

Fixed solid stream nozzles

Characteristics

Multiple solid stream with large spray intensity and highest force of impact possible.
 Universal nozzle with female thread.
 Bores and spray patterns according to your requirements possible!

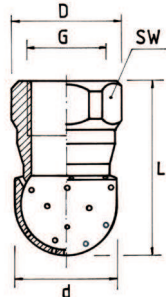
Application

Tank and container cleaning
 Pipe and sewer cleaning
 Steam and liquid injection
 Compressed air and gas injection
 Liquid recirculation

Material

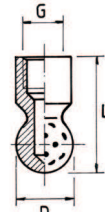
Brass
 Stainless steel
 Plastic
 Other materials on request

Illu. 1



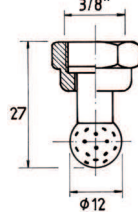
TM 3/8" to 2"
 up to 330° possible,
 flow rate
 on request

Illu. 2



TMA 1/8" to 1/4"
 up to 300° possible,
 flow rate
 on request

Illu. 3



TMÜ clamping
 of nozzle orifice with
 union nut 3/8",
 flow rate
 on request



300-330°
 Standard from 3/8"
37 bores



180°
 Standard from 3/8"
25 bores



180-300° resp. 330°
 Standard from 3/8"
25 bores



90-120°
90° 13 bores,
120° 19 bores



On request



On request



Pipe cleaning
 see also
 pages 5.5 and 5.6

Order example: (thread - type - spray coverage - bore-Ø - number of bores - material)
 3/4" - TM - F - Ø 2,0 - 37 - V4A ,

Spray coverage

Bore Ø (mm)	Flow rate \dot{V} l/min. at pressure p (bar) for 1 bore								Max. recomm. tank-Ø in m
	bar 0.5	bar 1	bar 2	bar 3	bar 5	bar 10	bar 15	bar 20	
0.6	0.10	0.14	0.20	0.24	0.32	0.45	0.55	0.63	0.3
0.8	0.20	0.28	0.40	0.45	0.60	0.89	1.10	1.26	0.4
1.0	0.35	0.50	0.70	0.85	1.10	1.57	1.92	2.21	0.6
1.5	0.75	1.07	1.50	1.83	2.37	3.36	4.11	4.74	1.0
2.0	1.20	1.70	2.40	2.93	3.79	5.37	6.58	7.58	1.5
2.5	2.05	2.91	4.10	5.00	6.48	11.2	11.2	12.9	2.0
3.0	3.00	4.26	6.00	7.32	9.40	13.5	16.4	19.0	3.0
4.0	4.20	5.96	8.40	10.4	13.3	19.7	23.0	26.5	5.0
5.0	7.00	9.90	14.0	17.1	22.1	32.8	38.4	44.2	8.0

Dimensions in mm					Max. \dot{V} (l/min.) at 3 bar	Max. bore number	Max. bore-Ø in mm
G	D	d	L	SW			
1/8"	13	13	26	11	16	13	1.0
1/4"	16	16	30	15	29	19	1.5
3/8"	24	21	36	22	45	37	2.0
1/2"	29	26	45	27	88	43	2.5
3/4"	34	31	54	32	181	74	3.0
1"	38	35	60	36	282	96	4.0
1 1/4"	50	50	78	46	410	108	5.0
1 1/2"	64	64	98	59	577	120	6.0
2"	70	70	106	64	1,000	144	8.0

Flow rate \dot{V} should not be exceeded significantly when choosing number of bores and bore-Ø.

TM F - 330°	Flow rate \dot{V} l/min. at pressure p (bar) 37 bores							
	0.5	1	2	3	5	10	15	20
0.6	3.70	5.18	7.40	8.88	11.8	16.6	20.4	23.3
0.8	7.40	10.4	14.8	16.6	22.2	33.0	40.3	46.6
1.0	12.8	18.5	25.9	31.4	40.7	58.1	70.7	81.8
1.5	27.8	39.6	55.5	67.7	87.7	124	152	175
2.0	44.4	63.3	88.8	108	140	199	243	280
2.5	75.8	108	152	185	238	414	415	479
3.0	111	158	222	271	348	500	608	701
4.0	155	220	311	385	492	729	851	980
5.0	259	366	518	632	818	1,214	1,421	1,635

TM B + I 180°	Flow rate \dot{V} l/min. at pressure p (bar) 25 bores							
	0.5	1	2	3	5	10	15	20
0.6	2.50	3.50	5.00	6.00	8.00	11.2	13.8	15.8
0.8	5.00	7.00	10.0	11.2	15.0	22.2	27.2	31.5
1.0	8.75	12.5	17.5	21.2	27.5	39.2	47.8	55.2
1.5	18.8	26.8	37.5	45.8	59.2	84.0	103	118
2.0	30.0	42.5	60.0	73.2	94.8	134	164	190
2.5	51.2	72.8	102	125	162	280	281	324
3.0	75.0	106	150	183	235	338	411	474
4.0	105	149	210	260	332	492	575	662
5.0	175	248	350	428	552	820	960	1,105

TM G - 90°	Flow rate \dot{V} l/min. at pressure p (bar) 13 bores							
	0.5	1	2	3	5	10	15	20
0.6	1.30	1.82	2.60	3.12	4.16	5.85	7.15	8.19
0.8	2.60	3.64	5.20	5.85	7.80	11.57	14.17	16.4
1.0	4.55	6.50	9.10	11.0	14.3	20.4	24.8	28.7
1.5	9.75	13.9	19.5	23.8	30.8	43.7	53.4	61.6
2.0	15.6	22.1	31.2	38.1	49.3	69.8	85.4	98.5
2.5	26.6	37.8	53.3	65.0	84.2	146	146	168
3.0	39.0	55.4	78.0	95.2	122	176	214	246
4.0	54.6	77.5	109	135	173	492	299	344
5.0	91.0	129	350	222	287	426	499	575

TM G - 120°	Flow rate \dot{V} l/min. at pressure p (bar) 19 bores							
	0.5	1	2	3	5	10	15	20
0.6	1.90	2.66	3.80	4.56	6.08	8.55	10.4	12.0
0.8	3.80	5.32	7.60	8.55	11.4	16.9	20.7	23.9
1.0	6.65	9.50	13.3	16.2	20.9	29.8	36.3	42.0
1.5	14.2	20.3	28.5	34.8	45.0	63.8	78.1	90.1
2.0	22.8	32.3	45.6	55.7	72.0	102	125	144
2.5	39.0	55.3	77.9	95.0	123	213	213	246
3.0	57.0	80.9	114	139	179	256	312	360
4.0	80.0	113	210	260	332	374	437	504
5.0	133	188	266	325	420	623	730	840