



WATERBLAST ACCESSORIES

SAPPHIRE NOZZLES

For High Pressure Applications

These nozzles are used for high pressure jetting applications where water filtration of 10 micron or better is required. Jeweled orifices make the best quality, longest lasting jets possible, especially for ultra-high pressures.

- Pressure Range: 20–40k psi (1400–2800 bar)
- Flow Range: 0.2–4.8 gpm (0.75–18 l/min)



Shown larger than actual size.

SAPPHIRE NOZZLE FLOW CHART (GPM)

ORIFICE I.D. in. mm	PRESSURE KPSI & (BAR)											AVAILABILITY		
	20 (1400)	22 (1500)	24 (1700)	26 (1800)	28 (1900)	30 (2100)	32 (2200)	34 (2300)	36 (2500)	38 (2600)	40 (2800)	OS4	OS6	OS7
.009 (0.23)	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	•	•	•
.010 (0.25)	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.34	0.4	•	•	•
.011 (0.28)	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	•	•	•
.012 (0.30)	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	•	•	•
.013 (0.33)	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	•	•	•
.014 (0.36)	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.8	•	•	•
.015 (0.38)	0.6	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.9	0.9	•	•	•
.016 (0.41)	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	•	•	•
.017 (0.43)	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	•	•	•
.018 (0.46)	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	•	•	•
.019 (0.48)	1.0	1.0	1.1	1.1	1.9	1.2	1.3	1.3	1.3	1.4	1.4	•	•	•
.020 (0.51)	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.6	•	•	•
.021 (0.53)	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	•	•	•
.022 (0.56)	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	•	•	•
.023 (0.58)	1.5	1.5	1.6	1.7	1.7	1.7	1.8	1.9	1.9	2.0	2.0	•	•	•
.024 (0.61)	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.2	•	•	•
.025 (0.64)	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.4	•	•	•
.026 (0.66)	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.6	•	•	•
.027 (0.69)	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.8	•	•	•
.028 (0.71)	2.2	2.3	2.4	2.5	2.6	2.5	2.7	2.8	2.9	3.0	3.1	•	•	•
.029 (0.74)	2.3	2.4	2.5	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	•	•	•
.031 (0.79)	2.6	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	•	•	•
.033 (0.84)	3.0	3.1	3.3	3.4	3.5	3.7	3.8	3.9	4.0	4.1	4.2	•	•	•
.034 (0.86)	3.2	3.3	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.4	4.5	•	•	•
.035 (0.89)	3.4	3.5	3.7	3.8	4.0	4.1	4.3	4.4	4.5	4.6	4.8	•	•	•
.036 (0.91)	3.6	3.7	3.9	4.0	4.2	4.4	4.5	4.6	4.8	4.9	5.0	•	•	•
.037 (0.94)	3.7	3.9	4.1	4.3	4.4	4.6	4.8	4.9	5.0	5.2	5.3	•	•	•
.039 (0.99)	4.2	4.4	4.6	4.7	4.9	5.1	5.3	5.4	5.6	5.7	5.9	•	•	•
.047 (1.20)	6.1	6.4	6.6	6.9	7.2	7.4	7.7	7.9	8.1	8.4	8.6	•	•	•

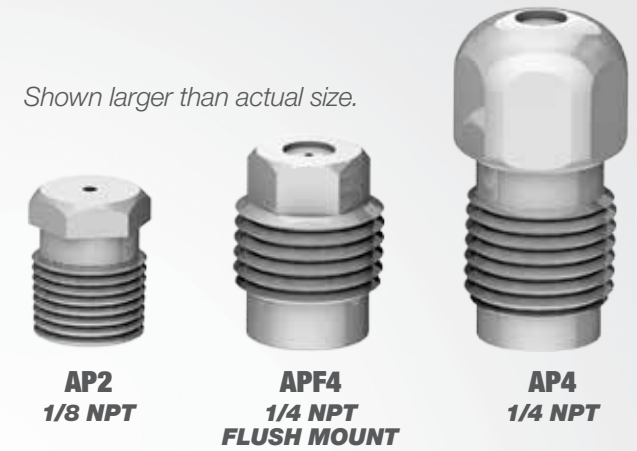
WATERBLAST ACCESSORIES

ATTACK TIPS™

For Low/Medium Pressure Applications

StoneAge Attack Tips are the highest quality, longest lasting nozzles available for low and medium pressure applications (up to 22k psi - 1500 bar). Flow straighteners correct turbulence, ensuring excellent jetting results.

- Pressure Range: 20–40k psi (1400–2800 bar)
- Flow Range: 0.6–46 gpm (2.27–174 l/min)



Shown larger than actual size.

STAINLESS STEEL OR CARBIDE AVAILABLE

ATTACK TIP NOZZLE FLOW CHART (GPM)

ORIFICE I.D. in. mm	PRESSURE - KPSI & (BAR)												FLOW RATING
	2 (140)	4 (280)	6 (410)	8 (550)	10 (700)	12 (830)	14 (970)	15 (1000)	16 (1100)	18 (1200)	20 (1400)	22 (1500)	
.018 (0.46)	0.39	0.55	0.68	0.78	0.87	0.96	1.0	1.1	1.1	1.2	1.2	1.3	0.6
.020 (0.51)	0.48	0.68	0.83	0.96	1.1	1.2	1.3	1.3	1.5	1.5	1.5	1.6	0.7
.022 (0.56)	0.58	0.82	1.0	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.9	0.8
.024 (0.61)	0.69	0.98	1.2	1.4	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	1.0
.026 (0.66)	0.81	1.2	1.4	1.6	1.8	2.0	2.1	2.2	2.3	2.4	2.6	2.7	1.1
.029 (0.74)	1.0	1.4	1.7	2.0	2.3	2.5	2.7	2.8	2.9	3.0	3.2	3.4	1.4
.032 (0.81)	1.2	1.7	2.1	2.5	2.8	3.0	3.3	3.4	3.5	3.7	3.9	4.1	1.7
.035 (0.89)	1.5	2.1	2.6	3.0	3.3	3.6	3.9	4.0	4.2	4.4	4.7	4.9	2.1
.038 (0.97)	1.7	2.5	3.0	3.5	3.9	4.3	4.6	4.8	4.9	5.2	5.5	5.7	2.5
.042 (1.07)	2.1	3.0	3.7	4.2	4.7	5.2	5.6	5.8	6.0	6.4	6.7	7.0	3.0
.047 (1.19)	2.7	3.8	4.6	5.3	5.9	6.5	7.0	7.3	7.5	8.0	8.4	8.8	3.8
.052 (1.32)	3.3	4.6	5.6	6.5	7.3	8.0	8.6	8.9	9.2	9.8	10	11	4.6
.057 (1.45)	3.9	5.5	6.8	7.8	8.7	9.6	10	11	11	12	12	13	5.5
.063 (1.60)	4.8	6.8	8.3	9.6	11	12	13	13	14	14	15	16	6.8
.069 (1.78)	5.7	8.1	9.9	12	13	14	15	16	16	17	18	19	8.1
.075 (1.91)	6.8	9.6	12	13	15	17	18	19	19	20	21	23	9.6
.082 (2.08)	8.1	12	14	16	18	20	21	22	23	24	26	27	12
.090 (2.29)	9.8	14	17	20	22	24	26	27	28	29	31	32	14
.098 (2.49)	12	16	20	23	26	28	31	32	33	35	37	38	16
.106 (2.69)	14	19	23	27	30	33	36	37	38	41	43	45	19
.115 (2.92)	16	23	28	32	36	39	42	44	45	48	50	53	23
.125 (3.18)	17	27	33	38	42	46	50	52	53	56	60	62	27
.135 (3.43)	22	31	38	44	49	54	58	60	62	66	69	73	31
.145 (3.68)	25	36	44	51	57	62	67	69	72	76	80	84	36
.155 (3.94)	29	41	50	58	65	71	77	79	82	87	92	96	41
.165 (4.19)	33	46	57	66	73	80	87	90	93	98	104	109	46