XLR Series Water Jets
User Manual

Rain Bird® XLR Series Water Jets are efficient and durable long-range impact rotors designed for a variety of uses and applications where relatively high flows and extended radius of throw are desired.

For best results, please read the following instructions before installation to ensure optimal performance.

Start Up Note

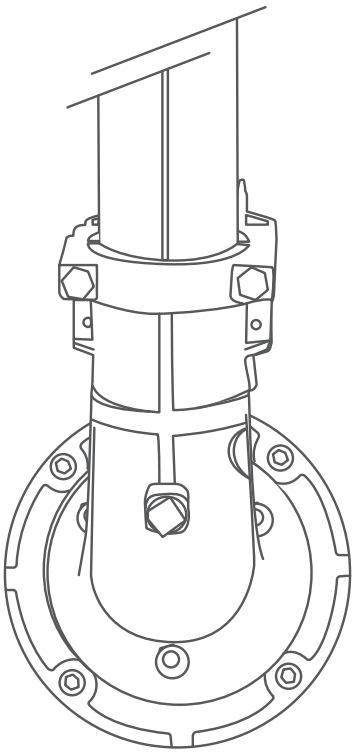
Always verify pressure. Pressure at the pump or point of connection does not equal pressure at the water jet. The most common problem associated with water jet installations is insufficient or too much pressure at the head.

Quick Start Guide

1. Configuring Your XLR Series Water Jet

With an optional jet-breaker and nine available nozzles (sold separately), you can customize your water jet to any application.

- Manually set the desired rotation arc by pushing the two friction collars to the desired position.



2. Installing Your Water Jet

Now that you have configured your water jet, make sure that it is mounted securely. If there is wobble while your water jet is in operation, it is a signal that you are losing energy needed to ensure optimal rotation speed.

3. Starting Your Water Jet

- Make sure that the water jet is pointed in a safe direction and all people in the area are ready.
- Activate valve if automatic. If controlled by a manual valve, open valve slowly until the desired pressure and flow are reached.

XLR Series Water Jet Configuration Details

Nozzle Selection

Select one of the nine available nozzles based on your performance requirements, available water pressure (at the water jet) and flow capacity.

Table 1 — XLR 24 and XLR ADJ Performance Data

Pressure psi	Nozzle Throw Range 0.47" (12 mm) Flow gpm	0.47" (12 mm) Radius ft	0.55" (14 mm) Flow gpm	0.55" (14 mm) Radius ft	0.63" (16 mm) Flow gpm	0.63" (16 mm) Radius ft	0.71" (18 mm) Flow gpm	0.71" (18 mm) Radius ft	0.79" (20 mm) Flow gpm	0.79" (20 mm) Radius ft	0.87" (22 mm) Flow gpm	0.87" (22 mm) Radius ft	0.94" (24 mm) Flow gpm	0.94" (24 mm) Radius ft	1.02" (26 mm) Flow gpm	1.02" (26 mm) Radius ft	1.10" (28 mm) Flow gpm	1.10" (28 mm) Radius ft
30	35	81	48	88	62	96	78	98	97	99	117	101	139	102	164	103	189	104
40	40	93	55	100	71	107	90	114	112	120	135	122	161	125	190	127	219	130
50	45	103	62	110	80	117	101	125	125	133	151	137	180	141	212	146	245	151
60	50	109	67	117	87	124	111	133	137	141	165	147	197	152	232	159	268	166
70	54	113	73	121	94	129	119	138	148	147	178	154	212	160	251	168	289	176
80	57	118	78	126	101	135	128	144	158	153	191	160	227	167	268	176	309	185
90	61	122	83	131	107	141	135	150	168	158	202	166	241	174	284	184	328	193
100	64	125	87	135	113	145	143	154	177	163	213	171	254	180	300	189	346	198
110	67	128	91	138	118	148	150	157	186	166	224	175	266	184	314	193	363	202

The performance data were obtained under ideal testing conditions and may be adversely affected by wind and other factors. Pressure refers to pressure at nozzle.
A lowered trajectory angle improves the irrigation efficiency in windy conditions. For every 3° drop of the trajectory angle the throw is reduced by aprrox. 3 to 4%.

Table 2 — XLR 44 Performance Data

Pressure psi	Nozzle Throw Range 0.47" (12mm) Flow gpm	0.47" (12mm) Radius ft	0.47" (12mm) Height ft	0.55" (14mm) Flow gpm	0.55" (14mm) Radius ft	0.55" (14mm) Height ft	0.63" (16mm) Flow gpm	0.63" (16mm) Radius ft	0.63" (16mm) Height ft	0.71" (18mm) Flow gpm	0.71" (18mm) Radius ft	0.71" (18mm) Height ft	0.79" (20mm) Flow gpm	0.79" (20mm) Radius ft	0.79" (20mm) Height ft	0.87" (22mm) Flow gpm	0.87" (22mm) Radius ft	0.87" (22mm) Height ft	0.94" (24mm) Flow gpm	0.94" (24mm) Radius ft	0.94" (24mm) Height ft	1.02" (26 mm) Flow gpm	1.02" (26 mm) Radius ft	1.02" (26 mm) Height ft	1.10" (28 mm) Flow gpm	1.10" (28 mm) Radius ft	1.10" (28 mm) Height ft
40	40	82	37	55	90	37	71	98	38	90	105	38	112	113	39	135	117	39	161	121	40	190	125	40	219	128	41
50	45	91	43	62	99	44	80	108	45	101	116	46	125	125	47	151	130	48	180	135	48	212	140	49	245	144	50
60	50	97	48	67	107	49	87	116	51	111	126	52	137	135	54	165	140	55	197	146	56	232	151	57	268	157	58
70	54	102	51	73	112	53	94	122	55	119	132	57	148	142	59	178	148	61	212	154	62	251	160	64	289	165	66
80	57	107	54	78	117	57	101	127	59	128	138	61	158	148	64	191	154	66	227	160	68	268	166	70	309	172	72
90	61	110	56	83	121	59	107	132	62	135	142	65	168	153	68	202	159	70	241	165	72	284	171	75	328	177	77
100	64	113	58	87	124	61	113	135	65	143	146	68	177	157	71	213	163	73	254	169	76	300	176	79	346	182	82
110	67	115	60	91	126	63	118	137	66	150	148	70	186	160	73	224	166	76	266	172	79	314	179	82	363	185	85
120	70	116	61	95	127	64	124	139	68	156	150	72	194	161	75	234	168	78	278	175	81	328	181	84	379	188	87

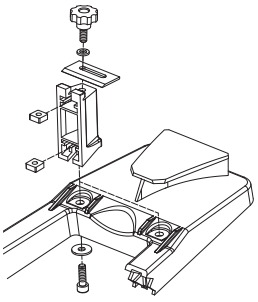
The performance data were obtained under ideal testing conditions and may be adversely affected by wind and other factors. Pressure refers to pressure at nozzle.
Radius = radius of throw in feet. Nozzle at 5 feet above ground level. Height = maximum stream height in meters above nozzle.

Jet-Breaker

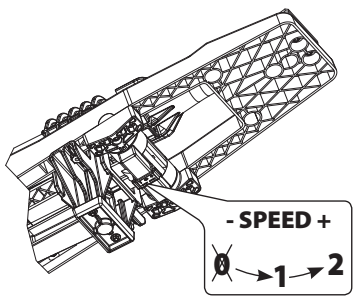
The jet-breaker is individually adjustable. To start, set the blade so it intersects the water stream for approximately 20% of the mounted nozzle diameter (e.g. for a nozzle of 0.80" [20 mm], the blade should reach 0.16" [4 mm] into the water stream). Fine tune, if required. The intermittence frequency can be adjusted with the speed / frequency selector.

Figure 1 — Jet Breaker

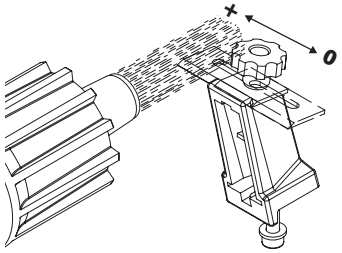
Installation



Speed / Frequency Selector



Jet-Breaker Blade Adjustment

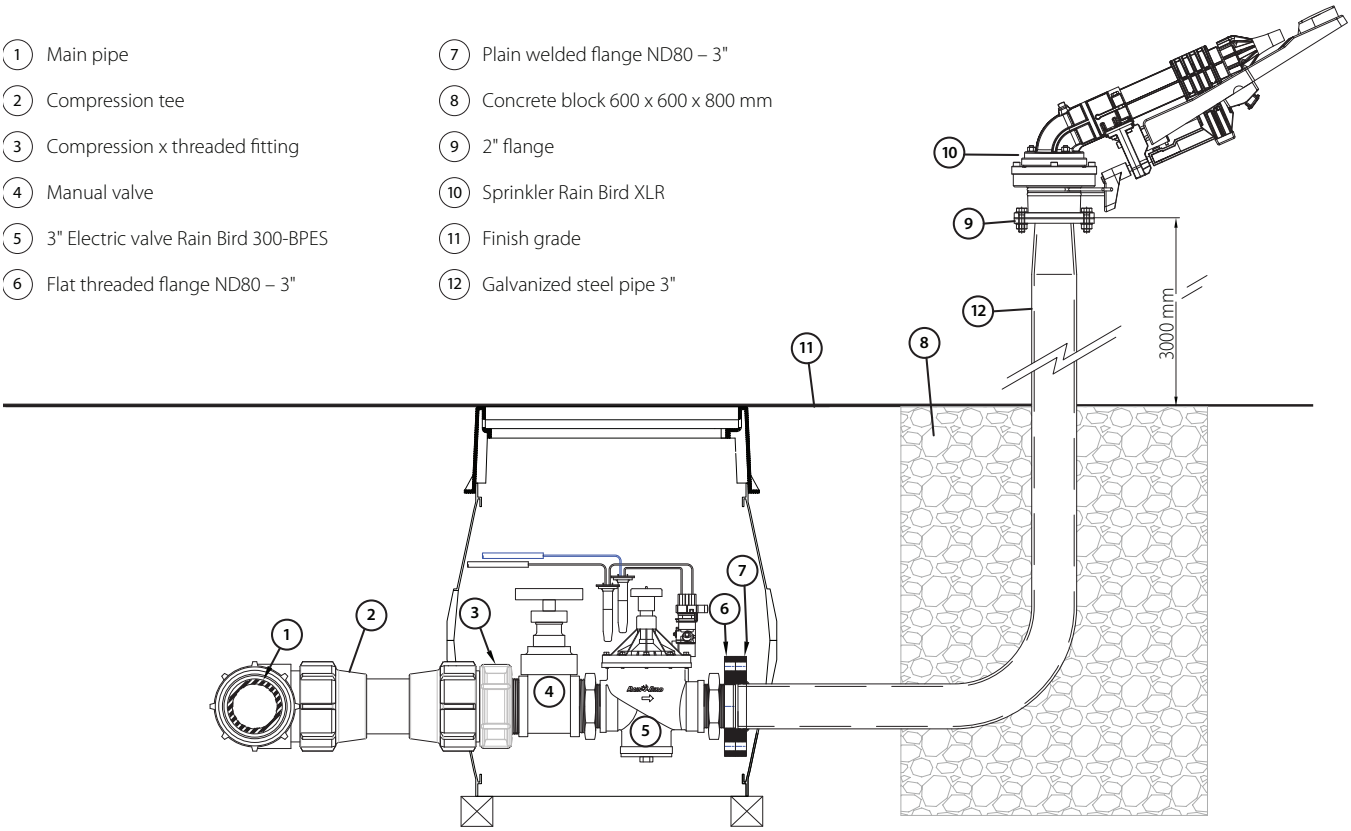


Riser Installation

To ensure proper operation and performance for the life of your Water Jet, the riser must be stable and solidly installed to resist vibration. An unsupported riser is insufficient for proper operation. Additionally, a PVC riser will not support the reaction load of a water jet. Some options that may be used are (Note: confirm friction loss and flow in your application):

Figure 1: Typical Installation

1. Main pipe
2. Compression tee
3. Compression x threaded fitting
4. Manual valve
5. 3" Electric valve Rain Bird 300-BPES
6. Flat threaded flange ND80 – 3"
7. Plain welded flange ND80 – 3"
8. Concrete block 600 x 600 x 800 mm
9. 2" flange
10. Sprinkler Rain Bird XLR
11. Finish grade
12. Galvanized steel pipe 3"



Install Water Jet to riser as shown in Figure 2 or 3.

Figure 2: Using Bolt Flange

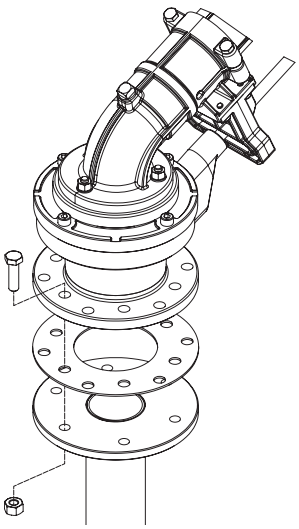
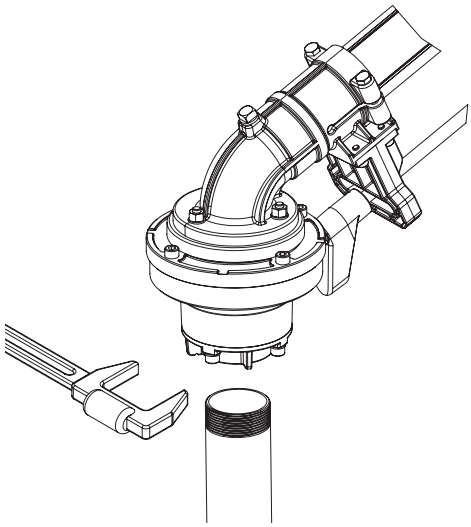


Figure 3: Using Thread Adapter



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