

# qd Atlantic Diffusers



Disc and Tube Diffusers



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## **Our Products**

Atlantic Diffusers' Disc and Tube Diffusers are available in a variety of sizes and duties. Our diffusers have the option of either EPDM or silicone membranes, which when compared to traditional stone diffusers, can greatly reduce and even eliminate the risk of unintended backflow of water into the air line, and reduce fouling by up to 73%. Each one of our products are made through the process of compression molding. Unlike traditional systems, our diffusers are made with the ability to be deconstructed, which allows for quick and efficient membrane replacements.

## **Applications:**

- Wastewater Treatment
- Water Oxygenation
- Aerobic Digestion
- Fish Pond Aeration
- Industrial Ecology
- Water Purification



## **About Us**

Atlantic Diffusers specialize in the production, research, and development of the highest quality aeration products in the marketplace. We provide our customers with long-lasting, low maintenance, and efficient products. Every diffuser has been engineered to be as efficient and effective as possible; this is down to the smallest details. For example each diffuser membrane is perforated by its' own purpose built dye cutter maximizing the concentration of perforations, without compromising its integrity. Atlantic Diffusers has an unmatched foundation on which the company has been built. All our diffusers have been engineered and manufactured from the ground up by our already very experienced engineers from our sister company Atlantic Blowers. Our people are some of the most experienced in the aeration industry because they understand the dynamics from the source of which it came, the blower. A major benefit you receive when doing business with Atlantic Diffusers is that we can supply everything you need for your aeration application from one place, the blower itself as well as the diffusers. Atlantic Diffusers has proved time and time again that we deliver on our promises to provide a great product with exceptional customer service.



## Disc Diffuser Installation

Installation of our Fine, Medium, and Coarse Bubble Disc Diffusers is made easy by utilizing our Universal Diffuser Mount throughout your piping system. The Universal Diffuser Mount is put into place by boring a 1" hole into the feeder pipe and gently tapping it into place with a rubber mallet until the saddle is flush with the pipe's surface.



The Universal Diffuser Mount is made from durable polypropylene and provides a leak-tight seal. The diffusers are installed via 3/4" MPT connection. Using the Universal Diffuser Mount as opposed to tapping directly into the pipe greatly reduces the chances of leakage/breakage, and system fouling. This results in a much more efficient and sustainable system. Once installed it is recommended that the area be filled just above the diffuser line before air is put into the system. Doing this will expose any faults by creating bubbles in the affected area. After the system has been tested for leaks, the area can be filled to the desired depth, and aeration can begin.

## Tube Diffuser Installation

Atlantic Diffusers' Fine Bubble Tube Diffusers can be used in a variety of water aeration, and oxygenation applications. Our Tube Diffusers are designed with a 3/4" FPT connection, but come with an MPT nipple for easy conversion, if desired. This nipple also allows users to install our Tube Diffusers using the same Universal Diffuser Mount mentioned above. Simply tap a 1" hole in your piping system and screw in the tube with the attached MPT nipple. Again once all of the diffusers are installed, fill the area just above the diffuser line with water and check for any faulty installations and/or leaks.



## Engineering and Troubleshooting

Atlantic Diffusers' engineers are available to answer any questions. We offer assistance with pressure, CFM, and SOTE calculations. We can even offer a complete turnkey solution for your next project including any control panel, and/or automated control system. If you are having an issue with the installation of your system, please feel free to contact us via phone or email. We strive to exceed every one of our customer's expectations.

## Disc Diffusers

Bubble Size	Model Number	Descriptions	Curve Number	Fitting Size	Airflow Requirements	Bubble Size	Active Surface Area	Flow Interference	Gallons Mixed per Hour @ 6 ft per CFM Air Input
Coarse	AB-70002	3" Coarse Bubble Cap Diffuser	D2	1/2"	1.5-15 SCFM	9-12mm	28 in <sup>2</sup>	3"	5.4
	AB-70016	5" Coarse Bubble Disc Diffuser	D16	3/4"	3-15 SCFM	9-12mm	32 in <sup>2</sup>	6.5"	10.8
	AB-70003	5" Coarse Bubble Disc Diffuser	D3	3/8"	3-15 SCFM	9-12mm	32 in <sup>2</sup>	6.5"	10.8
Medium	AB-70001	3" Medium Bubble Cap Diffuser	D1	1/2"	1.5-15 SCFM	6-10mm	28 in <sup>2</sup>	3"	5.4
	AB-70004	5" Medium Bubble Disc Diffuser	D4	3/8"	2-15 SCFM	6-10mm	32 in <sup>2</sup>	6.5"	10.8
	AB-70017	5" Medium Bubble Disc Diffuser	D17	3/4"	2-15 SCFM	6-10mm	32 in <sup>2</sup>	6.5"	10.8
Fine	AB-70005	9" Fine Bubble Disc Diffuser	D5	3/4"	5-10 SCFM	1-3mm	58 in <sup>2</sup>	10"	5.4
	AB-70013	9" Fine Bubble Disc Diffuser w/ Integrated Check Valve	D13	3/4"	5-10 SCFM	1-3mm	58 in <sup>2</sup>	10"	5.4
	AB-70006	12" Fine Bubble Disc Diffuser	D6	3/4"	1-15 SCFM	1-3mm	101 in <sup>2</sup>	13.5"	8.1
	AB-70014	13" Fine Bubble Disc Diffuser w/ Integrated Check Valve	D14	3/4"	1-15 SCFM	1-3mm	114 in <sup>2</sup>	14"	9
	AB-70007	15" Fine Bubble Disc Diffuser	D7	3/4"	2-15 SCFM	1-3mm	121 in <sup>2</sup>	16"	10.8

## Tube Diffusers

Bubble Size	Model Number	Descriptions	Curve Number	Fitting Size	Airflow Requirements	Bubble Size	Active Surface Area	Flow Interference	Gallons Mixed per Hour @ 6 ft per CFM Air Input
Fine	AB-70008	2.44"x12" Fine Bubble Tube Diffuser	D8	3/4"	1.5-15 SCFM	1-5mm	101 in <sup>2</sup>	12.5"	8.1
	AB-70009	2.44"x20" Fine Bubble Tube Diffuser	D9	3/4"	3-15 SCFM	1-5mm	118 in <sup>2</sup>	12.5"	9.5
	AB-70010	2.44"x24" Fine Bubble Tube Diffuser	D10	3/4"	5-20 SCFM	1-5mm	122 in <sup>2</sup>	12.5"	10
	AB-70011	2.44"x30" Fine Bubble Tube Diffuser	D11	3/4"	5-20 SCFM	1-5mm	130 in <sup>2</sup>	12.5"	11.2
	AB-70012	2.44"x40" Fine Bubble Tube Diffuser	D12	3/4"	5-20 SCFM	1-5mm	160 in <sup>2</sup>	12.5"	14.6

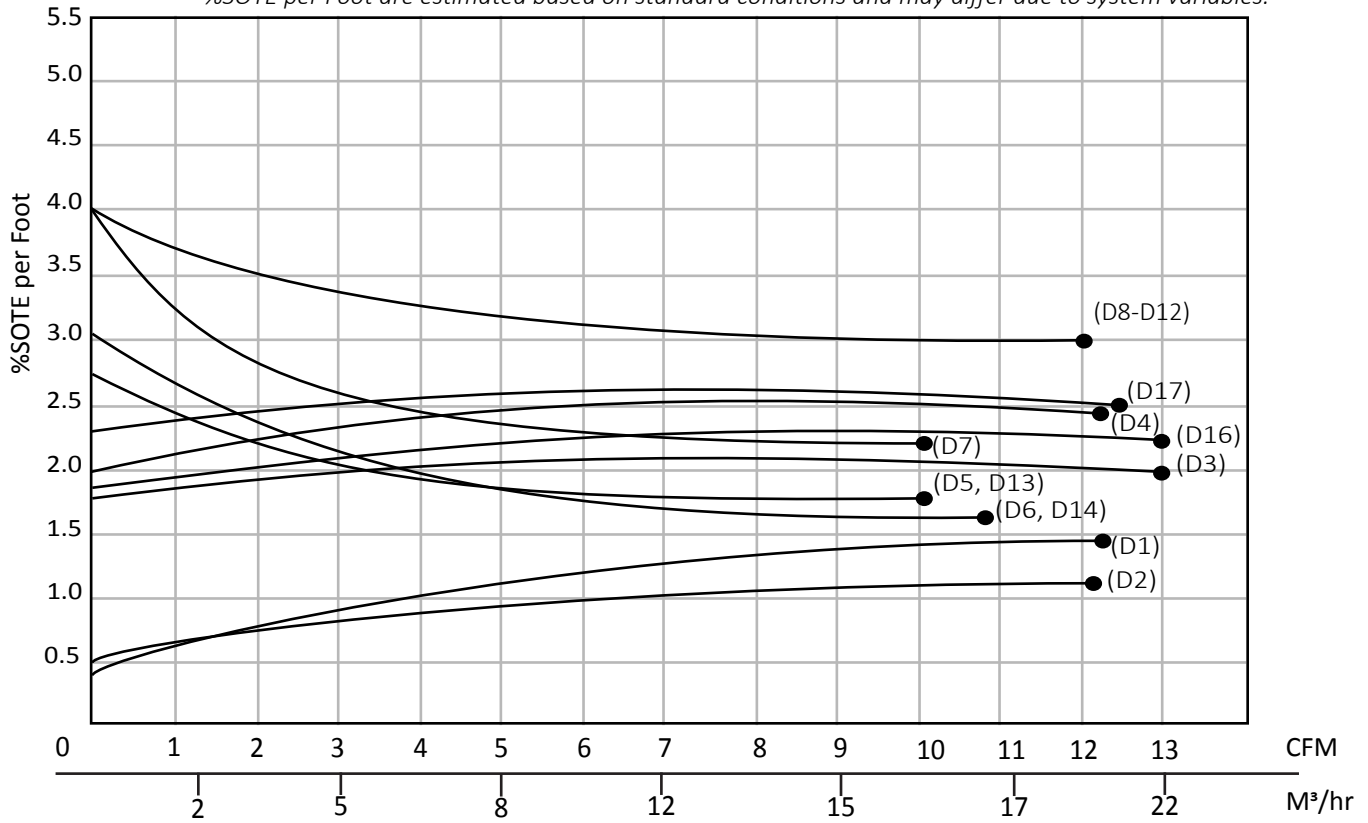
### Replacement Membranes

Atlantic Diffusers offers replacement membranes for all Disc and Tube Diffusers. Having the ability to replace these components greatly reduces ownership cost. By replacing over used membranes, you've eliminated the need to purchase a new diffuser, thus making system maintenance less costly and more efficient.

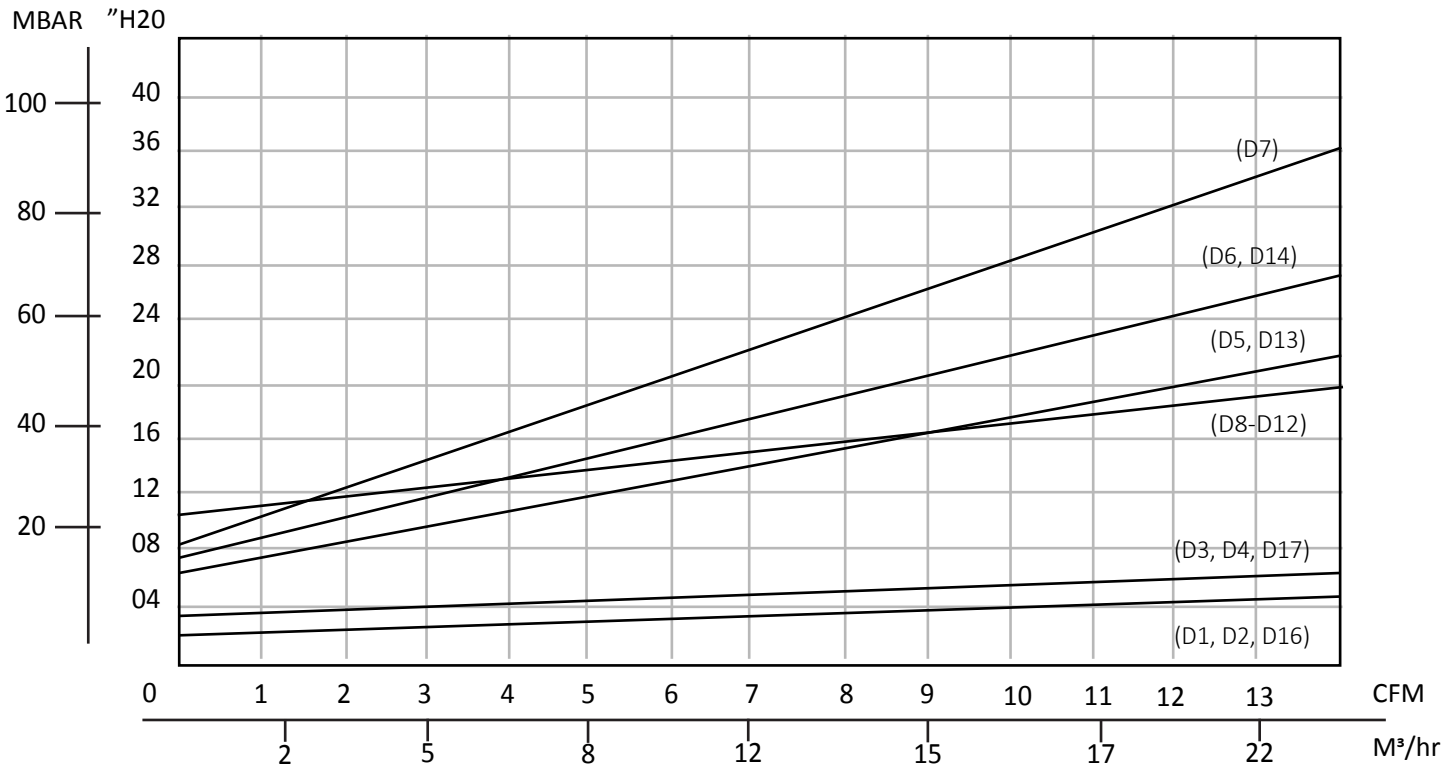


# Standard Oxygen Transfer Efficiency

\*%SOTE per Foot are estimated based on standard conditions and may differ due to system variables.

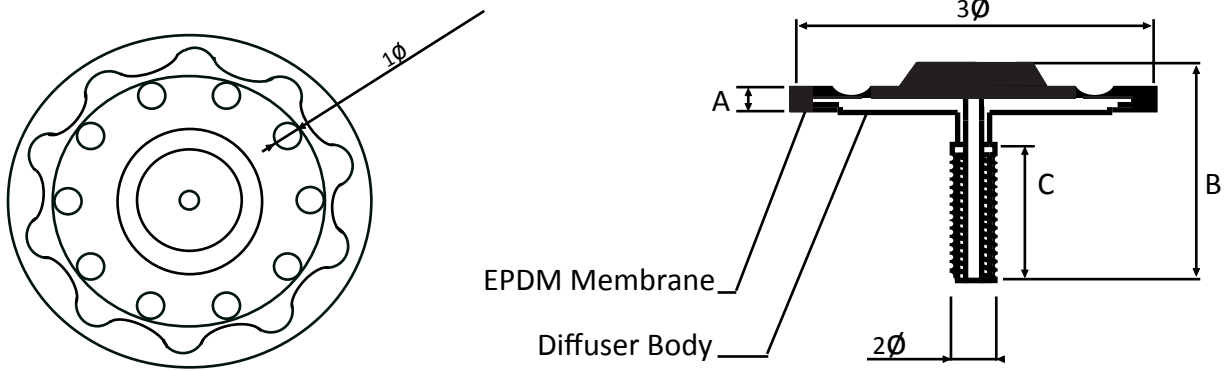


# HeadLoss Performance



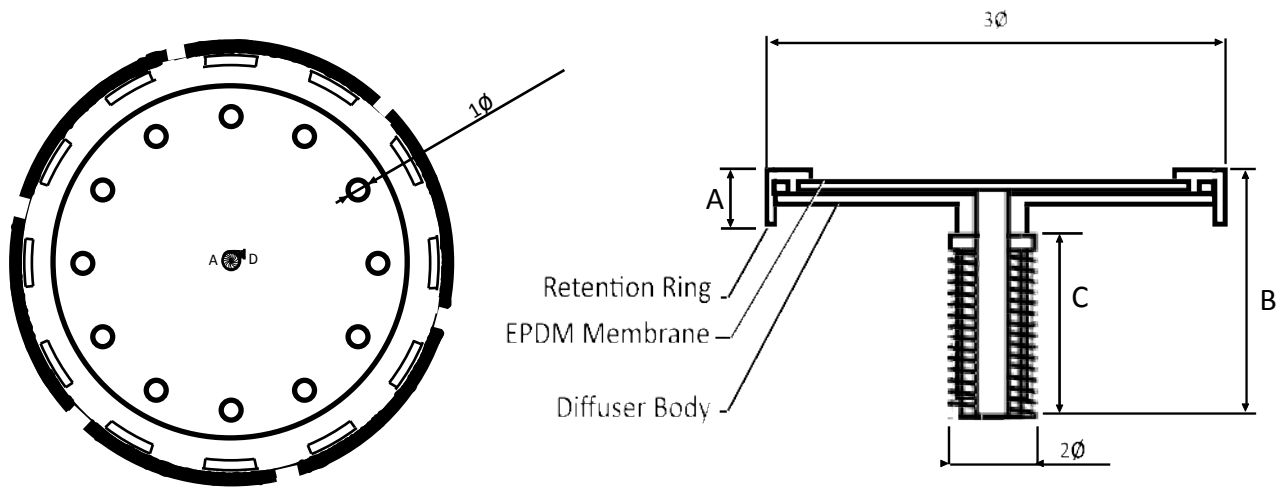


## 3" Disc Diffusers-Dimensions



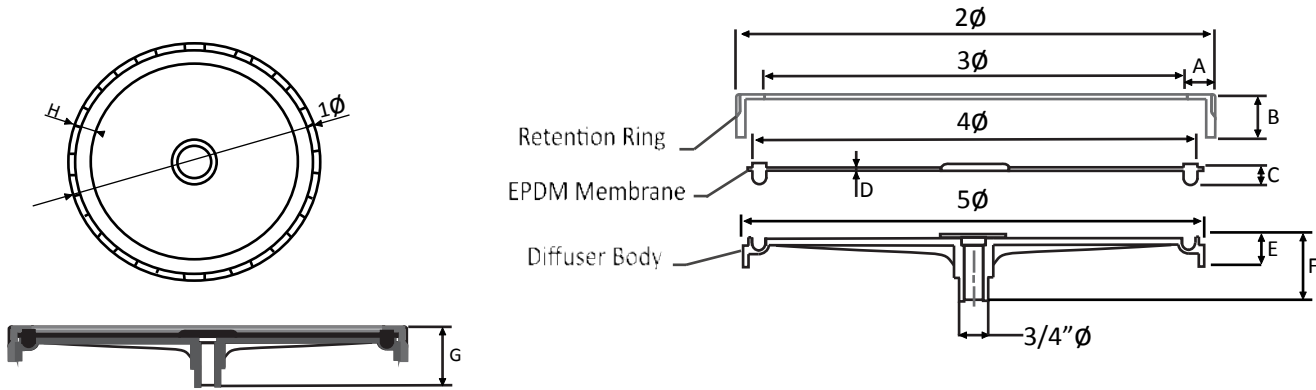
Model No.		A	B	C	1φ	2φ	3φ
AB-70001	(mm)	5	41	21.5	4	3/8"	77
	(in.)	0.2	1.61	0.84	0.15	3/8"	3.0
AB-70002	(mm)	5	41	21.5	6	3/8"	77
	(in.)	0.2	1.61	0.84	0.23	3/8"	3.0

## 5" Disc Diffusers-Dimensions



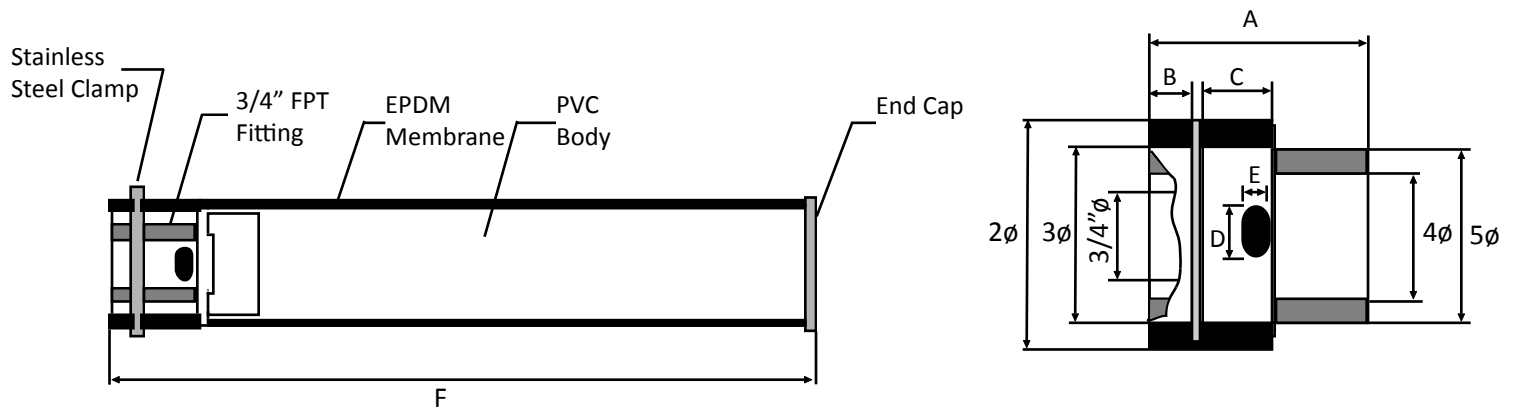
Model No.		A	B	C	1φ	2φ	3φ
AB-70004	(mm)	5	41	21.5	4	3/8"	127
	(in.)	0.2	1.61	0.84	0.15	3/8"	5.0
AB-70017	(mm)	5	41	21.5	4	3/4"	127
	(in.)	0.2	1.61	0.84	0.15	3/4"	5.0
AB-70003	(mm)	5	41	21.5	6	3/8"	127
	(in.)	0.2	1.61	0.84	0.23	3/8"	5.0
AB-70016	(mm)	5	41	21.5	6	3/4"	127
	(in.)	0.2	1.61	0.84	0.23	3/4"	5.0

## 9 - 15" Disc Diffusers-Dimensions



Model No.		A	B	C	D	E	F	G	H	1φ	2φ	3φ	4φ	5φ
AB-70005	(mm)	16.7	25	12	2	18	38	41	16.7	228	220	186	200	204
	(in.)	0.7	1.0	0.5	0.1	0.7	1.5	1.6	0.7	9.0	8.7	7.3	7.9	8.0
AB-70006	(mm)	16.7	25	12	2	18	38	41	16.7	305	305	282	262	270
	(in.)	0.7	1.0	0.5	0.1	0.7	1.5	1.6	0.7	12.0	12.0	11.1	10.3	10.6
AB-70007	(mm)	16.7	25	12	2	18	38	41	16.7	380	380	380	360	354
	(in.)	0.7	1.0	0.5	0.1	0.7	1.5	1.6	0.7	15.0	15.0	15.0	14.2	13.9
AB-70013	(mm)	16.7	25	12	2	25	89	89	16.5	228	220	190	180	223
	(in.)	0.7	1.0	0.5	0.1	1.0	3.5	3.5	0.7	9.0	8.7	7.5	7.4	8.8
AB-70014	(mm)	16.7	25	12	2	25	89	89	16.5	330	330	249	262	270
	(in.)	0.7	1.0	0.5	0.1	1.0	3.5	3.5	0.7	13.0	13.0	9.8	10.3	10.6

## 12" - 40" Tube Diffusers-Dimensions



Model No.		A	B	C	D	E	F	2φ	3φ	4φ	5φ
AB-70008	(mm)	36	20	30	16	10	304.8	64.5	63	59	62.9
	(in.)	1.4	0.8	1.2	0.6	0.4	12.0	2.5	2.5	2.3	2.5
AB-70009	(mm)	36	20	30	16	10	508	64.5	63	59	62.9
	(in.)	1.4	0.8	1.2	0.6	0.4	20.0	2.5	2.5	2.3	2.5
AB-70010	(mm)	36	20	30	16	10	609.6	64.5	63	59	62.9
	(in.)	1.4	0.8	1.2	0.6	0.4	24.0	2.5	2.5	2.3	2.5
AB-70011	(mm)	36	20	30	16	10	762	64.5	63	59	62.9
	(in.)	1.4	0.8	1.2	0.6	0.4	30.0	2.5	2.5	2.3	2.5
AB-70012	(mm)	36	20	30	16	10	1016	64.5	63	59	62.9
	(in.)	1.4	0.8	1.2	0.6	0.4	40.0	2.5	2.5	2.3	2.5



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