



**Spraying Systems Co.®**  
Experts in Spray Technology

# SPRAYDRY® DUALDRY™ DDSK NOZZLES

## SMALLER DROPS, SUPERIOR RESULTS.

Dual-atomization technology is ideal for producing fine to ultra-fine droplets that hydraulic, high-pressure or air atomization alone cannot achieve. This can reduce the need for post-processing equipment to reach target particle sizes.

## FEATURES & BENEFITS

- **Integrates high pressure, hydraulic spraying with compressed air**, achieving superior particle size control and energy efficiency.
- **Achieve up to a 75% reduction in drop size\*** – depending on operating conditions, drop sizes of less than 10 microns are achievable
- **Produces smaller droplets and narrower drop distributions** than traditional air atomizing nozzles
- **Compatible with a variety of SprayDry SK orifice and core combinations** to target precise flow rates and drop sizes
- **Standard configurations include external round spray and flat spray air caps**—ideal for spraying viscous liquids and minimizing clogging. Additional options available upon request.
- **Designed for use with 1/2 JBC-316SS, 1/2J-316SS inlet connections** or a custom-ordered lance assembly



DualDry with external mix flat spray cap

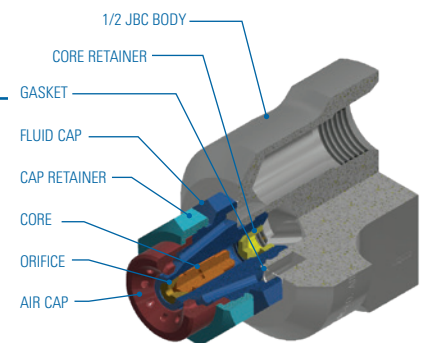
DualDry with external mix round spray cap and JBC body

DualDry with external mix round spray cap



## How DualDry Works

Dual atomization technology utilizes high-pressure, hydraulic spraying to create fine droplets, then compressed air further reduces and controls particle size.



\* Up to 75% reduction in drop size when compared to a representative sampling of standard spraydry nozzles used across the industry. See comparative performance.



IDEAL FOR:  
SPECIALTY CHEMICALS



FLAVORINGS & INGREDIENTS



DAIRY & PHARMACEUTICAL






BATTERY MATERIALS

# NOZZLE AND CAP COMBINATIONS TO DELIVER THE EXACT PERFORMANCE YOU NEED

DualDry nozzles are available with external mix round or flat spray caps that permit a wide range in atomization without affecting feed flow rates. The right cap for your application will vary based on the liquids you are spraying and the size and features of the particles you are trying to achieve. This is especially true for applications using highly viscous liquids where achieving precise powder properties can be challenging.



## DUALDRY COMPARATIVE PERFORMANCE DATA

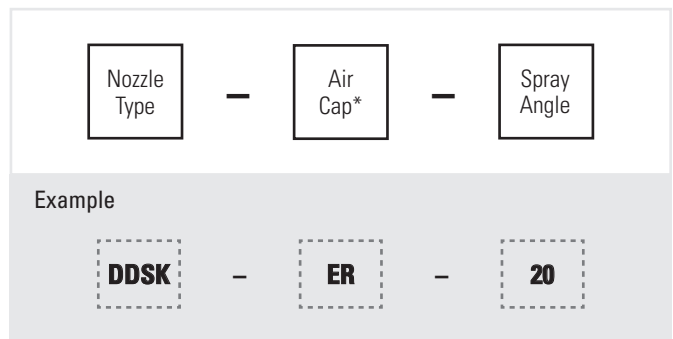
Nozzle Type	Core**	Orifice**	Air Capacity at 100 psi (6.9 bar) SCFM (Nm3/hr)	Liquid Flow Rate at 1,000 psi (69 bar) GPH (LPH)	Spray Angle Degrees	Drop Size Dv0.5 Microns
 <b>Hydraulic, High Pressure, SK Nozzle</b>	SKY16-MFP	SIY78	No Air	4.8 (18)	62°	43
	SKY17-MFP	SIY60		23 (87)	69°	50
	SKY28-MFP	SIY56		60 (227)	40°	53
	SKY28-MFP	SIY51		102 (386)	50°	56
 <b>DualDry with external mix round spray cap DDSK-ER-20</b>	SKY16-MFP	SIY78	99 (159)	5.4 (20)	19°	6
	SKY17-MFP	SIY60		22 (83)	25°	12
	SKY28-MFP	SIY56		59 (223)	23°	17
	SKY28-MFP	SIY51		102 (386)	20°	22
 <b>DualDry with external mix flat spray cap DDSK-EF-55</b>	SKY16-MFP	SIY78	84 (135)	4.8 (18)	52°	5
	SKY17-MFP	SIY60		22 (83)	56°	11
	SKY28-MFP	SIY56		66 (250)	59°	17
	SKY28-MFP	SIY51		104 (394)	59°	20

## SPECIFICATIONS

Flow rate range: 5 to 125 gph (20 to 470 lph)
Air Consumption: 50 to 130 scfm (80 to 210 Nm3/hr)
Operating Pressure: Air pressure 60 to 140 psi (4 to 10 bar); Liquid Pressure 500 to 3,000 psi (35 to 200 bar)
Spray angle: 20° round spray; 55° flat spray
Drop Size (Dv.5): 5 to 50 micron
Material: 316 stainless steel

## ORDERING INFORMATION

### SPRAYDRY DUALDRY DDSK-ER-20 & DDSK-EF-55



\*Specify EF for external mix flat spray or ER for external mix round spray  
 \*\*SprayDry SK Slotted core and orifice are specified separately.  
 See Bulletin 695, SprayDry Nozzles  
 Order body or request custom lance assembly separately



North Avenue and Schmale Road, P.O. Box 7900, Wheaton, IL 60187-7901 USA  
 Tel: 1.800.95.SPRAY Intl. Tel: 1.630.665.5000  
 www.spray.com

