

# DISCHARGE CAPACITY CHART (BTS-50) SATURATED STEAM - WITHOUT OVER PRESSURE

Valve Size	25X50	25X50	25X50	40X50	40X50	40X50	40X50	40X80	40X80	50X80	50X80	65X100
Orifice Designation	F	G	G1	F	G	G1	H	H	J	J	K	J
Orifice (Seat) Dia.	19mm	23mm	25mm	19mm	23mm	25mm	28mm	28mm	31.8mm	32.5mm	36mm	32.5mm
Area cm <sup>2</sup>	2.83385	4.154	4.90625	2.83385	4.154	4.90625	6.154	6.154	7.942	8.301	10.178	8.301
Set Pres.Kg/cm <sup>2</sup> (g)	Discharge Capacity kg/hr - Constant - 24											
1.00	137.0	200.8	237.1	137.0	200.8	237.1	297.4	297.4	383.8	401.2	491.9	401.2
1.50	170.3	249.6	294.8	170.3	249.6	294.8	369.8	369.8	477.3	498.9	611.7	498.9
2.00	203.7	298.5	352.6	203.7	298.5	352.6	442.3	442.3	570.7	596.5	731.4	596.5
3.00	270.3	396.3	468.1	270.3	396.3	468.1	587.1	587.1	757.7	791.9	971.0	791.9
3.50	303.7	445.2	525.8	303.7	445.2	525.8	659.5	659.5	851.1	889.6	1090.8	889.6
4.00	337.0	494.1	583.5	337.0	494.1	583.5	731.9	731.9	944.6	987.3	1210.5	987.3
5.00	403.7	591.8	699.0	403.7	591.8	699.0	876.8	876.8	1131.5	1182.7	1450.1	1182.7
5.50	437.1	640.7	756.7	437.1	640.7	756.7	949.2	949.2	1225.0	1280.3	1569.9	1280.3
6.00	470.4	689.6	814.5	470.4	689.6	814.5	1021.6	1021.6	1318.4	1378.0	1689.6	1378.0
7.00	537.1	787.4	929.9	537.1	787.4	929.9	1166.5	1166.5	1505.4	1573.4	1929.2	1573.4
7.50	570.5	836.2	987.7	570.5	836.2	987.7	1238.9	1238.9	1598.8	1671.1	2049.0	1671.1
8.00	603.8	885.1	1045.4	603.8	885.1	1045.4	1311.3	1311.3	1692.3	1768.8	2168.7	1768.8
8.50	637.2	934.0	1103.2	637.2	934.0	1103.2	1383.7	1383.7	1785.7	1866.5	2288.5	1866.5
9.00	670.5	982.9	1160.9	670.5	982.9	1160.9	1456.1	1456.1	1879.2	1964.1	2408.3	1964.1
10.00	737.2	1080.7	1276.4	737.2	1080.7	1276.4	1601.0	1601.0	2066.1	2159.5	2647.8	2159.5
10.25	753.9	1105.1	1305.2	753.9	1105.1	1305.2	1637.2	1637.2	2112.9	2208.4	2707.7	2208.4
10.40	763.9	1119.8	1322.6	763.9	1119.8	1322.6	1658.9	1658.9	2140.9	2237.7	2743.6	2237.7
10.54	773.2	1133.5	1338.7	773.2	1133.5	1338.7	1679.2	1679.2	2167.1	2265.0	2777.2	2265.0
11.00	803.9	1178.4	1391.8	803.9	1178.4	1391.8	1745.8	1745.8	2253.0	2354.9	2887.4	2354.9
11.25	820.6	1202.9	1420.7	820.6	1202.9	1420.7	1782.0	1782.0	2299.8	2403.7	2947.3	2403.7
12.00	870.6	1276.2	1507.3	870.6	1276.2	1507.3	1890.7	1890.7	2440.0	2550.3	3126.9	2550.3
12.50	904.0	1325.1	1565.1	904.0	1325.1	1565.1	1963.1	1963.1	2533.4	2647.9	3246.7	2647.9
13.00	937.3	1374.0	1622.8	937.3	1374.0	1622.8	2035.5	2035.5	2626.9	2745.6	3366.5	2745.6
14.00	1004.0	1471.7	1738.3	1004.0	1471.7	1738.3	2180.3	2180.3	2813.8	2941.0	3606.0	2941.0
14.06	1008.0	1477.6	1745.2	1008.0	1477.6	1745.2	2189.0	2189.0	2825.0	2952.7	3620.4	2952.7
15.00	1070.7	1569.5	1853.7	1070.7	1569.5	1853.7	2325.2	2325.2	3000.7	3136.4	3845.6	3136.4
15.25	1087.4	1594.0	1882.6	1087.4	1594.0	1882.6	2361.4	2361.4	3047.5	3185.2	3905.5	3185.2
16.00	1137.4	1667.3	1969.2	1137.4	1667.3	1969.2	2470.0	2470.0	3187.7	3331.8	4085.1	3331.8
17.00	1204.1	1765.0	2084.7	1204.1	1765.0	2084.7	2614.9	2614.9	3374.6	3527.1	4324.7	3527.1
17.58	1242.8	1821.8	2151.7	1242.8	1821.8	2151.7	2698.9	2698.9	3483.0	3640.4	4463.6	3640.4
18.00	1270.8	1862.8	2200.2	1270.8	1862.8	2200.2	2759.7	2759.7	3561.5	3722.5	4564.2	3722.5
18.25	1287.5	1887.3	2229.0	1287.5	1887.3	2229.0	2795.9	2795.9	3608.2	3771.3	4624.1	3771.3
18.50	1304.2	1911.7	2257.9	1304.2	1911.7	2257.9	2832.1	2832.1	3655.0	3820.2	4684.0	3820.2
19.00	1337.5	1960.6	2315.6	1337.5	1960.6	2315.6	2904.5	2904.5	3748.4	3917.9	4803.8	3917.9
20.00	1404.2	2058.4	2431.1	1404.2	2058.4	2431.1	3049.4	3049.4	3935.3	4113.2	5043.3	4113.2
20.75	1454.2	2131.7	2517.7	1454.2	2131.7	2517.7	3158.0	3158.0	4075.5	4259.8	5223.0	4259.8
21.00	1470.9	2156.1	2546.6	1470.9	2156.1	2546.6	3194.2	3194.2	4122.3	4308.6	5282.9	4308.6
22.00	1537.6	2253.9	2662.0	1537.6	2253.9	2662.0	3339.1	3339.1	4309.2	4504.0	5522.4	4504.0
23.00	1604.3	2351.7	2777.5	1604.3	2351.7	2777.5	3483.9	3483.9	4496.1	4699.4	5762.0	4699.4
24.00	1671.0	2449.4	2893.0	1671.0	2449.4	2893.0	3628.7	3628.7	4683.0	4894.7	6001.5	4894.7
25.00	1737.7	2547.2	3008.5	1737.7	2547.2	3008.5	3773.6	3773.6	4870.0	5090.1	6241.1	5090.1

Valve Size	65X100	65X100	65X100	80X100	80X100	100X150	100X150	100X150	150X200	150X200	200X250	250X350
Orifice Designation	K	K1	L	K1	L	M	N	P	Q	R	T	V
Orifice (Seat)Dia.	36mm	41.5mm	50mm	41.5mm	50mm	56mm	60mm	72.5mm	95.3mm	115mm	146mm	190mm
Area cm <sup>2</sup>	10.178	13.526	19.634	13.526	19.634	24.63	28	41.282	71.3	103.91	167.74	283.385
Set Pres.Kg/cm <sup>2</sup> (g)	Discharge Capacity kg/hr - Constant - 24											
1.00	491.9	653.7	948.9	653.7	948.9	1190.3	1353.2	1995.1	3445.8	5021.8	4158.6	22825.7
1.50	611.7	812.9	1179.9	812.9	1179.9	1480.2	1682.7	2480.9	4284.8	6244.6	4158.6	28383.8
2.00	731.4	972.0	1411.0	972.0	1411.0	1770.0	2012.2	2966.7	5123.9	7467.4	4158.6	33941.9
3.00	971.0	1290.4	1873.1	1290.4	1873.1	2349.7	2671.2	3938.3	6802.0	9913.0	4158.6	45058.2
3.50	1090.8	1449.6	2104.1	1449.6	2104.1	2639.5	3000.7	4424.1	7641.1	1135.8	4158.6	50616.3
4.00	1210.5	1608.7	2335.2	1608.7	2335.2	2929.4	3330.2	4909.9	8480.1	12358.6	4158.6	56174.4
5.00	1450.1	1927.1	2797.3	1927.1	2797.3	3509.1	3989.2	5881.5	10158.2	14804.2	4158.6	67290.6
5.50	1569.9	2086.2	3028.3	2086.2	3028.3	3798.9	4318.7	6367.3	10997.3	16027.1	4158.6	72848.7
6.00	1689.6	2245.4	3259.4	2245.4	3259.4	4088.8	4648.2	6853.1	11836.4	17249.9	4158.6	78406.8
7.00	1929.2	2563.8	3721.5	2563.8	3721.5	4668.5	5307.2	7824.7	13514.5	19695.5	4158.6	89523.1
7.50	2049.0	2722.9	3952.6	2722.9	3952.6	4958.3	5636.7	8310.5	14353.5	20918.3	4158.6	95081.2
8.00	2168.7	2882.1	4183.6	2882.1	4183.6	5248.2	5966.2	8796.4	15192.6	22141.1	4158.6	100639.3
8.50	2288.5	3041.3	4414.7	3041.3	4414.7	5538.0	6295.7	9282.2	16031.6	23363.9	4158.6	106197.4
9.00	2408.3	3200.5	4645.7	3200.5	4645.7	5827.8	6625.2	9768.0	16870.7	24586.7	4158.6	111755.5
10.00	2647.8	3518.8	5107.8	3518.8	5107.8	6407.5	7284.2	10739.6	18548.8	27032.4	4158.6	122871.8
10.25	2707.7	3598.4	5223.3	3598.4	5223.3	6552.5	7449.0	10982.5	18968.3	27643.8	4158.6	125650.8
10.40	2743.6	3646.1	5292.7	3646.1	5292.7	6639.4	7547.8	11128.2	19220.1	28010.6	4158.6	127318.3
10.54	2777.2	3690.7	5357.4	3690.7	5357.4	6720.6	7640.1	11264.2	19455.0	28353.0	4158.6	128874.5
11.00	2887.4	3837.2	5569.9	3837.2	5569.9	6987.2	7943.3	11711.2	20226.9	29478.0	4158.6	133988.0
11.25	2947.3	3916.7	5685.4	3916.7	5685.4	7132.1	8108.0	11954.1	20646.5	30089.4	4158.6	136767.1
12.00	3126.9	4155.5	6032.0	4155.5	6032.0	7566.9	8602.3	12682.8	21905.0	31923.6	4158.6	145104.2
12.50	3246.7	4314.7	6263.1	4314.7	6263.1	7856.8	8931.8	13168.6	22744.1	33146.4	4158.6	150662.3
13.00	3366.5	4473.9	6494.1	4473.9	6494.1	8146.6	9261.3	13654.4	23583.2	34369.2	4158.6	156220.5
14.00	3606.0	4792.2	6956.2	4792.2	6956.2	8726.3	9920.3	14626.0	25261.3	36814.8	4158.6	167336.7
14.06	3620.4	4811.3	6984.0	4811.3	6984.0	8761.1	9959.8	14684.3	25362.0	36961.6	4158.6	168003.7
15.00	3845.6	5110.5	7418.3	5110.5	7418.3	9306.0	10579.3	15597.6	26939.4	39260.5	4158.6	178452.9
15.25	3905.5	5190.1	7533.9	5190.1	7533.9	9450.9	10744.0	15840.5	27358.9	39871.9	4158.6	181232.0
16.00	4085.1	5428.9	7880.4	5428.9	7880.4	9885.7	11238.3	16569.2	28617.5	41706.1	4158.6	189569.1
17.00	4324.7	5747.2	8342.6	5747.2	8342.6	10465.4	11897.3	17549.9	30295.6	44151.7	4158.6	200685.4
17.58	4463.6	5931.9	8610.6	5931.9	8610.6	10801.6	12279.5	18104.4	31268.9	45570.2	4158.6	207132.8
18.00	4564.2	6065.6	8804.7	6065.6	8804.7	11045.1	12556.3	18512.5	31973.7	46597.3	4158.6	218010.6
18.25	4624.1	6145.2	8920.2	6145.2	8920.2	11190.0	12721.1	18755.4	32393.2	47208.7	4158.6	214580.7
18.50	4684.0	6224.8	9035.7	6224.8	9035.7	11334.9	12885.8	18998.3	32812.8	47820.1	4158.6	217359.7
19.00	4803.8	6383.9	9266.8	6383.9	9266.8	11624.8	13215.3	19484.1	33651.8	49042.9	4158.6	222917.8</