

# Nozzle Flow Charts (Theoretical) - GPM (LPM)

## 0° - Nozzle (S-1, S-2, S-7M, SA, BN11XX insert)

Insert	Nozzle No.	Pressure PSI (BAR)									
		1,000 (70)	2,000 (140)	3,000 (210)	4,000 (275)	5,000 (345)	6,000 (415)	7,000 (490)	8,000 (550)	9,000 (630)	10,000 (700)
—	0000.5	.21 (0.79)	.30 (1.14)	.37 (1.40)	.42 (1.59)	.47 (1.78)	.52 (1.97)	.56 (2.12)	.60 (2.27)	.64 (2.42)	.67 (2.54)
BN1135	0001	.31 (1.17)	.40 (1.51)	.53 (2.01)	.66 (2.50)	.75 (2.84)	.84 (3.18)	.90 (3.41)	.95 (3.60)	.98 (3.71)	1.0 (3.79)
—	0001.5	.63 (2.38)	.80 (3.03)	1.05 (3.97)	1.30 (4.92)	1.45 (5.49)	1.61 (6.09)	1.79 (6.78)	1.90 (7.19)	1.95 (7.38)	2.0 (7.57)
BN1121	0002	1.0 (3.79)	1.4 (5.30)	1.7 (6.43)	2.0 (7.57)	2.2 (8.33)	2.5 (9.46)	2.6 (9.84)	2.8 (10.60)	3.0 (11.36)	3.2 (12.11)
BN1122	0003	1.5 (5.68)	2.1 (7.95)	2.6 (9.84)	3.0 (11.36)	3.4 (12.87)	3.7 (14.00)	3.9 (14.76)	4.2 (15.90)	4.5 (17.03)	4.7 (17.79)
BN1123	0004	2.0 (7.57)	2.8 (10.60)	3.5 (13.25)	4.0 (15.14)	4.5 (17.03)	4.9 (18.55)	5.3 (20.06)	5.6 (21.20)	6.0 (22.71)	6.3 (23.85)
—	0004.5	2.3 (8.71)	3.2 (12.11)	3.9 (14.76)	4.5 (17.03)	5.1 (19.30)	5.5 (20.82)	5.9 (22.33)	6.3 (23.85)	6.8 (25.74)	7.1 (26.87)
BN1124	0005	2.5 (9.46)	3.5 (13.25)	4.3 (16.28)	5.0 (18.93)	5.6 (21.20)	6.2 (23.87)	6.6 (24.98)	7.1 (26.87)	7.5 (28.39)	7.9 (29.90)
—	0005.5	2.8 (10.60)	3.9 (14.76)	4.7 (17.79)	5.5 (20.82)	6.2 (23.47)	6.8 (25.74)	7.3 (27.63)	7.8 (29.52)	8.3 (31.42)	8.7 (32.93)
BN1125	0006	3.0 (11.36)	4.2 (15.90)	5.2 (19.68)	6.0 (22.71)	6.8 (25.74)	7.4 (28.01)	7.9 (29.90)	8.5 (32.17)	9.0 (34.07)	9.5 (35.96)
—	0006.5	3.3 (12.49)	4.6 (17.41)	5.6 (21.20)	6.5 (24.60)	7.3 (27.63)	8.0 (30.28)	8.6 (32.55)	9.2 (34.82)	9.8 (37.09)	10.3 (38.99)
—	0007	3.5 (13.25)	4.9 (18.55)	6.0 (22.71)	7.0 (26.50)	7.9 (29.90)	8.6 (32.55)	9.2 (34.82)	9.9 (37.47)	10.5 (39.74)	11.1 (42.01)
BN1126	0008	4.0 (15.14)	5.6 (21.20)	6.9 (26.12)	8.0 (30.28)	9.0 (34.07)	9.8 (37.09)	10.6 (40.12)	11.3 (42.77)	12.0 (45.42)	12.6 (47.69)
—	0009	4.5 (17.03)	6.3 (23.85)	7.7 (29.14)	9.0 (34.07)	10.2 (38.61)	11.1 (42.01)	11.9 (45.04)	12.7 (48.07)	13.5 (51.10)	14.2 (53.75)
BN1127	0010	5.0 (18.93)	7.0 (26.50)	8.6 (32.55)	10.0 (37.85)	11.3 (42.77)	12.3 (46.56)	13.2 (49.96)	14.1 (53.37)	15.0 (56.78)	15.8 (59.80)
BN1129	0012	6.0 (22.71)	8.4 (31.79)	10.3 (38.99)	12.0 (45.42)	13.6 (51.48)	14.8 (56.02)	15.8 (59.80)	16.9 (63.97)	18.0 (68.13)	19.0 (71.92)
BN1130	0015	7.5 (28.39)	10.5 (39.74)	12.9 (48.83)	15.0 (56.78)	16.8 (63.59)	18.5 (70.02)	19.8 (74.94)	21.2 (80.24)	22.5 (85.16)	23.7 (89.70)
BN1134	0020	10.0 (37.85)	14.0 (52.99)	17.2 (65.10)	20.0 (75.70)	22.4 (84.78)	24.6 (93.11)	26.4 (99.92)	28.2 (106.74)	30.0 (113.55)	31.6 (119.61)
BN1133	0030	15.0 (56.78)	21.0 (79.49)	25.8 (97.65)	30.0 (113.55)	33.5 (126.80)	36.9 (139.67)	39.6 (149.89)	42.3 (160.11)	45.0 (170.33)	47.4 (179.41)
—	0040	20.0 (75.70)	28.0 (105.98)	34.4 (130.20)	40.0 (151.40)	44.7 (169.19)	49.2 (186.22)	52.8 (199.85)	56.4 (213.47)	60.0 (227.10)	63.2 (239.21)
—	0050	25.0 (94.63)	35.0 (132.48)	43.0 (162.76)	50.0 (189.25)	55.9 (211.58)	61.5 (232.78)	66.0 (249.81)	70.5 (266.84)	75.0 (283.88)	79.0 (299.02)

Insert	Nozzle No.	Pressure PSI (BAR)									
		11,000 (770)	12,000 (840)	13,000 (900)	14,000 (980)	15,000 (1,035)	16,000 (1,120)	17,000 (1,190)	18,000 (1,260)	19,000 (1,330)	20,000 (1,400)
—	0000.5	.70 (2.65)	.73 (2.76)	.76 (2.88)	.79 (2.99)	.82 (3.10)	.85 (3.22)	.87 (3.29)	.89 (3.37)	.92 (3.48)	.95 (3.60)
BN1135	0001	1.05 (3.97)	1.09 (4.13)	1.14 (4.31)	1.18 (4.47)	1.22 (4.62)	1.27 (4.81)	1.3 (4.92)	1.34 (5.07)	1.38 (5.22)	1.41 (5.34)
—	0001.5	2.1 (7.95)	2.18 (8.25)	2.28 (8.63)	2.36 (8.93)	2.44 (9.24)	2.54 (9.61)	2.60 (9.84)	2.68 (10.14)	2.76 (10.45)	2.82 (10.67)
BN1121	0002	3.36 (12.72)	3.51 (13.29)	3.65 (13.82)	3.79 (14.35)	3.92 (14.84)	4.05 (15.33)	4.17 (15.78)	4.29 (16.24)	4.41 (16.69)	4.53 (17.15)
BN1122	0003	4.93 (18.66)	5.15 (19.49)	5.36 (20.29)	5.56 (21.04)	5.76 (21.80)	5.95 (22.52)	6.13 (23.20)	6.31 (23.88)	6.48 (24.53)	6.65 (25.17)
BN1123	0004	6.61 (25.02)	6.9 (26.12)	7.18 (27.18)	7.45 (28.20)	7.72 (29.22)	7.97 (30.17)	8.2 (31.04)	8.45 (31.98)	8.68 (32.85)	8.91 (33.72)
—	0004.5	7.45 (28.20)	7.78 (29.45)	8.09 (30.62)	8.4 (31.79)	8.69 (32.89)	8.98 (33.99)	9.23 (34.94)	9.53 (36.07)	9.79 (37.06)	10.04 (38.00)
BN1124	0005	8.29 (31.38)	8.69 (32.89)	9.01 (34.10)	9.35 (35.39)	9.68 (36.64)	9.99 (37.81)	10.3 (38.99)	10.6 (40.12)	10.89 (41.22)	11.17 (42.28)
—	0005.5	9.12 (34.52)	9.53 (36.07)	9.92 (37.55)	10.29 (38.95)	10.66 (40.35)	11.0 (41.64)	11.34 (42.92)	11.67 (44.17)	11.99 (45.38)	12.3 (46.56)
BN1125	0006	9.96 (37.70)	10.41 (39.40)	10.83 (40.99)	11.24 (42.54)	11.64 (44.06)	12.02 (45.50)	12.39 (46.90)	12.75 (48.26)	13.09 (49.55)	13.44 (50.87)
—	0006.5	10.8 (40.88)	11.28 (42.69)	11.74 (44.44)	12.19 (46.14)	12.61 (47.73)	13.03 (49.32)	13.43 (50.83)	13.82 (52.31)	14.2 (53.75)	14.57 (55.15)
—	0007	11.64 (44.06)	12.16 (46.03)	12.66 (47.92)	13.13 (49.70)	13.59 (51.44)	14.04 (53.14)	14.47 (54.77)	14.89 (56.36)	15.3 (57.91)	15.69 (59.39)
BN1126	0008	13.21 (50.00)	13.8 (52.23)	14.37 (54.39)	14.91 (56.43)	15.43 (58.40)	15.94 (60.33)	16.43 (62.19)	16.9 (63.97)	17.37 (65.75)	17.82 (67.45)
—	0009	14.89 (56.36)	15.56 (58.89)	16.19 (61.28)	16.8 (63.59)	17.39 (65.82)	17.96 (67.98)	18.51 (70.06)	19.05 (72.10)	19.6 (74.19)	20.1 (76.09)
BN1127	0010	16.57 (62.72)	17.31 (65.52)	18.01 (68.17)	18.69 (70.74)	19.35 (73.24)	19.99 (75.66)	20.6 (77.97)	21.2 (80.24)	21.8 (82.51)	22.3 (84.41)
BN1129	0012	19.93 (75.44)	20.81 (78.77)	21.66 (81.98)	22.48 (85.09)	23.27 (88.08)	24.0 (90.84)	24.8 (93.87)	25.5 (96.52)	26.2 (99.17)	26.9 (101.82)
BN1130	0015	24.86 (94.10)	25.96 (98.26)	27.02 (102.27)	28.0 (105.98)	29.0 (109.77)	30.0 (113.55)	30.9 (116.96)	31.8 (120.36)	32.7 (123.77)	33.5 (126.80)
BN1134	0020	33.14 (125.43)	34.6 (130.96)	36.0 (136.26)	37.4 (141.56)	38.7 (146.48)	40.0 (151.40)	41.2 (155.94)	42.4 (160.48)	43.6 (165.03)	44.7 (169.19)
BN1133	0030	49.7 (188.11)	51.9 (196.44)	54.0 (204.39)	56.0 (211.96)	58.0 (219.53)	60.0 (227.10)	61.8 (233.91)	63.6 (240.73)	65.3 (247.16)	67.0 (253.60)
—	0040	66.3 (250.95)	69.2 (261.92)	72.0 (272.52)	74.8 (283.12)	77.4 (292.96)	79.9 (302.42)	82.4 (311.88)	84.8 (320.97)	87.1 (329.67)	89.4 (328.38)
—	0050	82.9 (313.78)	86.5 (327.40)	90.1 (341.03)	93.5 (353.90)	96.8 (366.39)	99.9 (378.12)	103.0 (389.86)	106.0 (401.21)	108.9 (412.19)	111.7 (422.78)