



TECHNICAL DATA

VN NOZZLE FOR OXEO FIRE EXTINGUISHING SYSTEM (NITROGEN AND ARGON)

The Viking Corporation | 210 N Industrial Park Drive | Hastings MI 49058

Viking Special Hazards | Technical Services: 877-384-5464 | Email: techsvcs@vikingcorp.com | www.vikinggroupinc.com


Visit the Viking website for the latest edition of the technical data and system manuals.

1. DESCRIPTION

The Viking Oxeo VN nozzles may only be used as room protection nozzles in Oxeo Fire Extinguishing Systems utilizing Argon (IG-01) or Nitrogen (IG-100). The Viking Oxeo VN nozzles are installed to distribute the extinguishing agent evenly in the extinguishing zone in the calculated flooding time. During activation, the extinguishing agent flows through the nozzle, expanding once it exits the nozzle bores.

The VN nozzle is comprised of a nozzle body and an orifice plate with a specifically calculated diameter. vInert must be used to determine the orifice diameter specific to the fire extinguishing system. VN nozzles are not permitted for use within corrosive environments.

2. LISTINGS AND APPROVALS

 cULus Listed - EX5248 (Oxeo PR CF)



FM Approved: Oxeo PR CF

3. TECHNICAL DATA

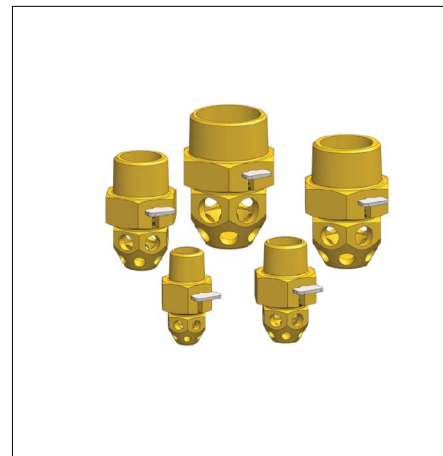
Specifications

- Argon (IG-01) or Nitrogen (IG-100)
- Connecting thread: varies; refer to tables 2-11.
- Operational temperature range: -4 °F to 122 °F (-20 °C to +55 °C)
- Storage temperature range: -40 °F to 149 °F (-40 °C to +65 °C)
- Assembly torque: 29.5 ± 3.7 ft-lb (40 ± 5 Nm)

Material Standards

- Nozzle socket / nozzle head: brass
- Orifice: stainless steel

Ordering Information: Refer to tables 1-11.



WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov



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4. INSTALLATION

1. Wrap the connection thread on the nozzle socket with a suitable sealant (e.g. PTFE tape).
2. Using a box wrench or a combination wrench on the width flat of the nozzle socket, firmly screw the nozzle into the fitting.
3. Using the correct hex socket wrench (refer to Table 1 for part numbers), tighten the nozzle to a torque of 45 ± 5 ft-lb (61 ± 7 Nm).

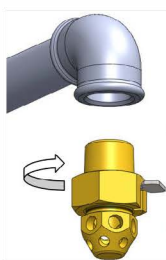


Figure 1

TABLE 1: WRENCH PART NUMBERS

TABLE 1: WRENCH PART NUMBERS		
25099	Socket, 1/2" Drive, 22 mm	1/2" NPT Nozzles
25100	Socket, 1/2" Drive, 27 mm	3/4" NPT Nozzles
25101	Socket, 1/2" Drive, 32 mm	1" NPT Nozzles
25232	Socket, 3/4" Drive, 41 mm	1-1/4" NPT Nozzles
25233	Socket, 3/4" Drive, 46 mm	1-1/2" NPT Nozzles

5. MAINTENANCE

The following must be carried out as part of the extinguishing system's maintenance intervals, either annually or upon system activation.

- Inspect the nozzles for any external damage, corrosion, contamination or any other visible marring. Check that all components are accounted for and that the nozzle has been installed properly.
- Immediately remove any debris from the nozzle bores. Dismount the nozzle to clean if necessary. Replace any damaged nozzles immediately.
- Spare nozzles should always be stored in their original packaging in dry conditions and protected against damage.

NOTICE

Risk of product damage.

Harsh cleaning agents can damage metals.

- Do not use cleaning agents that are harmful to metals.



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Table 2: 1/2" NPT VN Nozzles - 180° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
934164D-0118	934164	0.118 (3.0)	918524
934164D-0122		0.122 (3.1)	918525
934164D-0126		0.126 (3.2)	918526
934164D-0134		0.134 (3.4)	918527
934164D-0142		0.142 (3.6)	918528
934164D-0150		0.150 (3.8)	918529
934164D-0157		0.157 (4.0)	918530
934164D-0165		0.165 (4.2)	918531
934164D-0173		0.173 (4.4)	918532
934164D-0181		0.181 (4.6)	918533
934164D-0189		0.189 (4.8)	918534
934164D-0197		0.197 (5.0)	918535
934164D-0209		0.209 (5.3)	918536
934164D-0220		0.220 (5.6)	918537
934164D-0232		0.232 (5.9)	918538
934164D-0244		0.244 (6.2)	918539
934164D-0256		0.256 (6.5)	918540
934164D-0268		0.268 (6.8)	918541
934164D-0283		0.283 (7.2)	918542
934164D-0299		0.299 (7.6)	918543
934164D-0315		0.315 (8.0)	918544
934164D-0331		0.331 (8.4)	918545
934164D-0346		0.346 (8.8)	918546
934164D-0362		0.362 (9.2)	918547
934164D-0378		0.378 (9.6)	918548
934164D-0394		0.394 (10.0)	918549
934164D-0413		0.413 (10.5)	918550
934164D-0433		0.433 (11.0)	918551
934164D-0453		0.453 (11.5)	918552
934164D-0472		0.472 (12.0)	918553
934164D-0492	0.492 (12.5)	918554	

*Orifice plates not sold separately.



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Table 3: 1/2" NPT VN Nozzles - 360° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
918745D-0118	918745	0.118 (3.0)	918524
918745D-0122		0.122 (3.1)	918525
918745D-0126		0.126 (3.2)	918526
918745D-0134		0.134 (3.4)	918527
918745D-0142		0.142 (3.6)	918528
918745D-0150		0.150 (3.8)	918529
918745D-0157		0.157 (4.0)	918530
918745D-0165		0.165 (4.2)	918531
918745D-0173		0.173 (4.4)	918532
918745D-0181		0.181 (4.6)	918533
918745D-0189		0.189 (4.8)	918534
918745D-0197		0.197 (5.0)	918535
918745D-0209		0.209 (5.3)	918536
918745D-0220		0.220 (5.6)	918537
918745D-0232		0.232 (5.9)	918538
918745D-0244		0.244 (6.2)	918539
918745D-0256		0.256 (6.5)	918540
918745D-0268		0.268 (6.8)	918541
918745D-0283		0.283 (7.2)	918542
918745D-0299		0.299 (7.6)	918543
918745D-0315		0.315 (8.0)	918544
918745D-0331		0.331 (8.4)	918545
918745D-0346		0.346 (8.8)	918546
918745D-0362		0.362 (9.2)	918547
918745D-0378		0.378 (9.6)	918548
918745D-0394		0.394 (10.0)	918549
918745D-0413		0.413 (10.5)	918550
918745D-0433		0.433 (11.0)	918551
918745D-0453		0.453 (11.5)	918552
918745D-0472		0.472 (12.0)	918553
918745D-0492	0.492 (12.5)	918554	

*Orifice plates not sold separately.



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Table 4: 3/4" NPT VN Nozzles - 180° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
934165D-0413	934165	0.413 (10.5)	918567
934165D-0433		0.433 (11.0)	918555
934165D-0453		0.453 (11.5)	918556
934165D-0472		0.472 (12.0)	918557
934165D-0492		0.492 (12.5)	918558
934165D-0512		0.512 (13.0)	918559
934165D-0531		0.531 (13.5)	918560
934165D-0551		0.551 (14.0)	918561
934165D-0571		0.571 (14.5)	918562
934165D-0591		0.591 (15.0)	918563
934165D-0610		0.610 (15.5)	918564
934165D-0630		0.630 (16.0)	918565
934165D-0650		0.650 (16.5)	918568
934165D-0669		0.669 (17.0)	916566

*Orifice plates not sold separately.

Table 5: 3/4" NPT VN Nozzles - 360° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
918746D-0413	918746	0.413 (10.5)	918567
918746D-0433		0.433 (11.0)	918555
918746D-0453		0.453 (11.5)	918556
918746D-0472		0.472 (12.0)	918557
918746D-0492		0.492 (12.5)	918558
918746D-0512		0.512 (13.0)	918559
918746D-0531		0.531 (13.5)	918560
918746D-0551		0.551 (14.0)	918561
918746D-0571		0.571 (14.5)	918562
918746D-0591		0.591 (15.0)	918563
918746D-0610		0.610 (15.5)	918564
918746D-0630		0.630 (16.0)	918565
918746D-0650		0.650 (16.5)	918568
918746D-0669		0.669 (17.0)	916566

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Table 6: 1" NPT VN Nozzles - 180° Style			
Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
934166D-0591	934166	0.591 (15.0)	918570
934166D-0610		0.610 (15.5)	918571
934166D-0630		0.630 (16.0)	918572
934166D-0650		0.650 (16.5)	918569
934166D-0669		0.669 (17.0)	918573
934166D-0689		0.689 (17.5)	918578
934166D-0709		0.709 (18.0)	918574
934166D-0748		0.748 (19.0)	918575
934166D-0787		0.787 (20.0)	918576
934166D-0827		0.827 (21.0)	918577

*Orifice plates not sold separately.

Table 7: 1" NPT VN Nozzles - 360° Style			
Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
918747D-0591	918747	0.591 (15.0)	918570
918747D-0610		0.610 (15.5)	918571
918747D-0630		0.630 (16.0)	918572
918747D-0650		0.650 (16.5)	918569
918747D-0669		0.669 (17.0)	918573
918747D-0689		0.689 (17.5)	918578
918747D-0709		0.709 (18.0)	918574
918747D-0748		0.748 (19.0)	918575
918747D-0787		0.787 (20.0)	918576
918747D-0827		0.827 (21.0)	918577

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Table 8: 1-1/4" NPT VN Nozzles - 180° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
934167D-0709	934167	0.709 (18.0)	918579
934167D-0748		0.748 (19.0)	918580
934167D-0787		0.787 (20.0)	918581
934167D-0827		0.827 (21.0)	918582
934167D-0866		0.866 (22.0)	918583
934167D-0906		0.906 (23.0)	918584
934167D-0945		0.945 (24.0)	918585
934167D-0984		0.984 (25.0)	918586
934167D-1024		1.024 (26.0)	918587
934167D-1063		1.063 (27.0)	918588

*Orifice plates not sold separately.

Table 9: 1-1/4" NPT VN Nozzles - 360° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
918748D-0709	918748	0.709 (18.0)	918579
918748D-0748		0.748 (19.0)	918580
918748D-0787		0.787 (20.0)	918581
918748D-0827		0.827 (21.0)	918582
918748D-0866		0.866 (22.0)	918583
918748D-0906		0.906 (23.0)	918584
918748D-0945		0.945 (24.0)	918585
918748D-0984		0.984 (25.0)	918586
918748D-1024		1.024 (26.0)	918587
918748D-1063		1.063 (27.0)	918588

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Table 10: 1-1/2" NPT VN Nozzles - 180° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
934168D-0945	934168	0.945 (24.0)	918594
934168D-0984		0.984 (25.0)	918595
934168D-1024		1.024 (26.0)	918596
934168D-1063		1.063 (27.0)	918597
934168D-1102		1.102 (28.0)	918598
934168D-1142		1.142 (29.0)	918599
934168D-1181		1.181 (30.0)	918600
934168D-1220		1.220 (31.0)	918601
934168D-1260		1.260 (32.0)	918602
934168D-1299		1.299 (33.0)	918603

*Orifice plate not sold separately.

Table 11: 1-1/2" NPT VN Nozzles - 360° Style

Ordering Number	Nozzle Body	Orifice Diameter Inches (mm)	Orifice Plate Number*
918749D-0945	918749	0.945 (24.0)	918594
918749D-0984		0.984 (25.0)	918595
918749D-1024		1.024 (26.0)	918596
918749D-1063		1.063 (27.0)	918597
918749D-1102		1.102 (28.0)	918598
918749D-1142		1.142 (29.0)	918599
918749D-1181		1.181 (30.0)	918600
918749D-1220		1.220 (31.0)	918601
918749D-1260		1.260 (32.0)	918602
918749D-1299		1.299 (33.0)	918603

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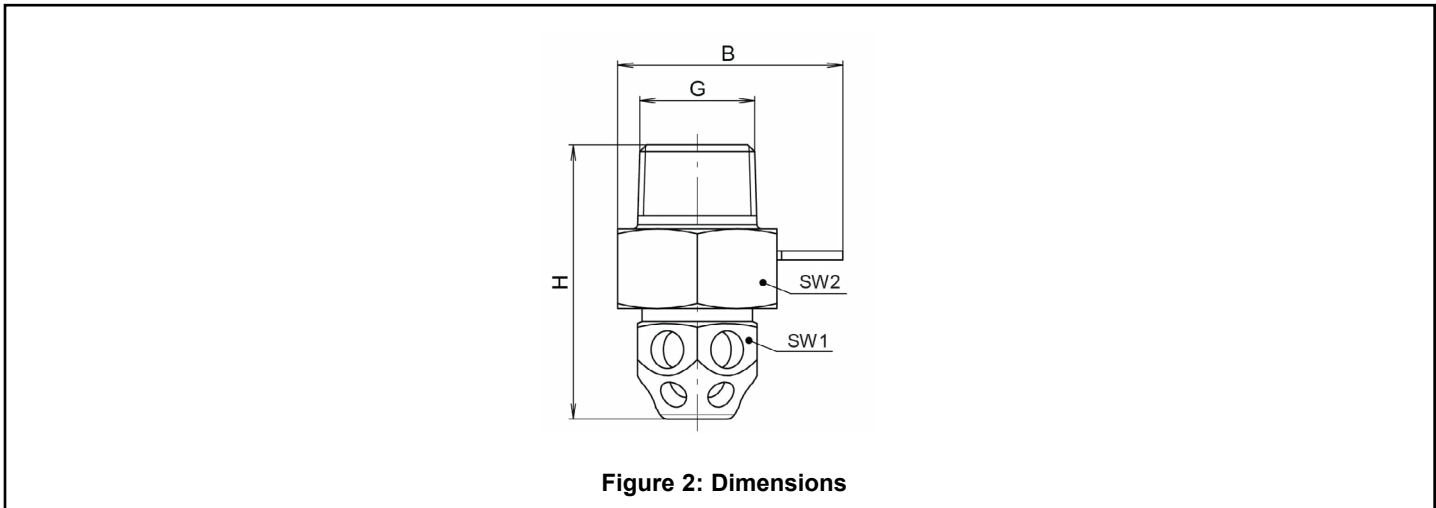


Table 13: Dimensions Inches (mm)				
G	H (approx.)	B (approx.)	SW1	SW2
1/2" NPT	2.32 (59)	1.77 (45)	0.87 (22)	1.18 (30)
3/4" NPT	2.48 (63)	2.0 (51)	1.06 (27)	1.41 (36)
1" NPT	2.76 (70)	2.20 (56)	1.26 (32)	1.61 (41)
1-1/4" NPT	3.07 (78)	2.52 (64)	1.61 (41)	1.97 (50)
1-1/2" NPT	3.27 (83)	3.07 (78)	1.81 (46)	2.16 (55)



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CLASS B FUEL MDC VALUES- VN NOZZLES					
FUEL	VN NOZZLE	VN NOZZLE SHORT THROW	VN NOZZLE LONG THROW	CONSTANT FLOW	
	IG-100	IG-01	IG-01	IG-100	IG-01
Acetone	42.4	57.9	64.8	43.0	56.2
Acetonitrile	42.4	57.9	64.8	43.0	56.2
Aviation gas	42.4	57.9	64.8	43.0	56.2
Benzene	42.4	57.9	64.8	43.0	56.2
Diesel no. 2	42.9	58.6	65.6	43.6	56.8
Ethane	42.9	58.6	65.6	43.6	56.8
Ethyl acetate	43.6	59.5	66.6	44.2	57.7
Ethyl alcohol	51.9	70.9	79.4	52.7	68.8
Ethylene glycol	48.6	66.5	74.4	49.4	64.5
Gasoline - no lead	44.2	60.3	67.5	44.9	58.5
Heptane, commercial	42.4	57.9	64.8	43.0	56.2
i-Octane	42.4	57.9	64.8	43.0	56.2
i-Propyl alcohol	48.0	65.5	73.4	48.7	63.6
Kerosene	44.2	60.3	67.5	44.9	58.5
Lube oil at 500 °F	45.5	62.0	69.5	46.2	60.2
Methane	42.4	57.9	64.8	43.0	56.2
Methyl alcohol	62.1	84.8	95.0	63.1	82.3
Methyl isobutyl ketone	44.9	61.2	68.6	45.5	59.4
Morpholine	50.6	69.1	77.4	51.3	67.1
n-Butane	42.4	57.9	64.8	43.0	56.2
n-Heptane	42.4	57.9	64.8	43.0	56.2
n-Hexane	42.9	58.6	65.6	43.6	56.8
n-Octane	43.6	59.5	66.6	44.2	57.7
n-Pentane	42.4	57.9	64.8	43.0	56.2
n-Propyl alcohol	49.3	67.3	75.3	50.0	65.3
Propane	42.9	58.6	65.6	43.6	56.8
Tetrahydrofuran	47.3	64.7	72.5	48.0	62.8
Toluene	42.4	57.9	64.8	43.0	56.2
Transformer oil	44.9	61.2	68.6	45.5	59.4
Xylene	42.4	57.9	64.8	43.0	56.2