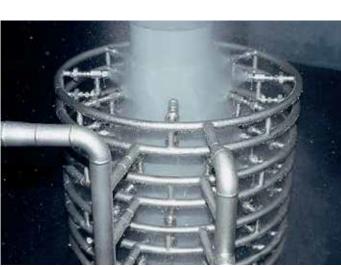
## Semi-Fine Fog, Semi-Coarse Fog Nozzles

# DOVEA / DDA / JJA series Nozzles DOVVA-G / VVEA / PSN





■DOVEA, DDA JJA and DOVVA-G series, developed to satisfy the crucial requirements for spray nozzles in the continuous casting process of steel making, feature stable spray angles and distributions with large turndown ratios, having fine and uniform spray droplet size distributions across the entire spray area.

Also, free passage diameters are twice as large as those of hydraulic nozzles to minimize clogging.

With these features, DOVEA, DDA JJA and DOVVA-G series are highly effective nozzles for steel / gas cooling.

■VVEA, PSN series are innovative pneumatic spray nozzles developed for new cleaning method requiring high-velocity and concentrated spraying of fine atomization, which can wash out fine dirt particles that conventional cleaning could not clean.

### Contents

DOVEA series Flat Spray Semi-Fine, Semi-Coarse Fog Nozzles p.47

DDA series Oval Spray Semi-Fine, Semi-Coarse Fog Nozzles p.52

JJA series Full Cone Spray Semi-Fine, Semi-Coarse Fog Nozzles p.55

DOVVA-G series Flat Spray Semi-Fine, Semi-Coarse Fog Nozzles p.58

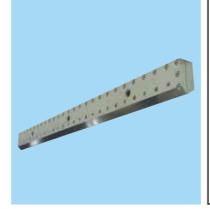
VVEA series High Impact Flat Spray Semi-Fine, Semi-Coarse Fog Nozzles p.61

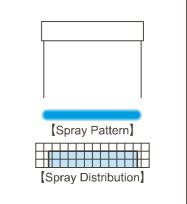
PSN series
Pneumatic Slit Nozzles p.64

**PSN** 

#### **Features**

- ■New pneumatic slit-laminar nozzle provides uniform spray distribution with high impact, which ensures perfect and complete cleaning, leaving no spot unwashed.
- ■PSN can be used at spray distances as short as 5-10mm.

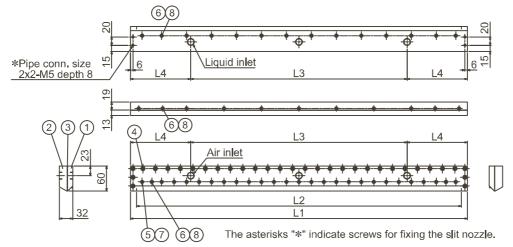




#### **Applications**

- ■Cleaning: Glass substrate, liquid crystal
- ■Cooling: Steel plates, moldings ■Moisture control: Paper, cardboard

#### Structure & Materials



Components and materials

and materials								
No.	Components	Standard Materials						
1	Body (Air inlet side)	S304						
2	Body (Liquid inlet side)	S304						
3	Packing	PE						
4	Bolt (M5x12)	S304						
(5)	Bolt (M4x8)	S304						
6	Bolt (M4x10)	S304						
7	O-ring (P-4)	FKM						
8	O-ring	FKM						

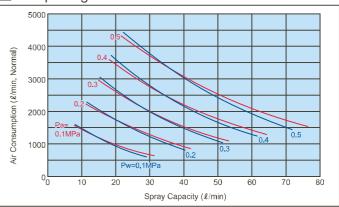
Nozz <b>l</b> e Code		(Number of Inlets)-(Thread Size)						
Slit Length L2 (mm)	Slit Opening	Air	Liquid	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	Mass (kg)
460		2-3/8F	2-3/8F	490	460	230	130	5,6
600	0.05	3-3/8F	3-3/8F	630	600	400	115	7.2
700	0.1	3-3/8F	3-3/8F	730	700	460	135	8.4
780	0.15	3 <b>-</b> 3/8F	3 <b>-</b> 3/8F	810	780	520	145	9.3
1200		5-3/8F	5 <b>-</b> 3/8F	1230	1200	960	135	14.0

#### Flow-rate Diagram

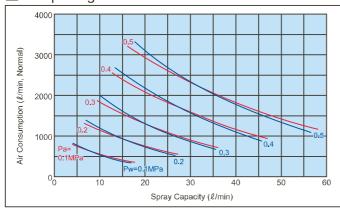
#### ■How to read the chart

- ①The air consumption and spray capacity shown are for one nozzle per 1000mm of slit length.
- ②Red lines (—) represent compressed air pressures Pa in MPa. Blue lines (—) represent liquid pressures Pw in MPa.
- ③Air consumption and spray capacity are proportionate to slit length. To calculate the air consumption and spray capacity for slit length longer/shorter than 1000mm, multiply in proportion to this length. (Example: when the slit length is 700mm, multiply the amount for 1000mm x 0.7)

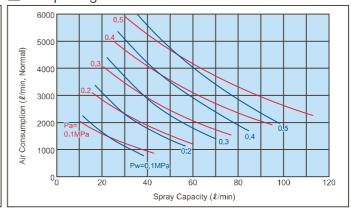
#### ■Slit opening: 0.1mm



#### ■Slit opening: 0.05mm



#### ■Slit opening: 0.15mm



#### How to order Please inquire or order for a specific nozzle using this coding system. <Example> 2 x 3-3/8F PSN 700 x 0.05 S304 **PSN** 2 x 3-3/8F 700 0.05 S304 Χ Number of inlets Slit Length Slit Opening -Thread size **460** 0.05 **■**2-3/8F **600 0.**1 ■3-3/8F **7**00 **■**0.15 ■5-3/8F **780 1200** Please feel free to inquire with us if you need a different slit length.