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

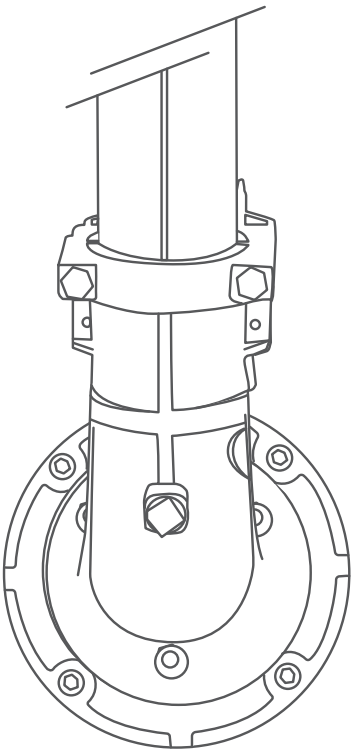
Always verify pressure. Pressure at the pump or point of connection does not equal pressure at the water jet. The most common problem associated with water jet installations is insufficient or too much pressure at the head.

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

	Nozzle Throw Range																	
	12 mm (0.47")		14 mm (0.55")		16 mm (0.63")		18 mm (0.71")		20 mm (0.79")		22 mm (0.87")		24 mm (0.94")		26 mm (1.02")		28 mm (1.10")	
Pressure bar	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m	Flow m³/h	Radius m
2,0	7,8	24,2	10,6	26,5	13,8	28,9	17,5	29,1	21,7	29,4	26,1	29,8	31,1	30,2	36,7	30,6	42,3	30,9
2,5	8,7	26,8	11,9	29,0	15,4	31,3	19,5	32,5	24,2	33,8	29,2	34,4	34,7	35,1	41,0	35,8	47,3	36,5
3,0	9,6	29,4	13,0	31,6	16,9	33,7	21,4	35,9	26,5	38,2	31,9	39,1	38,0	39,9	44,9	41,0	51,8	42,1
3,5	10,3	31,2	14,1	33,3	18,2	35,5	23,1	37,9	28,7	40,4	34,5	41,6	41,1	42,9	48,5	44,4	56,0	45,9
4,0	11,1	32,9	15,1	35,1	19,5	37,3	24,7	39,9	30,7	42,5	36,9	44,2	43,9	45,8	51,8	47,8	59,8	49,7
4,5	11,7	33,9	16,0	36,2	20,7	38,6	26,2	41,2	32,5	43,9	39,1	45,7	46,6	47,6	55,0	49,8	63,5	52,0
5,0	12,4	34,8	16,8	37,3	21,8	39,8	27,6	42,5	34,3	45,2	41,2	47,3	49,1	49,3	58,0	51,8	66,9	54,3
5,5	13,0	35,7	17,7	38,4	22,9	41,1	29,0	43,8	35,9	46,5	43,2	48,7	51,5	50,9	60,8	53,5	70,2	56,2
6,0	13,5	36,6	18,4	39,5	23,9	42,4	30,3	45,0	37,5	47,7	45,2	50,1	53,8	52,5	63,5	55,3	73,3	58,1
6,5	14,1	37,4	19,2	40,4	24,9	43,3	31,5	46,0	39,1	48,7	47,0	51,2	56,0	53,7	66,1	56,5	76,3	59,3
7,0	14,6	38,2	19,9	41,2	25,8	44,2	32,7	46,9	40,6	49,7	48,8	52,3	58,1	54,9	68,6	57,7	79,2	60,6

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

	Nozzle Throw Range																							
	12mm (0.47")			14mm (0.55")			16mm (0.63")			18mm (0.71")			20mm (0.79")			22mm (0.87")			24mm (0.94")			26 mm (1.02")			28 mm (1.10")		
Pressure bar	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m	Flow m³/h	Radius m	Height m
3,0	9,6	26,1	11,9	13,0	28,5	12,1	16,9	31,0	12,3	21,4	33,5	12,5	26,5	35,9	12,7	31,9	37,2	12,9	38,0	38,5	13,1	44,9	39,7	13,3	51,8	41,0	13,4
3,5	10,3	27,7	13,1	14,1	30,3	13,4	18,2	33,0	13,7	23,1	35,6	14,0	28,7	38,2	14,4	34,5	39,7	14,6	41,1	41,1	14,9	48,5	42,6	15,1	56,0	44,0	15,3
4,0	11,1	29,3	14,3	15,1	32,1	14,7	19,5	34,9	15,1	24,7	37,8	15,6	30,7	40,6	16,0	36,9	42,2	16,3	43,9	43,8	16,6	51,8	45,5	17,0	59,8	47,1	17,3
4,5	11,7	30,4	15,1	16,0	33,4	15,6	20,7	36,3	16,1	26,2	39,3	16,7	32,5	42,2	17,2	39,1	43,9	17,6	46,6	45,6	18,1	55,0	47,3	18,5	63,5	49,0	18,9
5,0	12,4	31,5	15,9	16,8	34,6	16,5	21,8	37,7	17,1	27,6	40,8	17,8	34,3	43,9	18,4	41,2	45,7	19,0	49,1	47,4	19,5	58,0	49,2	20,0	66,9	51,0	20,5
5,5	13,0	32,4	16,4	17,7	35,6	17,2	22,9	38,7	17,9	29,0	41,9	18,6	35,9	45,1	19,4	43,2	46,9	20,0	51,5	48,7	20,6	60,8	50,5	21,2	70,2	52,3	21,8
6,0	13,5	33,3	17,0	18,4	36,5	17,8	23,9	39,8	18,7	30,3	43,0	19,5	37,5	46,3	20,3	45,2	48,1	21,0	53,8	50,0	21,7	63,5	51,8	22,3	73,3	53,6	23,0
6,5	14,1	33,9	17,4	19,2	37,2	18,3	24,9	40,5	19,2	31,5	43,8	20,1	39,1	47,1	21,0	47,0	49,0	21,8	56,0	50,9	22,5	66,1	52,7	23,3	76,3	54,6	24,1
7,0	14,6	34,5	17,9	19,9	37,8	18,8	25,8	41,2	19,8	32,7	44,6	20,7	40,6	48,0	21,7	48,8	49,9	22,5	58,1	51,8	23,4	68,6	53,7	24,2	79,2	55,6	25,1
7,5	15,1	34,8	18,1	20,6	38,2	19,1	26,7	41,7	20,2	33,8	45,1	21,2	42,0	48,5	22,2	50,5	50,4	23,1	60,1	52,4	24,0	71,0	54,3	24,9	82,0	56,3	25,8
8,0	15,6	35,2	18,4	21,3	38,7	19,5	27,6	42,1	20,6	34,9	45,5	21,6	43,4	49,0	22,7	52,2	51,0	23,6	62,1	53,0	24,6	73,3	55,0	25,5	84,6	57,0	26,4

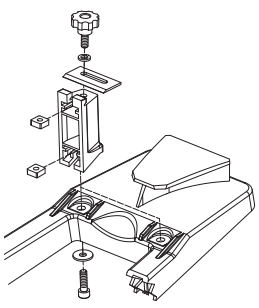
The performance data were obtained under ideal testing conditions and may be adversely affected by wind and other factors. Pressure refers to pressure at nozzle.
Radius = radius of throw in meters. Nozzle at 1,5 meters above ground level. Height = maximum stream height in meters above nozzle.

Jet-Breaker

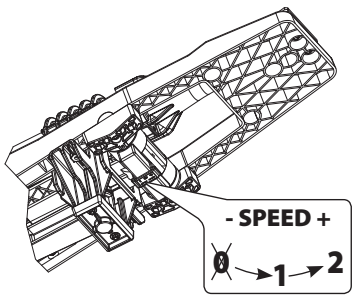
The jet-breaker is individually adjustable. To start, set the blade so it intersects the water stream for approximately 20% of the mounted nozzle diameter (e.g. for a nozzle of 20 mm [0.80"], the blade should reach 4 mm [0.16"] into the water stream). Fine tune, if required. The intermittence frequency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

Figure 1 — Jet Breaker

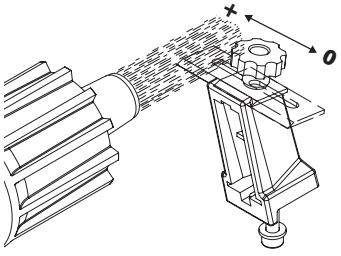
Installation



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"

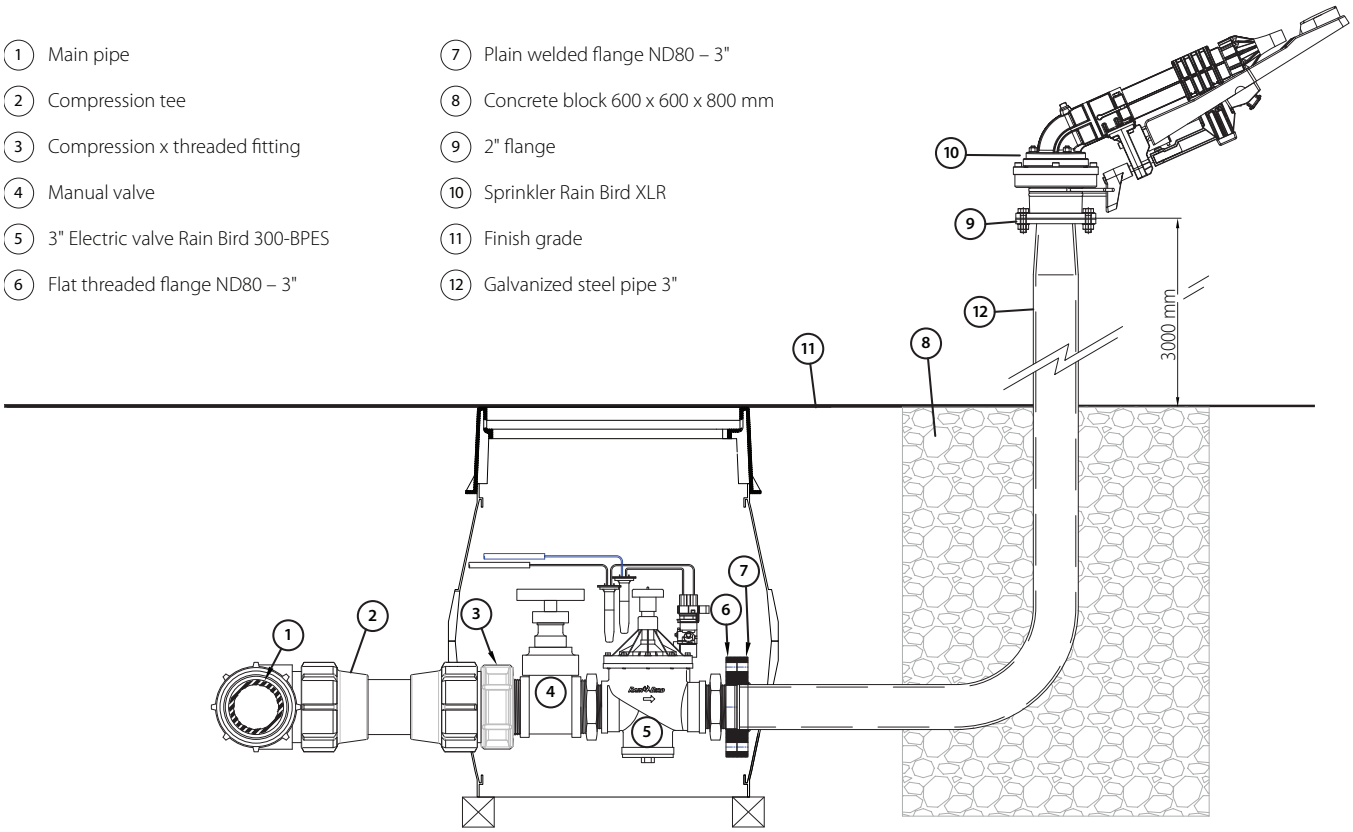
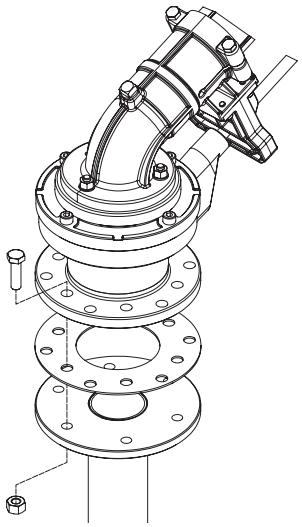


Figure 2: Attach Water Jet to Riser with Bolt Flange



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