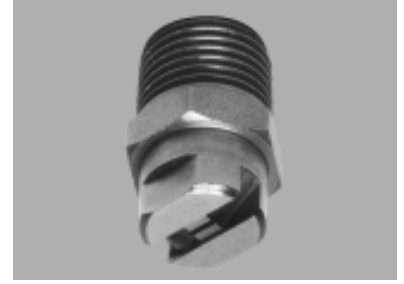
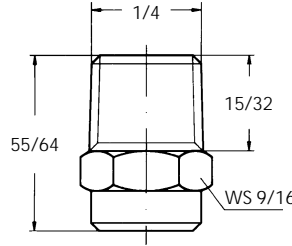


H type flat-jet nozzles are available in a wide range of capacities, spray angles and materials. The tapered thread assures a tight connection and makes it easy to orient the jets in the desired direction.

The outlet orifices of the low flow rate nozzles depicted on this page are relatively small and precisely machined. This requires that an appropriate filter be installed to prevent clogging.

Connection: Male thread

Materials: Brass (T1)
303 stainless steel (B1)
316 stainless steel (B3)



LOW FLOW RATE

Composing a code for low flow rate H nozzles

The nozzles shown on this page can be supplied with eight different spray angles as shown in the table below. Angles are designated by the third digit in the nozzle code. For example,



CODE	ANGLE
HBD	25°
HBL	40°
HBN	50°
HBR	65°
HBS	75°
HBT	80°
HBV	95°
HBJ	110°

Low flow rate H nozzles are provided with an internal thread to accommodate the installation of a filter.

See the Accessories section of this catalog for details.



Nozzle code	Flow rates (gpm) at various pressures (psi)											Spray angle		
	5	10	20	30	40	60	80	100	200	300	500	20 psi	40 psi	80 psi
HBD 0260 xx	-	0.033	0.047	0.057	0.066	0.081	0.094	0.10	0.15	0.18	0.23	14	25	34
HBD 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	14	25	34
HBD 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	15	25	34
HBD 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	15	25	33
HBD 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	15	25	33
HBD 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	16	25	32
HBL 0260 xx	-	0.033	0.047	0.057	0.066	0.081	0.094	0.10	0.15	0.18	0.23	24	40	53
HBL 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	26	40	52
HBL 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	27	40	52
HBL 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	29	40	51
HBL 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	30	40	50
HBL 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	30	40	50
HBN 0260 xx	-	0.033	0.047	0.057	0.066	0.081	0.094	0.10	0.15	0.18	0.23	35	50	60
HBN 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	37	50	59
HBN 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	38	50	58
HBN 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	39	50	57
HBN 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	40	50	56
HBN 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	42	50	56
HBR 0060 xx	-	-	-	0.013	0.015	0.019	0.022	0.024	0.034	0.042	0.054	44	65	77
HBR 0130 xx	-	-	-	0.029	0.033	0.041	0.047	0.052	0.074	0.091	0.12	47	65	76
HBR 0260 xx	-	0.033	0.047	0.057	0.066	0.081	0.094	0.10	0.15	0.18	0.23	50	65	75
HBR 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	51	65	74
HBR 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	51	65	74
HBR 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	52	65	73
HBR 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	53	65	72
HBR 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	53	65	72
HBS 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	53	73	86
HBS 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	54	73	85
HBS 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	55	73	84
HBS 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	56	73	83
HBT 0200 xx	-	0.020	0.028	0.034	0.040	0.049	0.056	0.063	0.089	0.11	0.14	61	80	95
HBT 0260 xx	-	0.033	0.047	0.057	0.066	0.081	0.094	0.10	0.15	0.18	0.23	67	80	94
HBT 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	68	80	89
HBT 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	68	80	89
HBT 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	69	80	88
HBT 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	70	80	87
HBT 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	71	80	86
HBV 0200 xx	-	0.020	0.028	0.034	0.040	0.049	0.056	0.063	0.089	0.11	0.14	81	95	105
HBV 0260 xx	-	0.033	0.047	0.057	0.066	0.081	0.094	0.10	0.15	0.18	0.23	81	95	105
HBV 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	81	95	105
HBV 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	82	95	105
HBV 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	82	95	105
HBV 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	83	95	104
HBV 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	84	95	103
HBJ 0390 xx	-	0.050	0.070	0.086	0.10	0.12	0.14	0.16	0.22	0.27	0.35	94	110	121
HBJ 0590 xx	-	0.075	0.11	0.13	0.15	0.18	0.21	0.24	0.34	0.41	0.53	97	110	121
HBJ 0780 xx	0.070	0.10	0.14	0.17	0.20	0.24	0.28	0.31	0.45	0.55	0.70	98	110	120
HBJ 1120 xx	0.10	0.14	0.20	0.25	0.29	0.35	0.40	0.45	0.64	0.78	1.0	99	110	120
HBJ 1160 xx	0.14	0.20	0.29	0.35	0.41	0.50	0.58	0.65	0.91	1.1	1.4	100	110	119

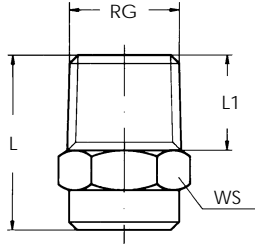
MATERIALS

MATERIAL	0060	0130	0200	0260	0390	0590	0780	1120	1160
BRASS	●	●	●	●	●	●	●	●	●
303 SS	-	-	●	●	-	-	●	●	●
316 SS	-	-	●	●	-	-	-	-	●

H

FLAT-JET NOZZLES

STANDARD FLOW RATE



H type standard flow rate flat-jet nozzle are shown on this and the following page.

Connection: Male thread

Materials: Brass (T1)
303 stainless steel (B1)
316 stainless steel (B3)
Other materials available on request

Nozzle code	D	Flow rates (gpm) at various pressures (psi)																									
		5	10	20	30	40	60	80	100	200	300	500															
25°	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1153xx	0.053	-	0.20	0.28	0.34	0.39	0.48	0.55	0.62	0.87	1.1	1.4
															1190xx	0.059	-	0.24	0.34	0.42	0.48	0.59	0.69	0.77	1.1	1.3	1.7
															1233xx	0.065	-	0.30	0.42	0.52	0.59	0.73	0.84	0.94	1.3	1.6	2.1
															1310xx	0.079	0.28	0.40	0.56	0.69	0.79	0.97	1.1	1.3	1.8	2.2	2.8
															1385xx	0.087	0.35	0.49	0.69	0.85	1.0	1.2	1.4	1.6	2.2	2.7	3.5
															1490xx	0.098	0.44	0.63	0.88	1.1	1.3	1.5	1.8	2.0	2.8	3.4	4.4
															1581xx	0.106	0.52	0.7	1.0	1.3	1.5	1.8	2.1	2.3	3.3	4.1	5.2
															1780xx	0.118	0.70	1.0	1.4	1.7	2.0	2.4	2.8	3.1	4.5	5.5	7.0
															1980xx	0.138	0.88	1.3	1.8	2.2	2.5	3.1	3.5	4.0	5.6	6.9	8.8
															2124xx	0.157	1.1	1.6	2.2	2.7	3.2	3.9	4.5	5.0	7.1	8.7	11.2
															2153xx	0.177	1.4	2.0	2.8	3.4	3.9	4.8	5.5	6.2	8.7	10.7	13.8
															2195xx	0.197	1.8	2.5	3.5	4.3	5.0	6.1	7.0	7.8	11.1	13.6	17.5
															2245xx	0.216	2.2	3.1	4.4	5.4	6.3	7.7	8.9	9.9	14.0	17.2	22.2
															2274xx	0.224	2.5	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7
															2310xx	0.236	2.8	4.0	5.6	6.9	7.9	9.7	11.2	12.6	17.8	21.7	28.1
															2390xx	0.276	3.5	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2
															2470xx	0.303	4.2	6.0	8.5	10.4	12.0	14.7	17.0	19.0	26.8	32.9	42.4

DIMENSIONS

	RG	L	L1	WS
HA	1/8"	49/64"	7/16"	1/2"
HB	1/4"	55/64"	15/32"	9/16"
HC	3/8"	63/64"	35/64"	11/16"

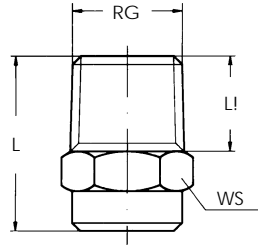
Nozzle code	D	Flow rates (gpm) at various pressures (psi)																									
		5	10	20	30	40	60	80	100	200	300	500															
40°	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1153xx	0.053	-	0.20	0.28	0.34	0.39	0.48	0.55	0.62	0.87	1.1	1.4
															1190xx	0.059	-	0.24	0.34	0.42	0.48	0.59	0.69	0.77	1.1	1.3	1.7
															1233xx	0.065	-	0.30	0.42	0.52	0.59	0.73	0.84	0.94	1.3	1.6	2.1
															1310xx	0.079	0.28	0.40	0.56	0.69	0.79	0.97	1.1	1.3	1.8	2.2	2.8
															1385xx	0.087	0.35	0.49	0.69	0.85	1.0	1.2	1.4	1.6	2.2	2.7	3.5
															1490xx	0.098	0.44	0.63	0.88	1.1	1.3	1.5	1.8	2.0	2.8	3.4	4.4
															1581xx	0.106	0.52	0.7	1.0	1.3	1.5	1.8	2.1	2.3	3.3	4.1	5.2
															1780xx	0.118	0.70	1.0	1.4	1.7	2.0	2.4	2.8	3.1	4.5	5.5	7.0
															1980xx	0.138	0.88	1.3	1.8	2.2	2.5	3.1	3.5	4.0	5.6	6.9	8.8
															2124xx	0.157	1.1	1.6	2.2	2.7	3.2	3.9	4.5	5.0	7.1	8.7	11.2
															2153xx	0.177	1.4	2.0	2.8	3.4	3.9	4.8	5.5	6.2	8.7	10.7	13.8
															2195xx	0.197	1.8	2.5	3.5	4.3	5.0	6.1	7.0	7.8	11.1	13.6	17.5
															2245xx	0.216	2.2	3.1	4.4	5.4	6.3	7.7	8.9	9.9	14.0	17.2	22.2
															2274xx	0.224	2.5	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7
															2310xx	0.236	2.8	4.0	5.6	6.9	7.9	9.7	11.2	12.6	17.8	21.7	28.1
															2390xx	0.276	3.5	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2
															2470xx	0.303	4.2	6.0	8.5	10.4	12.0	14.7	17.0	19.0	26.8	32.9	42.4

Nozzle code	D	Flow rates (gpm) at various pressures (psi)																									
		5	10	20	30	40	60	80	100	200	300	500															
50°	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1153xx	0.053	-	0.20	0.28	0.34	0.39	0.48	0.55	0.62	0.87	1.1	1.4
															1190xx	0.059	-	0.24	0.34	0.42	0.48	0.59	0.69	0.77	1.1	1.3	1.7
															1233xx	0.065	-	0.30	0.42	0.52	0.59	0.73	0.84	0.94	1.3	1.6	2.1
															1310xx	0.079	0.28	0.40	0.56	0.69	0.79	0.97	1.1	1.3	1.8	2.2	2.8
															1385xx	0.087	0.35	0.49	0.69	0.85	1.0	1.2	1.4	1.6	2.2	2.7	3.5
															1490xx	0.098	0.44	0.63	0.88	1.1	1.3	1.5	1.8	2.0	2.8	3.4	4.4
															1581xx	0.106	0.52	0.7	1.0	1.3	1.5	1.8	2.1	2.3	3.3	4.1	5.2
															1780xx	0.118	0.70	1.0	1.4	1.7	2.0	2.4	2.8	3.1	4.5	5.5	7.0
															1980xx	0.138	0.88	1.3	1.8	2.2	2.5	3.1	3.5	4.0	5.6	6.9	8.8
															2124xx	0.157	1.1	1.6	2.2	2.7	3.2	3.9	4.5	5.0	7.1	8.7	11.2
															2153xx	0.177	1.4	2.0	2.8	3.4	3.9	4.8	5.5	6.2	8.7	10.7	13.8
															2195xx	0.197	1.8	2.5	3.5	4.3	5.0	6.1	7.0	7.8	11.1	13.6	17.5
															2245xx	0.216	2.2	3.1	4.4	5.4	6.3	7.7	8.9	9.9	14.0	17.2	22.2
															2274xx	0.224	2.5	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7
															2310xx	0.236	2.8	4.0	5.6	6.9	7.9	9.7	11.2	12.6	17.8	21.7	28.1
															2390xx	0.276	3.5	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2
															2470xx	0.303	4.2	6.0	8.5	10.4	12.0	14.7	17.0	19.0	26.8	32.9	42.4

H

FLAT-JET NOZZLES

LARGE FLOW RATE



The **H** flat-jet nozzles shown here have large flow rate capacities.

Connection: Male thread

Materials: Brass (T1)
303 stainless steel (B1)
316 stainless steel (B3) on request

HYDRAULIC NOZZLES
FLAT-JET

		Nozzle code	D	Flow rates (gpm) at various pressures (psi)									Spray angle							
				10	20	30	40	60	80	100	200	300	500	20 psi	80 psi	200 psi				
●	●	HDA 2590 xx	0.295	7.5	10.6	13.0	15.1	18.4	21.3	23.8	33.7	41.2	53.2	0° solid stream						
		HDA 2780 xx	0.327	10.0	14.1	17.2	19.9	24.4	28.2	31.5	44.5	54.5	70.4							
		HEA 3134 xx	0.437	17.1	24.2	29.6	34.2	41.9	48.4	54.1	76.5	93.7	121							
		HEA 3275 xx	0.590	35.1	49.6	60.8	70.2	86.0	99.3	111	157	192	248							
		HFA 3390 xx	0.748	49.8	70.4	86.2	99.5	122	141	157	223	273	352							
		HFA 3435 xx	0.779	56	79	96	111	136	157	176	248	304	393							
	●	●	HDB 2195 xx	0.165	2.5	3.5	4.3	5.0	6.1	7.0	7.9	11.1	13.6				17.6	11	18	21
			HDB 2274 xx	0.224	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2				24.7	11	18	21
			HDB 2390 xx	0.224	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3				35.2	13	17	18
			HEB 2990 xx	0.370	12.6	17.9	21.9	25.2	30.9	35.7	40.0	56.5	69.2				89.3	14	16	17
	●	●	HDD 2390 xx	0.244	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3				35.2	23	28	32
			HDD 2590 xx	0.295	7.5	10.6	13.0	15.1	18.42	21.3	23.8	33.7	41.2				53.2	24	28	30
			HDD 2780 xx	0.327	10.0	14.1	17.2	19.9	24.4	28.2	31.5	44.5	54.5				70.4	24	26	29
			HFD 3195 xx	0.516	24.9	35.2	43.1	49.8	61.0	70.4	78.7	111	136				176	24	26	29
	●	●	HDL 2195 xx	0.165	2.5	3.5	4.3	5.0	6.1	7.0	7.9	11.1	13.6				17.6	35	45	48
			HDL 2240 xx	0.181	3.1	4.3	5.3	6.1	7.5	8.7	9.7	13.7	16.8				21.7	35	45	48
HDL 2274 xx			0.224	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7	35	45	48				
HDL 2390 xx			0.244	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2	34	43	46				
HDL 2590 xx			0.295	7.5	10.6	13.0	15.1	18.4	21.3	23.8	33.7	41.2	53.2	35	43	44				
●			●	HDN 2274 xx	0.224	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7	46	54	59		
	HDN 2390 xx	0.244		5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2	44	52	54				
	HDN 2590 xx	0.295		7.5	10.6	13.0	15.1	18.4	21.3	23.8	33.7	41.2	53.2	45	52	55				
	HDN 2780 xx	0.327		10.0	14.1	17.2	19.9	24.4	28.2	31.5	44.5	54.5	70.4	46	52	55				
	HEN 3158 xx	0.464		20.2	28.5	34.9	40.3	49.4	57.0	63.8	90.2	110	143	46	52	55				
	HFN 3195 xx	0.516		24.9	35.2	43.1	49.8	61.0	70.4	78.7	111	136	176	49	51	54				
●	●	HFN 3230 xx	0.559	29.4	41.5	50.8	58.5	71.9	83.0	92.8	131	161	208	49	51	53				
		HDR 2195 xx	0.165	2.5	3.5	4.3	5.0	6.1	7.0	7.9	11.1	13.6	17.6	60	68	71				
		HDR 2240 xx	0.181	3.1	4.3	5.3	6.1	7.5	8.7	9.7	13.7	16.8	21.7	60	68	71				
		HDR 2274 xx	0.224	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7	60	68	71				
		HDR 2390 xx	0.244	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2	58	69	70				
		HDR 2590 xx	0.295	7.5	10.6	13.0	15.1	18.4	21.3	23.8	33.7	41.2	53.2	59	68	70				
●	●	HFR 2780 xx	0.327	10.0	14.1	17.2	19.9	24.4	28.2	31.5	44.5	54.5	70.4	60	67	69				
		HDT 2195 xx	0.165	2.5	3.5	4.3	5.0	6.1	7.0	7.9	11.1	13.6	17.6	74	83	85				
		HDT 2240 xx	0.181	3.1	4.3	5.3	6.1	7.5	8.7	9.7	13.7	16.8	21.7	75	83	85				
		HDT 2274 xx	0.224	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7	75	83	86				
		HDT 2390 xx	0.244	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2	75	83	86				
		HDT 2590 xx	0.295	7.5	10.6	13.0	15.1	18.4	21.3	23.8	33.7	41.2	53.2	73	84	86				
		HDT 2780 xx	0.327	10.0	14.1	17.2	19.9	24.4	28.2	31.5	44.5	54.5	70.4	74	82	85				
		HET 2780 xx	0.327	10.0	14.1	17.2	19.9	24.4	28.2	31.5	44.5	54.5	70.4	74	82	85				
●	●	HET 3158 xx	0.464	20.2	28.5	34.9	40.3	49.4	57.0	63.8	90.2	110	143	78	81	83				
		HDV 2195 xx	0.165	2.5	3.5	4.3	5.0	6.1	7.0	7.9	11.1	13.6	17.6	93	99	103				
		HDV 2240 xx	0.181	3.1	4.3	5.3	6.1	7.5	8.7	9.7	13.7	16.8	21.7	93	99	103				
		HDV 2274 xx	0.224	3.5	4.9	6.1	7.0	8.6	9.9	11.1	15.6	19.2	24.7	93	99	103				
●	●	HDV 2390 xx	0.244	5.0	7.0	8.6	10.0	12.2	14.1	15.7	22.3	27.3	35.2	93	99	102				
		HDV 2590 xx	0.295	7.5	10.6	13.0	15.1	18.4	21.3	23.8	33.7	41.2	53.2	93	99	102				

DIMENSIONS

	RG	L	L1	WS
HD	1/2"	1 19/64"	43/64"	7/8"
HE	3/4"	1 39/64"	51/64"	1 1/16"
HF	1"	2 13/32"	55/64"	1 1/16"

Some nozzles having 0° spray angle may have dimensions different from those shown.

Please contact us for further information.