

EuSpray Dry



euspray®

by Eurospray spray and filter technology SL

Wear Parts EuSpray Dry orifice discs, swirl chambers and seals



SWIRL CHAMBERS

EuDry models	Part No Ex. end plate	Part No Inc. end plate	EuDry models	Part No Combined end plate	EuDry models	Part No Combined end plate	
DI	DII	CTSCO01	CTSCC01	DIII	CTSCDIII01	BI	-
DI	DII	CTSCO02	CTSCC02	DIII	CTSCDIII02	BI	CTSCBI02
DI	DII	CTSCO03	CTSCC03	DIII	CTSCDIII03	BI	CTSCBI03
DI	DII	CTSCO04	CTSCC04	DIII	CTSCDIII04	BI	CTSCBI04
DI	DII	CTSCO05	CTSCC05	DIII	CTSCDIII05	BI	CTSCBI05
DI	DII	CTSCO06	CTSCC06	DIII	CTSCDIII06	BI	CTSCBI06
DI	DII	CTSCO07	CTSCC07	DIII	CTSCDIII07	BI	CTSCBI07
DI	DII	CTSCO08	CTSCC08	DIII	CTSCDIII08	BI	CTSCBI08
DI	DII	CTSCO09	CTSCC09	DIII	CTSCDIII09	BI	-
DI	DII	CTSCO10	CTSCC10	DIII	CTSCDIII10	BI	-

ORIFICE DISCS

Part No	EuSpray Dry models
CTOD min.0,64mm - max 6,99mm	DI DII BI
CTODDIII min.0,64mm - max 6,99mm	DIII

SK range of orifice discs and swirl chambers are available upon request.

SEALS (Packs of 10)

EuSpray Dry models	Part No	Material	
DI	Orifice o ring	NYORODI	Nylon
		TFORODI	PTFE
	Body o ring	NYORB DI	Nylon
		TFORBDI	PTFE
DII	Orifice o ring	SIORODII	Silicon
		VIORODII	Viton
	Body o ring	SIORB DII	Silicon
		VIORB DII	Viton
DIII	Orifice o ring	SIORODIII	Silicon
		VIORODIII	Viton
	Body o ring	SIORB DIII	Silicon
		VIORB DIII	Viton
BI	O ring	VIORBI	Viton

Orifice gauges

The easy way to measure the orifice disc performance.

The RA05 standard quick check gauge is ideal for spot checks whilst on site. Measure 0-5mm



The RA10 may be used for very accurate checks, normally in an office/laboratory environment. Measures in 0.1mm increments



Changing to Euspray The logical and easy way forward

Saving operation costs, improving production are all part of the complex spray drying operation and changing to Euspray is the way forward



Euspray products are compatible with most similar products from other manufactures both in quality and performance and in some cases Euspray's product quality and engineering is superior, giving improved performance and longer "life".

Replacing the total nozzle or just the internal wear parts is feasible and in most cases uncomplicated and easy.

Additionally Euspray's manufacturing and design means that your spray dryer operation should not see any difference in the exchange of nozzles and their internal parts.

Any concern you have, advice needed or to place an order, one of Euspray's technical engineers with a wealth of experience will assist you in an easy and simple changeover. Our philosophy is to work with you - we are not just a supplier!

As an extra benefit, Euspray not only manufactures spray drying nozzles and components, but offers a comprehensive range of associated filtration, CIP and tank cleaning equipment and standard spray nozzles.

Wear Part Maintenance

Little should go wrong with the body and adaptor, so we need to focus on the internal wear parts.

Seals

Leaks and unwanted waste product and fires in the dryer are to be avoided.

Therefore it is essential these are replaced every time the nozzle is opened regardless of their appearance.



Swirl Chamber

Regardless of the tungsten carbide grade, the swirl chamber will wear over a period of time. How long will depend upon the properties of the feedstock, the operating pressure and flow rate.

As the swirl chamber enlarges through wear, the first signs of a deterioration will be an increase in flow and a drop in pressure. In addition you will see a difference in the finished product.

Understanding your dryer process, combined with a planned maintenance cycle and replacement of the swirl will overcome this problem.

Orifice Disc

The orifice disc should wear evenly. However this might not be the case, especially if the swirl chamber has deteriorated, or if the tungsten carbide is of an inferior quality. Wear rates depend upon the nature of the product, flow rates and pressure.

An early sign of wear again will be an increase in flow, a change of spray angle, different product quality and a drop in pressure.

Again a planned maintenance cycle and exchange of orifice disc will overcome this issue.

Use of Euspray's orifice gauge to measure the wear will certainly prevent this problem.



EuSpray Dry DI Nozzle

This standard nozzle design is tried and tested and has become the mainstay of spray drying technology.

Manufactured from high grade stainless steel, it uses the single vortex swirl chamber, with or without a combined end plate and standard orifice disc.



Part No	Description	Material
ABSDMDI	Body	Stainless steel
AHSPMDI	Holding screw pin	Stainless steel
Adaptor BSPT thread (NPT on request)		
A1FAMDI	1/4" adaptor	Stainless steel
A2FAMDI	3/8" adaptor	Stainless steel
A3FAMDI	1/2" adaptor	Stainless steel
A4FAMDI	3/4" adaptor	Stainless steel
AWAMDI	Weld adaptor	Stainless steel
Wear parts		
CTOD.....	Orifice disc	Tungsten Carbide
CTSC.....	Swirl Chamber	Tungsten Carbide

Seal kits - packs of 10

Part No	Description	Material
NYORODI	Orifice o ring	Nylon
TFORODI		PTFE
NYORBDI	Body o ring	Nylon
TFORBDI		PTFE

Orifice discs: From 0.64mm
To 6,99mm

Swirl chambers: CTSC.....01 - 10

Ordering Swirl chambers and orifice discs: Contact our technical department

EuSpray Dry DII Nozzle

This simple nozzle design is tried and tested and together with the EuSpray Dry DI design has become the popular in spray drying technology.

Manufactured from high grade stainless steel, it uses the single vortex swirl chamber, with or without a combined end plate and standard orifice disc.



Part No	Description	Material
ABSDMDII	Body	Stainless steel
Adaptor BSPT thread **		
A1FAMDII	1/4" adaptor	Stainless steel
A2FAMDII	3/8" adaptor	Stainless steel
A3FAMDII	1/2" adaptor	Stainless steel
A4FAMDII	3/4" adaptor	Stainless steel
AWAMDII	Weld adaptor	Stainless steel
Wear parts		
CTOD.....	Orifice disc	Tungsten Carbide
CTSC.....	Swirl Chamber	Tungsten Carbide

Seal kits - packs of 10

Part No	Description	Material
SIORODII	Orifice o ring	Silicon
VIORODII		Viton
SIORBII	Body o ring	Silicon
VIORBII		Viton

Orifice discs: From 0.64mm
To 6,99mm

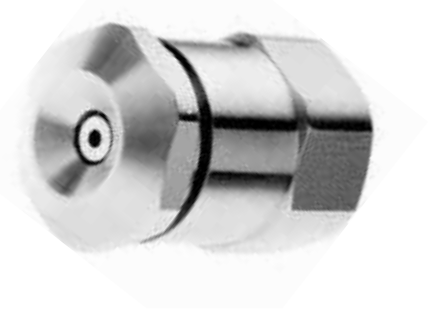
Swirl chambers: CTSC.....01 - 10

Ordering Swirl chambers and orifice discs: Contact our technical department

EuSpray Dry DIII Nozzle

The EuSpray Dry DIII design is a simple to assemble spray drying nozzle. Compact it can be partly assembled before final installation, therefore is “user friendly” and popular.

To assist changing to this model, special adaptors can be incorporated to fit existing adaptors/lance configurations



Part No	Description	Material
ABSDMDIII	Body	Stainless steel
ARDMDIII	Retaining disc	Stainless steel
Adaptor BSPT thread (NPT on request)		
A1FAMDIII	1/4" adaptor	Stainless steel
A2FAMDIII	3/8" adaptor	Stainless steel
A3FAMDIII	1/2" adaptor	Stainless steel
A4FAMDIII	3/4" adaptor	Stainless steel
AWAMDIII	Weld adaptor	Stainless steel
Wear parts		
CTODDIII....	Orifice disc	Tungsten Carbide
CTSC.....	Swirl Chamber	Tungsten Carbide

Seal kits - packs of 10		
Part No	Description	Material
SIORODIII	Orifice o ring	Silicon
VIORODIII		Viton
SIORBDIII	Body o ring	Silicon
VIORBDIII		Viton

Orifice discs: From 0.64mm
To 6,99mm

Swirl chambers: CTSC.....01 - 10

Ordering Swirl chambers and orifice discs: Contact our technical department

EuSpray Dry BI Nozzle

A unique nozzle configuration with a butt weld adptor. Very easy to install and use. Combines a simple orifice disc and single vortex swirl chamber configuration manufactured from high grade stainless steel



Part No	Description	Material
ABSDMBI	Body	Stainless steel
ASMBI	Spacer	Stainless steel
AWAMBI	Weld adaptor	Stainless steel
Wear parts		
CTOD....	Orifice disc	Tungsten Carbide
CTSC.....	Swirl Chamber	Tungsten Carbide

Seal kits - packs of 10		
Part No	Description	Material
VIORBI	Orifice o ring	Viton

Orifice discs: From 0.64mm
To 6,99mm

Swirl chambers: CTSC.....01 - 10

Ordering Swirl chambers and orifice discs: Contact our technical department

PA range of Air Atomising Nozzles (Two Fluid Nozzles)

This type of nozzle is ideal where spraying viscous feedstock can cause problems. The compressed air assists in atomising the feedstock into a sprayable liquid.

In addition Euspray's PA range is ideal for low flow operations, where the cost of a full hydraulic operation would be prohibitive.

Pilot plants benefit from these type of nozzles. Droplet size is relatively easy to change, together with spray angles and flow rates, making product trials efficient and cost effective

Normally full cone and wide angle full cone external combinations are used. In some applications an internal air/product mix may be considered.

Clean out needles and shut off valves can be included and heated jackets are available for those more difficult products.

A complete range of tried and tested products for all applications - The PA Range.

Full flow rate charts, specifications and options are available at www.euspray.com.



With all spray drying applications there are always other issues that need addressing.

Filtration

Applications include: Filtration of feed stock, finished product or effluent all may be required.

Euspray's unique range of self cleaning filters are ideal for these applications, with many benefits including

- > Continuous operation - no plant down times.
- > Low running cost and less maintenance time and costs
- > Compact size

Cleaning in Place (CIP)

It is essential that the strictest regime is kept where spray drying operations occur.

Euspray's comprehensive range of tank cleaning equipment, specifically our rotating tank washer.

Other applications

Euspray has a comprehensive range of spray nozzles for most other applications and these can be viewed at www.euspray.com



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