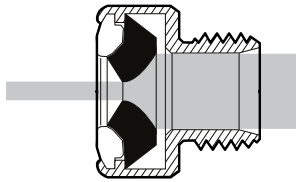


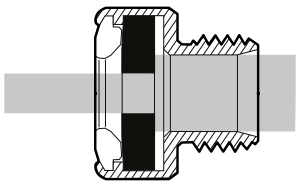
innovation in irrigation™

NELSON**FCN® FLOW CONTROL NOZZLE**

Uneven water distribution through your sprinkler system may be caused by field elevation difference, excessive pipe friction loss or variations in pump pressure. The Nelson FCN® Flow Control Nozzle is designed to automatically compensate for these factors, allowing you to achieve a more uniform application of water on all parts of your field.



Nelson FCN under
high pressure



Nelson FCN under
low pressure

Installing Nelson FCN Nozzles in place of standard impact sprinkler nozzles helps to equalize the flow rate from each sprinkler on hand line, wheel line or solid set systems. On a center pivot system, the FCN helps maintain a constant flow rate. The result of more uniform water application can be improved crop yields, reduced pumping costs and savings in water and costly farm chemicals.

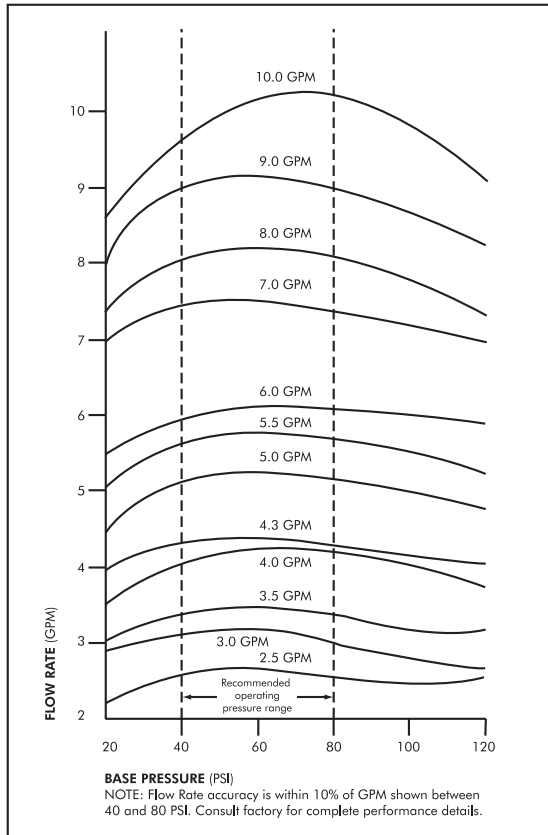
HOW THE NELSON FCN WORKS:

On the outside the Nelson FCN looks much like a regular brass sprinkler nozzle. But inside, the FCN has a patented flexible orifice that contracts as the pressure increases. This allows the gpm discharge to be held constant, regardless of pressure fluctuations. Since the stream is discharged across the orifice directly into the atmosphere the pressure drop normally associated with flow control devices does not occur. The FCN also has a much lower threshold pressure — the pressure at which it achieves rated flow — than that of base flow control devices.

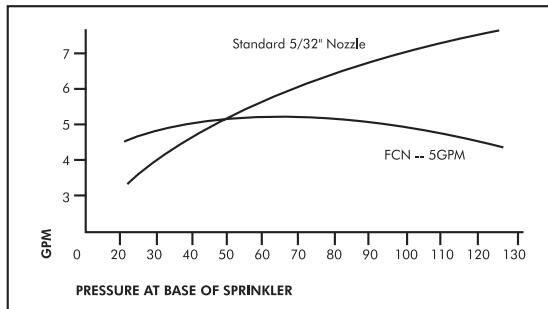
WARRANTY AND DISCLAIMER

Nelson Impact Sprinklers and FCN® Flow Control Nozzles are warranted for one year from date of original sale to be free of defective materials and workmanship when used within the working specifications for which the products were designed and under normal use and service. The manufacturer assumes no responsibility for installation, removal or unauthorized repair of defective parts. The manufacturer's liability under this warranty is limited solely to replacement or repair of defective parts and the manufacturer will not be liable for any crop or other consequential damages resulting from defects or breach of warranty. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES AND OF ALL OTHER OBLIGATIONS OR LIABILITIES OF MANUFACTURER. No agent, employee or representative of the manufacturer has authority to waive, alter or add to the provisions of this warranty, nor to make any representations or warranty not contained herein.

FCN PERFORMANCE — GPM VS. PSI



FCN performance VS. STANDARD NOZ. performance

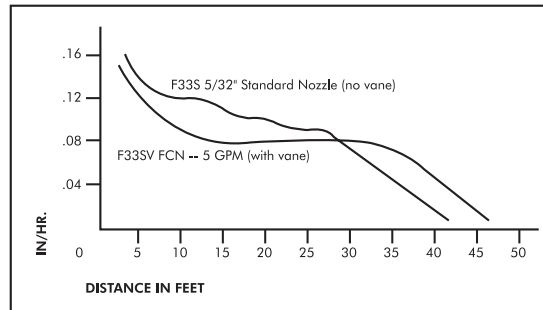


WATER DISTRIBUTION

The average water distribution profile of a sprinkler equipped with a FCN is not significantly different from that of a sprinkler equipped with a standard nozzle. The variances shown in the comparative profiles below are largely a result of differences in arm stroke rate, nozzle exit conditions, and stream-straightener vanes.

The total amount of water collected is essentially the same, indicating that under low-wind conditions there is very little difference in irrigation efficiency or in the amount of water lost as mist. High wind test results are not yet available.

AVERAGE PROFILE Test #IS 003 50 PSI — 3 MPH WIND



FCN FLOW CONTROL NOZZLE ORDER INFORMATION

2 FCN for 1/2" Impacts		3 FCN for 3/4" Impacts	
Model	GPM size	Model	GPM size
2 FCN	1.0	3 FCN	2.5
2 FCN	1.5	3 FCN	3.0
2 FCN	2.0	3 FCN	3.5
2 FCN	2.5	3 FCN	4.0
2 FCN	3.0	3 FCN	4.3
2 FCN	3.5	3 FCN	5.0
2 FCN	4.0	3 FCN	5.5
		3 FCN	6.0
		3 FCN	7.0
		3 FCN	8.0
		3 FCN	9.0
		3 FCN	10.0

NOTE: FCN performance data has been obtained under ideal test conditions and may be adversely affected by wind, poor hydraulic entrance conditions, or other factors. Nelson Irrigation Corporation makes no representation regarding droplet conditions, uniformity, or application rate.

The chart to the left illustrates how the FCN serves to maintain a constant flow rate over a wide range of pressure. Notice that the GPM of a standard 5/32" nozzle will vary as much as 40% when the pressure changes from 40 psi to 80 psi, while the GPM of the FCN holds nearly constant during an identical pressure change.

SPRINKLER PERFORMANCE

BASE Pressure PSI	Throw Radius (feet) for F32SV					Throw Radius (feet) for F33SV						
	2.5 3FCN	3.0 3FCN	3.5 3FCN	4.0 3FCN	4.3 3FCN	5.0 3FCN	5.5 3FCN	6.0 3FCN	7.0 3FCN	8.0 3FCN	9.0 3FCN	10.0 3FCN
40	41	42	42	42	43	44	45	47	48	50	51	53
50	41	42	42	42	43	44	46	47	48	50	51	53
60	42	43	43	43	44	45	46	47	48	50	51	53
70			43	43	44	45	47	48	49	51	52	53
80			43	44	44	46	47	48	50	51	52	52

NOTE: All test data based on no-wind test conditions on a 30-inch riser. For F44V, reduce values by 2-4%. For operation without vanes, reduce with-vane values by 4-12% (largest decrease at largest flow.)