7/8" (.875)	7/8" (.875)	10	24	120	4	10	3	13 1/8" (13.125)	4	2.25	1/2 x 12
15	17	18 7/8" (19.875)	8 7/8" (8.875)	7/8" (.875)	7/8" (.875)	10	36	120	5	10	3.5	16	4	2.25	1/2 x 12
18	21	22 7/8" (22.875)	10 1/2" (10.5)	1"	1/18" (1.125)	12	36	120	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)	13 7/8" (13.875)	1"	1 1/8" (1.125)	12	48	120	8	14	4.125	25	4.5	2.25	5/8 x 12
30	33 3/4" (33.75)	36 1/8" (36.125)	17 3/8" (17.375)	1 1/8" (1.125)	1 1/8" (1.125)	15	60	120	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)	20 1/2" (20.5)	1 1/8" (1.125)	1 1/8" (1.125)	15	72	120	12	14	5.375	37	6	2.25	3/4 x 12

Gate Size	Gate Height																
	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	
	30*		42		54		66										
18	36		48		60		72		78	84	90	96	102	108	114	120	
	34		46		58		70										
24	48		60		72		78		84	90	96	102	108	114	120		
	44		56		68												
30	60		72	78	84	90	96	102	108	114	120						
36	72	78	84	90	96	102	108	114	120								

* Gate Height of Old Style Gates

X-GATE™ Low Head Canal Gates are designed to XCAD's highest specifications and parts are not necessarily interchangeable with other brands.

X-GATE™ LOW HEAD CANAL GATE PARTS

FRAMES

Flat Back

CGFBF8	8"
CGFBF10	10"
CGFBF12	12"
CGFBF15	15"
CGFBF18	18"
CGFBF24	24"
CGFBF30	30"
CGFBF36	36"

Spigot Back

CGSBF8	8"
CGSBF10	10"
CGSBF12	12"
CGSBF15	15"
CGSBF18	18"
CGSBF24	24"
CGSBF30	30"
CGSBF36	36"

COVERS

CGC8	8"
CGC10	10"
CGC12	12"
CGC15	15"
CGC18	18"
CGC24	24"
CGC30	30"
CGC36	36"

WEDGE SET (2pcs)

W-Type

W8-15WEDGE	8"-15" gate
W18-24WEDGE	18"-24" gate
W30-36WEDGE	30"-36" gate

Fresno-Type

F6-15WEDGE	6"-15" gate
F15-36WEDGE	15"-36" gate

TOP RAIL

W-Type

CGR8TPRAIL	8"
CGR10TPRAIL	10"
CGR12TPRAIL	12"
CGR15TPRAIL	15"
CGR18TPRAIL	18"
CGR24TPRAIL	24"
CGR30TPRAIL	30"
CGR36TPRAIL	36"

Fresno-Type

F8TPRAIL	8"
F10TPRAIL	10"
F12TPRAIL	12"
F15TPRAIL	15"
F18TPRAIL	18"
F24TPRAIL	24"

Competitive Brand Replacement Parts

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

LIFT NUT

W-Type Left-Hand Thread

WL78BNUT	Fits 7/8" Stem
WL1BNUT	Fits 1" Stem
WL118BNUT	Fits 1 1/8" Stem

W-Type Right-Hand Thread

WR78BNUT	Fits 7/8" Stem
WR1BNUT	Fits 1" Stem
WR118BNUT	Fits 1 1/8" Stem

Fresno-Type

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

STEM EXTENDERS

Steel Extension Coupler

CGEC8-15	7/8" for 8" - 15" gate
CG3C18-24	1" for 18" - 24" gate
CGEC30-36	1 1/4" for 30"-36" gate

HAND WHEELS

W-Type

W8-15WHL	8"-15" gate
W18-24WHL	18"-24" gate
W30-36WHL	30"-36" gate

Fresno-Type

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

LIFT COLLAR

W-Type

W8-15RING	Fits 7/8" Stem
W15-24RING	Fits 1" Stem
W30-36RING	Fits 1 1/8" Stem

Fresno-Type

F-RING	Fits 7/8" and 1 1/8" Stem
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STEM SUPPORT BRACKET

W-Type

CGSB8	8"
CGSB10	10"
CGSB12	12"
CGSB15	15"
CGSB18	18"
CGSB24	24"
CGSB30	30"
CGSB36	36"

STAINLESS STEEL STEMS

W-Type Left-Hand Thread

WL78X24ST	7/8" x 24"
WL78X36ST	7/8" x 36"
WL78X48ST	7/8" x 48"
WL78X60ST	7/8" x 60"
WL78X72ST	7/8" x 72"
WL78X72STA	7/8" x 72" All Thread
WL78X120ST	7/8" x 120" All Thread
WL1X36ST	1" x 36"
WL1X48ST	1" x 48"
WL1X60ST	1" x 60"
WL1X72ST	1" x 72"
WL1X72STA	1" x 72" All Thread
WL1X120ST	1" x 120" All Thread
WL118X60ST	1 1/8" x 60"
WL118X72ST	1 1/8" x 72"
WL118X72STA	1 1/8" x 72" All Thread
WL118X120ST	1 1/8" x 120" All Thread

W-Type Right-Hand Thread

WR78X24ST	7/8" x 24"
WR78X36ST	7/8" x 36"
WR78X48ST	7/8" x 48"
WR78X60ST	7/8" x 60"
WR78X72ST	7/8" x 72"
WR78X72STA	7/8" x 72" All Thread
WR78X120ST	7/8" x 120" All Thread
WR1X36ST	1" x 36"
WR1X48ST	1" x 48"
WR1X60ST	1" x 60"
WR1X72ST	1" x 72"
WR1X72STA	1" x 72" All Thread
WR1X120ST	1" x 120" All Thread
WR118X60ST	1 1/8" x 60"
WR118X72ST	1 1/8" x 72"
WR118X72STA	1 1/8" x 72" All Thread
WR118X120ST	1 1/8" x 120" All Thread

Fresno-Type Left-Hand Thread

FL78X24ST	7/8" x 24"
FL78X36ST	7/8" x 36"
FL78X48ST	7/8" x 48"
FL78X60ST	7/8" x 60"
FL78X72ST	7/8" x 72"
FL78X72STA	7/8" x 72" All Thread
FL78X120ST	7/8" x 120" All Thread
FL118X36ST	1 1/8" x 36"
FL118X48ST	1 1/8" x 48"
FL118X60ST	1 1/8" x 60"
FL118X72ST	1 1/8" x 72"
FL118X72STA	1 1/8" x 72" All Thread
FL118X120ST	1 1/8" x 120" All Thread

X-GATE™ LOW HEAD CANAL GATES**Low Head Flat Back Gate****Installation Guide for 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 facilitate proper headwall mounting of the gate. It is also recommended that you provide sufficient access to the back side of the gate, allowing 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 against the headwall. 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 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.

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 spigotback gate as a template (13/52" or 7/16" drill bit).

3 - Secure the gate to corrugated pipe using either galvanized Grade 5 steel bolts or a 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.

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 corugated 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.

INSTALLATION AND STORAGE GUIDELINES

XCAD Inline Control Valves XCON and X-Max 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

DO NOT OVER-TIGHTEN BOLTS

4" XCON Inline Wafer Valve --- 15 Ft. Lbs. Torque
6" XCON/6" X-Max Inline Wafer Valve --- 20 Ft. Lbs. Torque
8" XCON Inline Wafer Valve --- 20 Ft. Lbs. Torque

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

Over-tightening of valve may cause damage to the diaphragm and void warranty.

- ▶ If the valve is to be installed in ambient temperatures below freezing, consult with your nearest XCAD 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 - GPM

4" XCON Inline Wafer Valve -- 200 - 800
6" XCON/6" X-Max Inline Wafer Valve -- 500 - 2250
8" XCON Inline Wafer Valve -- 1200 - 4000

Specifications:

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

Max Pressure: 140 psi

Water Temp Range: 33°F to 130°F



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
- ▶ Tighten bolts to the recommended torque for specific size and model of valve
- ▶ 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 in ambient temperatures below freezing, consult with your nearest XCAD 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 - GPM

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

Specifications:

Fixed Diaphragm Style.
Mounts between all standard flanges.

Max Pressure: 200 psi

Water Temp Range: 33°F to 130°F



2014 Policy and Conditions of Sale

This statement of Policy and Conditions of Sales supersedes all previous Policy and Conditions as stated by XCAD Valve and Irrigation Inc., hereinafter collectively and individually referred to as the "Company". This will apply to all XCAD, Aqua Burst, Pressure Guard, X-Gate, Seal Matic and OEM made products sold by XCAD unless otherwise stated in writing.

Prices, Terms and Specifications

PRICING: Prices listed in our catalog are recommended list prices F.O.B. the "Company". Prices are subject to change without notice and shall be those in effect at time of shipment. All prices are in U.S. dollars.

DEALERS: Sales are made through authorized distributors, OEM's and/or dealers only. Possession of our catalog does not constitute an offer to sell our product. All orders are subject to acceptance by the "Company".

TAXES: The purchaser shall reimburse the seller for any sales, use, occupation, excise, or other taxes in connection with the sale, which will be charged by invoice. The purchaser will not be invoiced for tax on items that are exempt with an appropriate tax exemption certificate.

TERMS: All orders are subject to the approval and conditions of the "Company's" credit department. Payment terms are net 30 days unless otherwise specified in writing. Cash discounts, if applicable, will be stated on the invoice. Freight or other net priced items are not subject to further discount. Interest may be charged on all past due invoices at the current rate allowed by law. Any check returned for non-sufficient funds will be subject to a \$100.00 handling charge.

SPECIFICATIONS: The "Company" policy is one of continuous improvement. The "Company" reserves the right to make changes to designs or specifications without notice or incurring obligation.

CANCELLATION: Standard items may only be cancelled if request is made prior to shipment. Special or custom-made items may not be cancelled unless cancellation precedes the item being in the process of manufacture. Such cancellations will only be allowed after full costs expended in the process of manufacture have been fully reimbursed.

SECURITY INTEREST: Buyer acknowledges that the "Company" will retain a purchase money security interest in the goods sold until the purchase price has been paid in full and all other conditions of sale fully performed.

Freight, Returns and Delivery

FREIGHT ALLOWANCE: On orders equaling \$7,000 net or more, freight will be prepaid on domestic shipments (excluding X-Gate products) to the first destination in the continental United States. The "Company" reserves the right to select the carrier and method of delivery.

DAMAGE CLAIMS / SHORTAGES: Freight shortages and damage claims due to transportation shall be made directly to the transportation provider. Shipments should be carefully examined upon arrival, prior to delivery receipt being signed. If any loss or damage is evident, it should be noted on the delivery receipt. Have the driver initial such exceptions. The contents of all packages should be examined within 48 hours for concealed damage. Contact the carrier to arrange for the prompt inspection of any damaged goods. If replacement for damaged or lost items is needed, the purchaser will give the seller a new order marked "replacement for the same". The purchaser shall pay the invoices for such replacement and request a duplicate receipt to be filled with his claim against the carrier. All claims for shortages must be made within 10 days of receipt of shipment. Claims need to identify item, quantity, package list number, invoice number, and date of shipment.

RETURNS: The return of current catalog merchandise in saleable condition may be subject to a restocking charge. All returns must be accompanied by a "Company" approved Return Authorization. Specials, custom fabricated or modified items will not be accepted for return. Items not listed in the current "Company" catalog or items purchased more than one year prior to the request date will not receive authorization. All returns must be shipped freight prepaid unless otherwise specified on the Return Authorization. Return parts may be subject to a rework charge. All returned merchandise will be credited to the purchaser's account unless otherwise specified on the Return Authorization.

DELIVERY: The "Company" accepts no liability for delay in delivery caused by circumstances arising beyond the control of the "Company". These circumstances include but are not limited to delays of carriers or suppliers.

Manufacturers Limited Warranty

All products sold and/or manufactured by the "Company" are warranted to be free of defects in material and workmanship for a period of one year from the date of delivery unless otherwise specified. Specific product line warranties may supercede this warranty. No warranty will extend beyond the description of goods sold on the "Company" invoice. Except as expressly provided herein, all warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose or use, are hereby excluded and disclaimed. The buyer assumes all risk and liability resulting from use of products purchased. Any misuse, neglect, modifications or use for purposes not approved by the "Company" shall completely void any warranty claim. The "Company" at its sole discretion shall have the option to repair or replace, part or all of the defective product or provide full or partial refunds 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 include any installation, attorney fees or transportation costs, which must be borne by the purchaser. "Company" reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

2014 Policy and Conditions of Sale

Tynnan Limited Warranty

All Tynnan products sold and/or manufactured by the "Company" are warranted to be free of defects in material and workmanship for a period of 30 days from the date of delivery unless otherwise specified. No warranty will extend beyond the description of Tynnan goods sold on the "Company" or "Company's" distributors invoice except as expressly provided herein. All warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose or use are hereby excluded and disclaimed. The buyer assumes all risk and liability resulting from the use of Tynnan products purchased. Any misuse, neglect, modifications or use for purposes not approved by the "Company" shall completely void any warranty claim. This warranty does not cover Tynnan products adversely effected by the system into which the engine products are incorporated; including system failure, improperly designed, installed, operated, maintained or serviced systems. The warranties on all Tynnan products are completely void if they are not used in conjunction with proper lubricants and fuels. This warranty does not cover failure caused by lightning strikes, wind or rain damage, flood, contaminated fuel, lack of lubricating oil, industrial accidents, irrigation water contamination, wheel line crashes or "Acts of God." The "Company" reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

Aqua Burst Brass Impact 5-Year Extended Bearing Warranty on Select Models HF-30, HF30AL, AL30

Select Aqua Burst Brass Impact Sprinklers carry a five-year extended 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. "Company" 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 Extended Warranty on Select Models X25ED, X25EDS, X35ED, X65ED, X65EDS, X85ED18, X85ED24

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 wheelline crashes, industrial accidents, freezing or any "Acts of God". The "Company" reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

Seal Matic Warranty and 5-Year Limited Warranty

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 good 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 five years for replacement diaphragms only. The "Company" reserves the right to define this warranty or any other warranty of the "Company" as it sees fit.

Address all warranty claims to:

XCAD USA
359 W 100 S
P.O. BOX 578
PAUL, ID 83347

NOTES

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