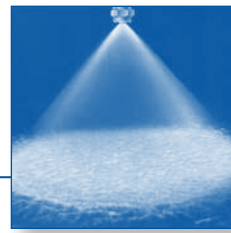




Full cone nozzles Axial-flow Series 419



Particularly insensitive to clogging thanks to very large free cross sections.
Stable spray angle.
Uniform spray pattern

Applications:

- Gas washing
- Spraying over packings
- Dust control
- Absorption
- Distillation



Figure 1

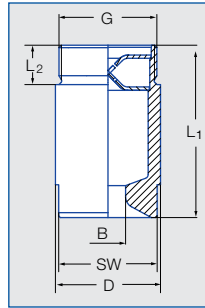


Figure 2

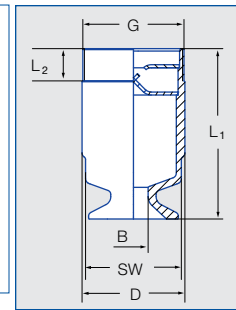
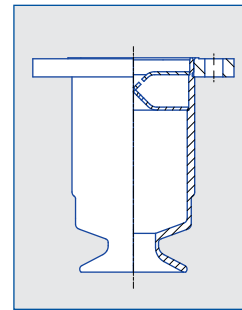
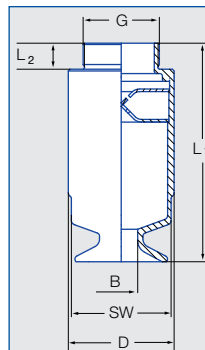


Figure 3



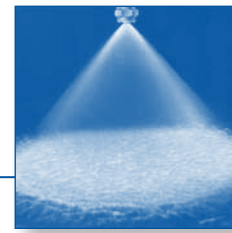
Other materials and flange versions are available on request



Spray Angle	Type	Code	Figure	Dimensions [in]					Weight (lbs)
				G NPT Male	L ₁	L ₂	D	Flats	
90° + 120°	419.3XX	BR	3	1 1/2	5.20	.87	2.52	2.36	3.31
		BV	1	2	4.49	.94	2.52	2.36	2.65
	419.4XX	BV	3	2	6.42	1.06	3.15	2.95	4.41
		BY	2	2 1/2	5.28	.94	3.15	2.95	3.75
	419.51X 419.54X	BV	3	2	7.83	1.06	4.02	3.74	8.16
		BY	3	2 1/2	7.95	1.18	4.02	3.74	8.38
		MA	3	3	8.07	1.26	4.02	3.74	11.46
	419.57X	MC	2	3 1/2	6.65	1.06	4.02	3.74	7.05
		BY	3	2 1/2	9.09	1.18	4.53	4.13	11.46
		MA	3	3	9.17	1.42	4.53	4.13	11.46
	419.6XX	ME	2	4	7.64	.36	4.53	4.13	9.70
		MA	3	3	9.92	.30	4.41	4.53	11.90
MC		3	3 1/2	10.00	.32	4.41	4.53	12.13	

Conversion formula for the above series: $V_2 = V_1 * \left(\frac{P_2}{P_1}\right)^{0.4}$
(≤150 psi) (See page 12 for symbol definitions.)



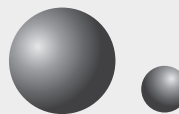
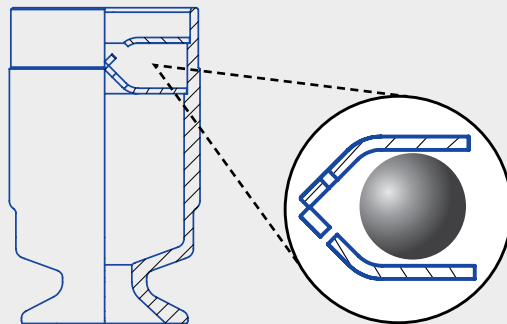
Full cone nozzles Axial-flow Series 419



Spray angle* 	Type	Mat.-Nr.		Ordering no. Code								B Ø [in]	E Ø [in]	Flow Rate (Gallons Per Minute)					Spray Diameter D [in] at p = 15 psi 	
		1Y	2P	1 1/2 Male NPT	2 Male NPT	2 1/2 NPT male	3 NPT male	3 1/2 NPT male	4 NPT male	5 psi	10 psi			15 psi	30 psi	75 psi	H = 20 in	D = 40 in		
		316L SS	904 L																	
90°	419.366	○	○	BR	BV	-	-	-	-	.70	.69	33	43	51	67	97	39	79		
	419.396	○	○	BR	BV	-	-	-	-	.81	.69	39	52	61	80	116	39	79		
	419.446	○	○	-	BV	BY	-	-	-	.91	.81	52	69	81	107	155	39	79		
	419.486	○	○	-	BV	BY	-	-	-	1.10	.81	65	86	101	134	193	39	79		
	419.516	○	○	-	BV	BY	MA	MC	-	1.07	.95	78	104	122	161	232	39	79		
	419.546	○	○	-	BV	BY	MA	MC	-	1.30	.95	93	124	144	190	274	39	79		
	419.576	○	○	-	-	BY	MA	-	ME	1.34	1.07	111	147	172	228	328	39	79		
	419.606	○	○	-	-	-	MA	MC	-	1.48	1.19	131	172	203	268	386	39	79		
419.626	○	○	-	-	-	MA	MC	-	1.69	1.19	163	216	254	335	483	39	79			
120°	419.368	○	○	BR	BV	-	-	-	-	.81	.69	33	43	51	67	97	67	114		
	419.398	○	○	BR	BV	-	-	-	-	.93	.69	39	52	61	80	116	67	114		
	419.448	○	○	-	BV	BY	-	-	-	.96	.81	52	69	81	107	155	67	114		
	419.488	○	○	-	BV	BY	-	-	-	1.16	.81	65	86	101	134	193	67	114		
	419.518	○	○	-	BV	BY	MA	MC	-	1.07	.95	78	104	122	161	232	67	114		
	419.548	○	○	-	BV	BY	MA	MC	-	1.34	.95	93	124	144	190	274	67	114		
	419.578	○	○	-	-	BY	MA	-	ME	1.34	1.13	111	147	172	228	328	67	114		
	419.608	○	○	-	-	-	MA	MC	-	1.50	1.27	131	172	203	268	386	67	114		
419.628	○	○	-	-	-	MA	MC	-	1.71	1.27	163	216	254	335	483	67	114			

B = Orifice diameter-Ø · E = Free passage · * Spray angle at 15 psi

Example **Type** + **Material-Nr.** + **Code** = **Ordering no.**
for ordering: 419.366 + 1Y + BR = 419.366.1Y.BR



Comparison of the large FreeFlow cross-section with the cross-section of a similar full cone nozzle.