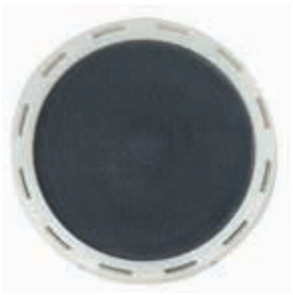
EDI PermaCap 5™ Diffusers

- **Upgrade systems from 2 to 3" diameter coarse bubble diffusers**
- **Integral unit design to prevent blowoff**
- **High capacity air flow ranges up to 20 cfm with low pressure loss**

Coarse Bubble

Medium Bubble



Fine Bubble

These diffusers offer greater unit capacity over small diameter diaphragm coarse bubble diffusers at a lower cost. They feature a high-strength ABS body with 3/8" or 3/4" NPT(M) connections. The EPDM membrane is locked in place with an engineered retaining ring to prevent blowout.

Replace small diameter coarse bubble diffusers with EDI PermaCap 5 diffusers for increased air capacity and greater oxygen transfer. A one-to-one change out lets you use up to 4 times more blower capacity with no pressure increase. The coarse bubble PermaCap 5 operates at rates up to 20 cfm, while small 2" and 3" coarse bubble diffusers are rated from 3 to 12 cfm with a much higher pressure drop. PermaCap medium and coarse bubble diffusers can be mounted upside down to aid condensate removal from the air header.

Using PermaCap medium bubble diffusers in place of 2" or 3" coarse bubble diffusers with no reduction in air flow maintains adequate mixing while improving oxygen transfer efficiency. Fine bubble diffusers improve oxygen transfer efficiency even further; however, since fine bubble diffusers use less air per unit, additional diffusers will have to be added to use the blower's existing output and to provide adequate mixing. Before making a conversion from coarse bubble to fine bubble, we recommend you contact us for details.

BEST! SELLER

CONNECTION SIZE	MEMBRANE STYLE	TYPICAL DESIGN AIRFLOW RANGE	MAX CFM*	STOCK #	EACH	QTY 50+
3/4" NPT(M)	Coarse	2 to 15 cfm	20	**32189**	$	$
3/4" NPT(M)	Medium	1 to 4 cfm	8	**32191**		
3/4" NPT(M)	Fine	0.5 to 1 cfm	2	**32190**		
3/8" NPT(M)	Coarse	2 to 15 cfm	20	**32197**		
3/8" NPT(M)	Medium	1 to 4 cfm	8	**32198**		
3/8" NPT(M)	Fine	0.5 to 1 cfm	2	**32199**		

***Maximum airflow suitable for short term intermittent use.**

Call us for special project pricing.

operator notes

How big is a coarse bubble? Medium bubble? Fine bubble?

In theory, if you had a single bubble that measured 1 cubic foot, you would have 6 square feet of surface area in contact with the surrounding water. Obviously, 6 square feet per cubic foot of air is not adequate for facilitating oxygen transfer. Coarse, medium and fine bubble diffusers increase surface contact area between the oxygen in the air and the water by breaking up each cubic foot of air into small bubbles.

Coarse bubbles may be defined as 10 mm and larger. A cubic foot of air made up of 10 mm bubbles has approximately 54,081 bubbles with surface area of 182 square feet.

Medium bubbles fall in a range between 4 mm and 6 mm. A cubic foot of air made up of 5 mm bubbles has approximately 432,650 bubbles with a surface area of 365 square feet.

Fine bubbles are 2 mm in diameter and smaller. A cubic foot of air made up of 1 mm bubbles has approximately 54,081,391 bubbles with a surface area of 1829 square feet.

Oxygen transfer is closely related to surface area contact between the air and water. The smaller the bubble, the better the transfer. Simply pumping a prescribed amount of air does not guarantee that you will get the results you want. Diffuser selection and position are crucial to how a system will perform.

EDI Cap Diffusers

- **Less expensive than other comparable models**
- **Manufactured identical to competitors' diffusers**

EDI cap diffusers are a cost-effective drop-in replacement for more expensive cap diffuser brands. They're great for aerobic digesters, equalization tanks or anywhere else requiring dependable course bubble aeration. Membranes are manufactured with EPDM.

TYPICAL DESIGN AIRFLOW RANGE CFM	MAX CFM	NIPPLE, NPT(M)	STOCK #	EACH	QTY 50+
1 to 5	5	3/8"	**13467**	$	$
1 to 10	10	3/4"	**13468**		
Replacement Cap	—	—	**13469**		

Complete Diffuser

Our Customer Service team is available from 6 am to 7 pm Central Time.