



**AQUALOC<sup>®</sup> MUNICIPAL PVC PRESSURE PIPE**  
LOCKING PURITY, SAFETY AND ECONOMY INTO YOUR WATER SUPPLY



# AQUALOC<sup>®</sup>

## WATER QUALITY YOU CAN DEPEND ON

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In communities across the country and around the world, smart planners have discovered the benefits of AQUALOC Municipal PVC Pressure Pipe for their municipal water supplies. They know that they can depend on AQUALOC to safeguard their communities' water supplies.



Besides protecting public health, AQUALOC offers other benefits that municipal engineers demand. Made to withstand extreme pressures without leaking or corroding, this tough pipe is lighter to handle and easier to install than most other pipe available, while its performance and durability mean it's more cost-effective. These advantages make AQUALOC today's optimal choice for tomorrow's water supply demands.

At NEXT Polymers, we've been developing and perfecting water main systems for over 40 years, and we continue to be committed to providing a superior product-backed, as always, by our record of service excellence.

# PRODUCT RANGE

## DR 18 (Class 150) C.I. Outside Diameter - Blue

Size		D		d		d1		t(min)		g		Weight	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg/m	lb/ft
100	4	121.9	4.80	108.3	4.26	151.6	5.97	6.78	0.267	70.0	2.76	3.7	2.53
150	6	175.3	6.90	155.8	6.13	217.7	8.57	9.72	0.383	80.0	3.11	7.4	5.12
200	8	229.9	9.05	204.3	8.04	280.9	11.06	12.80	0.504	90.0	3.46	12.7	8.80
250	10	281.9	11.10	250.5	9.86	341.9	13.46	15.70	0.618	95.0	3.74	19.1	13.27
300	12	335.3	13.20	298.1	11.74	400.6	15.77	18.60	0.732	100.0	3.94	27.2	18.76
350	14	388.6	15.30	345.4	13.60	476.3	18.75	21.60	0.850	125.0	4.92	36.6	26.64
400	16	442.0	17.40	392.8	15.46	533.4	21.00	24.60	0.969	150.0	5.91	46.9	32.68

## DR 25 (Class 100) C.I. Outside Diameter - Blue

Size		D		d		d1		t(min)		g		Weight	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg/m	lb/ft
100	4	121.9	4.80	112.1	4.41	151.6	5.97	4.88	0.192	70.0	2.76	2.7	1.86
150	6	175.3	6.90	161.3	6.35	217.7	8.57	7.00	0.276	80.0	3.11	5.5	3.74
200	8	229.9	9.05	211.5	8.33	280.9	11.06	9.20	0.362	90.0	3.46	9.4	6.47
250	10	281.9	11.10	259.3	10.21	341.9	13.46	11.30	0.445	95.0	3.74	14.2	9.72
300	12	335.3	13.20	308.5	12.14	400.6	15.77	13.40	0.528	100.0	3.94	20.2	13.93
350	14	388.6	15.30	357.4	14.07	463.6	18.25	15.60	0.614	125.0	4.92	26.9	19.50
400	16	442.0	17.40	404.6	15.93	527.1	20.75	17.70	0.697	150.0	5.91	34.6	23.28

All dimensions and weights are approximate

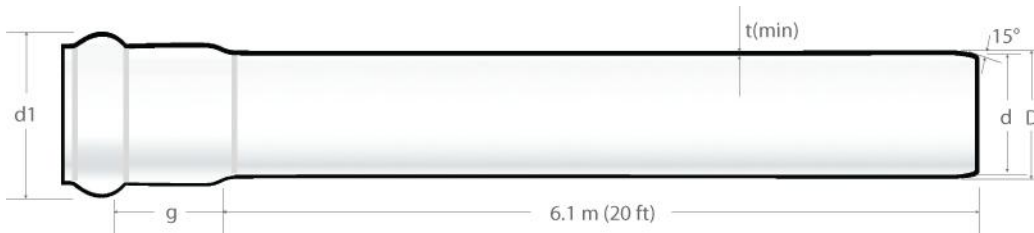


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# SPECIFICATIONS

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## Short form specification

AQUALOC Pressure Class 100 and 150 pipes shall be manufactured and certified to CSA B 137.3 and NSF standards. It shall also be manufactured in conformance to AWWA C900 and AWWA C905. In addition AQUALOC Pressure Class Pipe shall be listed to ULC and FM standards.

All AQUALOC Pressure Pipe shall be manufactured from PVC compound conforming to ASTM D 1784 and according to the NSF 61 standard for purity. The sealing gaskets shall be in accordance with ASTM F 477. Gaskets shall be locked into the bell during the manufacturing process. Only NEXT lubricant shall be used when assembling AQUALOC pipe.

Pipe joints shall be hydrostatically tested in accordance with ASTM D 3139 and shall be certified to meet these requirements under CSA B 137.3.

## Installation

AQUALOC pipe shall be installed in strict accordance with the NEXT Polymers Municipal PVC Pipe Installation Guide. Experienced service and technical support is available at NEXT Polymers office. If you have any questions concerning pipe installation, a NEXT representative will be glad to assist you.

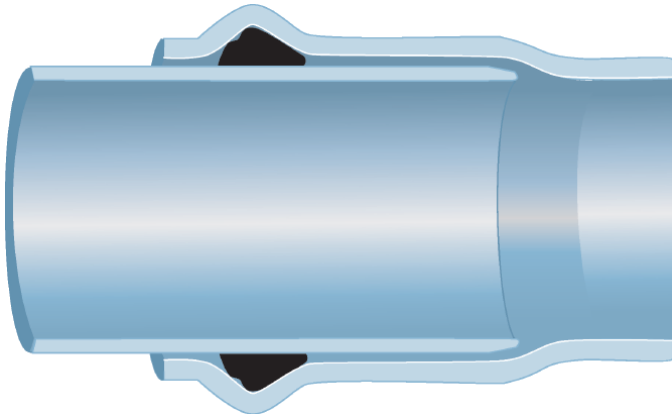
## Pressure tests

Products	Hydrostatic psi (kPa)	Burst psi (kPa)	Gasketed Joints psi (kPa)
DR 18 (Class 150)	650 (4480)	900 (6200)	752 (5190)
DR 25 (Class 100)	430 (2965)	650 (4480)	532 (3670)



# SUPERIOR PERFORMANCE SYSTEM

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*Illustration not to scale*

## **Corrosion resistance**

PVC pipe is immune to all types of metallic corrosion, so no coating, cathodic protection or lining is required. This immunity gives PVC the significant advantages of lower operating costs and longer system life compared with other piping materials.

## **Leak-proof design**

NEXT's locked-in gasket system eliminates the threat of gasket roll. The sealing gaskets are in accordance with CSA B 137.3 and ASTM F 477. Each joint can withstand many times its pressure rating, even under deflected conditions specified in standard tests, without any leakage. Pipe joints are manufactured and hydrostatically tested in accordance with ASTM D 3139 and are certified to meet these requirements under CSA B 137.3. This virtually eliminates both the health risks associated with infiltration and the high cost of exfiltration.

## **Flexibility**

PVC is tough, yet flexible enough to allow the pipe to move with the surrounding soil. This means fewer repairs due to stress cracks.

## **Strength**

NEXT's Pressure Class Pipe provides an additional safety factor for short-term surge pressures and a 2 1/2-to-1 safety factor for 100-300 mm (4-12 in) and 2-to-1 for 350 mm (14 in) and larger for long-term hydrostatic pressure.

## **Reduced maintenance and operation costs**

Because PVC's smooth bore resists tuberculation, scaling and abrasion, AQUALOC retains its flow capacity longer than other piping materials. It never needs cleaning, so pumping is not impeded and costs are kept to a minimum. The Hazen-Williams flow coefficient (C-factor), which has been set conservatively at 150, is easily sustainable.

## **Ease of Installation and Handling**

With its high strength-to-weight ratio, AQUALOC combines superior performance with low installation and handling costs. When compared with other materials, PVC pipe can be handled with smaller equipment and can be installed faster—some sizes can even be lifted by hand. See the NEXT Polymers Municipal PVC Pipe Installation Guide for complete installation instructions.

## **Ease of Direct Tapping**

AQUALOC Class 150 and 100 are easily tapped for 19 mm (3/4 in) and 25 mm (1 in) services for pipe sizes 150 mm (6 in) and above. See the NEXT Polymers AQUALOC Pressure Pipe Tapping Guide for details.

## **Compatibility**

AQUALOC DR 18 and DR 25 have cast iron outside diameters and can be used with Class 150 PVC push-on fittings as well as ductile iron (D.I.) push-on or mechanical joint (M.J.) fittings.

# CONTROLS AND STANDARDS

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## Impact

In accordance with CSA B 137.3, AQUALOC will not split or crack during impact tests performed at 0°C (32°F).

## Flattening

AQUALOC can withstand a compression of 95% of its original O.D. without splitting or breaking.

## Extrusion quality

Average outside diameter, out-of-roundness and wall thickness are measured hourly to ensure extrusion quality conforms to standards.

## Materials

The PVC compound meets all requirements of cell classification 12454-B according to ASTM D 1784.

## Fusion

AQUALOC shows no visible sign of flaking or cracking when immersed in anhydrous acetone for 20 minutes.

## Elastomeric seals

Gaskets used for joining PVC pressure pipe shall conform to CSA B 137.3 and ASTM F 477 standards.

## Standards and certifications

- CSA International - CSA B 137.0 and B 137.3
- American Water Works Association - AWWA C900 and C905 (Class 150 and Class 100)
- Bureau de Normalisation du Québec -NQ 3624-250 and 3660-950
- FM Global - FM 1610 (for underground fire protection)
- ULC
- NSF International - NSF 61
- ASTM International - ASTM D 1784, D 3139 and F 477



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