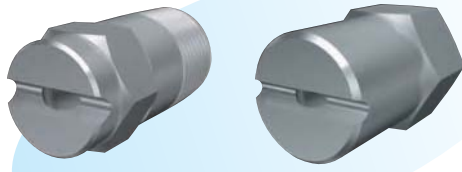


Flat Spray Nozzles Integral Type



► Features

- Simple structure for resistance to clogging with impurities.
- Large droplets.
- Flow distribution raised in the central part widthwise.

► Applications

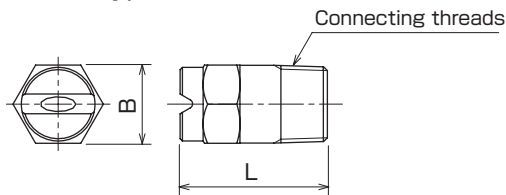
- Washing of vehicles, shipping containers, films, felts, filters, screens, bottles, soil, ballast, metals, machines, steel sheets, steel billets, wires, containers, etc.
- Spraying of etching solution, oil, lubricant, liquid glue, insect repellent, herbicide, aqueous solution, etc.

► Materials

- Stainless steel (standard material: SUS303) or brass
- Plastics (PTFE, PVC, or PP)

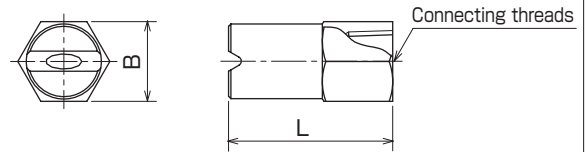
Shapes and dimensions

● KSH type



Model	Dimension (mm)		Connecting threads	Weight (g)
	B	L		
1/8 KSH	10	18	R 1/8	10
1/4 KSH	14	25	R 1/4	25
3/8 KSH	17	32	R 3/8	45
1/2 KSH	23	38	R 1/2	95
3/4 KSH	27	50	R 3/4	175
1 KSH	35	60	R 1	340
1 1/4 KSH	46	75	R 1 1/4	740
1 1/2 KSH	50	90	R 1 1/2	1050

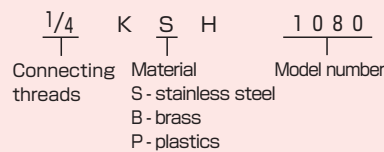
● KSH - H type



Model	Dimension (mm)		Connecting threads	Weight (g)
	B	L		
1/8 KSH····H	14	22	Rc 1/8	20
1/4 KSH····H	19	32	Rc 1/4	55
3/8 KSH····H	22	38	Rc 3/8	80
1/2 KSH····H	27	50	Rc 1/2	160
3/4 KSH····H	32	64	Rc 3/4	290
1 KSH····H	41	80	Rc 1	600

NPT thread is also available.

● Model and Model Number representing



● Standard type model number list (spray angle: 15° to 80°, connecting threads: 1/8 to 1/4) ● Model availability

Connecting threads	Model		Model number	Minimum orifice diameter (mm)	Flow rate (L/min) at following pressure (MPa)								Spray angle at following pressure (MPa)					
	R threads	Rc threads																
	KSH	KSH-H			0.05	0.1	0.2	0.3	0.5	0.7	1.0	1.5	0.1	0.2	0.3	0.5	1.0	1.5
1/8	●	●	00815	0.8	0.33	0.46	0.65	0.80	1.03	1.22	1.46	1.79	7°	12°	15°	18°	20°	20°
	●	●	00825	0.8	0.33	0.46	0.65	0.80	1.03	1.22	1.46	1.79	15°	21°	25°	29°	31°	31°
	●	●	00840	0.7	0.33	0.46	0.65	0.80	1.03	1.22	1.46	1.79	30°	36°	40°	44°	47°	47°
	●	●	00850	0.6	0.33	0.46	0.65	0.80	1.03	1.22	1.46	1.79	35°	45°	50°	55°	58°	58°
	●	●	00865	0.5	0.33	0.46	0.65	0.80	1.03	1.22	1.46	1.79	50°	60°	65°	70°	73°	73°
	●	●	00880	0.5	0.33	0.46	0.65	0.80	1.03	1.22	1.46	1.79	65°	75°	80°	85°	88°	88°
	●	●	0115	0.9	0.41	0.58	0.82	1.00	1.29	1.53	1.83	2.2	7°	12°	15°	18°	20°	20°
	●	●	0125	0.9	0.41	0.58	0.82	1.00	1.29	1.53	1.83	2.2	15°	21°	25°	29°	31°	31°
	●	●	0140	0.8	0.41	0.58	0.82	1.00	1.29	1.53	1.83	2.2	30°	36°	40°	44°	47°	47°
	●	●	0150	0.7	0.41	0.58	0.82	1.00	1.29	1.53	1.83	2.2	36°	45°	50°	55°	58°	58°
	●	●	0165	0.7	0.41	0.58	0.82	1.00	1.29	1.53	1.83	2.2	51°	60°	65°	70°	73°	73°
	●	●	0180	0.6	0.41	0.58	0.82	1.00	1.29	1.53	1.83	2.2	66°	75°	80°	85°	88°	88°
	●	●	01515	1.1	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	9°	13°	15°	18°	20°	20°
	●	●	01525	1.0	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	16°	21°	25°	29°	31°	31°
	●	●	01540	0.9	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	31°	36°	40°	44°	47°	47°
	●	●	01550	0.8	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	41°	46°	50°	54°	57°	57°
	●	●	01565	0.7	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	53°	60°	65°	71°	73°	73°
	●	●	01580	0.6	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	67°	75°	80°	85°	88°	88°
	●	●	0215	1.4	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	9°	13°	15°	18°	20°	20°
	●	●	0225	1.2	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	16°	21°	25°	29°	31°	31°
	●	●	0240	1.0	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	31°	36°	40°	44°	47°	47°
	●	●	0250	0.9	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	41°	46°	50°	54°	57°	57°
	●	●	0265	0.8	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	53°	60°	65°	71°	73°	73°
	●	●	0280	0.7	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	67°	75°	80°	85°	88°	88°
	●	●	0315	1.7	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	10°	13°	15°	17°	19°	19°
	●	●	0325	1.6	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	17°	22°	25°	28°	30°	30°
	●	●	0340	1.4	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	32°	37°	40°	43°	45°	45°
	●	●	0350	1.3	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	42°	47°	50°	53°	56°	56°
	●	●	0365	1.2	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	54°	61°	65°	69°	72°	72°
	●	●	0380	1.0	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	67°	75°	80°	85°	88°	88°
	●	●	0415	1.8	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	10°	13°	15°	17°	19°	19°
	●	●	0425	1.7	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	17°	22°	25°	28°	30°	30°
●	●	0440	1.6	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	32°	37°	40°	43°	45°	45°	
●	●	0450	1.5	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	42°	47°	50°	53°	56°	56°	
●	●	0465	1.3	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	54°	61°	65°	69°	72°	72°	
●	●	0480	1.1	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	67°	75°	80°	85°	88°	88°	
●	●	0615	2.2	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	10°	13°	15°	17°	19°	19°	
●	●	0625	2.1	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	17°	22°	25°	28°	30°	30°	
●	●	0640	2.0	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	32°	37°	40°	43°	45°	45°	
●	●	0650	1.9	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	42°	47°	50°	53°	55°	55°	
●	●	0665	1.8	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	54°	61°	65°	69°	72°	72°	
●	●	0680	1.5	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	67°	75°	80°	84°	87°	87°	
●	●	0815	2.6	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	10°	13°	15°	17°	19°	19°	
●	●	0825	2.5	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	17°	22°	25°	28°	30°	30°	
●	●	0840	2.3	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	32°	37°	40°	43°	45°	45°	
●	●	0850	2.2	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	42°	47°	50°	53°	55°	55°	
●	●	0865	2.0	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	56°	62°	65°	68°	71°	71°	
●	●	0880	1.7	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	68°	76°	80°	84°	86°	86°	
●	●	1015	3.1	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	10°	13°	15°	17°	19°	19°	
●	●	1025	2.8	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	18°	22°	25°	28°	30°	30°	
●	●	1040	2.6	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	32°	37°	40°	43°	45°	45°	
●	●	1050	2.5	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	42°	47°	50°	53°	55°	55°	
●	●	1065	2.3	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	56°	62°	65°	68°	70°	70°	
●	●	1080	2.0	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	70°	77°	80°	83°	85°	85°	
●	●	1515	3.6	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	10°	13°	15°	17°	19°	19°	
●	●	1525	3.5	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	18°	22°	25°	28°	30°	30°	
●	●	1540	3.4	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	32°	37°	40°	43°	45°	45°	
●	●	1550	3.3	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	42°	47°	50°	53°	55°	55°	
●	●	1565	3.0	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	56°	62°	65°	68°	70°	70°	
●	●	1580	2.5	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	70°	77°	80°	83°	85°	85°	

● Standard type model number list (spray angle: 15° to 80°, connecting threads: 1/4 to 1 1/2) ● Model availability

Connecting threads	Model		Model number	Minimum orifice diameter (mm)	Flow rate (L/min) at following pressure (MPa)								Spray angle at following pressure (MPa)					
	R threads	Rc threads			0.05	0.1	0.2	0.3	0.5	0.7	1.0	1.5	0.1	0.2	0.3	0.5	1.0	1.5
	KSH	KSH··H																
1/4	●	●	2015	4.2	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	10°	13°	15°	17°	19°	19°
	●	●	2025	4.1	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	18°	22°	25°	28°	30°	30°
	●	●	2040	3.8	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	32°	37°	40°	43°	45°	45°
	●	●	2050	3.7	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	42°	47°	50°	53°	55°	55°
	●	●	2065	3.4	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	57°	62°	65°	68°	70°	70°
	●	●	2080	3.0	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	71°	77°	80°	83°	85°	85°
	●	●	2515	4.8	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	10°	13°	15°	17°	19°	19°
	●	●	2525	4.6	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	18°	22°	25°	28°	30°	30°
	●	●	2540	4.4	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	32°	37°	40°	43°	45°	45°
	●	●	2550	4.1	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	42°	47°	50°	53°	55°	55°
	●	●	2565	3.8	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	57°	62°	65°	68°	70°	70°
	●	●	2580	3.5	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	72°	77°	80°	83°	85°	85°
	●	●	3015	5.0	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	10°	13°	15°	17°	19°	19°
	●	●	3025	4.8	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	18°	22°	25°	28°	30°	30°
	●	●	3040	4.6	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	32°	37°	40°	43°	45°	45°
	●	●	3050	4.4	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	42°	47°	50°	53°	55°	55°
●	●	3065	4.2	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	57°	62°	65°	68°	70°	70°	
●	●	3080	4.0	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	72°	77°	80°	83°	85°	85°	
3/8	●	●	3515	5.4	14.3	20.2	28.6	35.0	45.2	53.5	63.9	78.3	10°	13°	15°	17°	19°	19°
	●	●	3525	5.2	14.3	20.2	28.6	35.0	45.2	53.5	63.9	78.3	18°	22°	25°	28°	30°	30°
	●	●	3540	5.0	14.3	20.2	28.6	35.0	45.2	53.5	63.9	78.3	32°	37°	40°	43°	45°	45°
	●	●	3550	4.8	14.3	20.2	28.6	35.0	45.2	53.5	63.9	78.3	42°	47°	50°	53°	55°	55°
	●	●	3565	4.6	14.3	20.2	28.6	35.0	45.2	53.5	63.9	78.3	57°	62°	65°	68°	70°	70°
	●	●	3580	4.4	14.3	20.2	28.6	35.0	45.2	53.5	63.9	78.3	72°	77°	80°	83°	85°	85°
	●	●	4015	6.0	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	10°	13°	15°	17°	19°	19°
	●	●	4025	5.7	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	18°	22°	25°	28°	30°	30°
	●	●	4040	5.5	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	32°	37°	40°	43°	45°	45°
	●	●	4050	5.2	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	42°	47°	50°	53°	55°	55°
	●	●	4065	5.0	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	57°	62°	65°	68°	70°	70°
	●	●	4080	4.8	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	72°	77°	80°	83°	85°	85°
1/2	●	●	5050	5.5	20.4	28.9	40.8	50.0	64.5	76.4	91.3	112	42°	47°	50°	53°	55°	55°
	●	●	5065	5.3	20.4	28.9	40.8	50.0	64.5	76.4	91.3	112	57°	62°	65°	68°	70°	70°
	●	●	5080	5.1	20.4	28.9	40.8	50.0	64.5	76.4	91.3	112	72°	77°	80°	83°	85°	85°
	●	●	6050	6.3	24.5	34.6	49.0	60.0	77.5	91.7	110	134	42°	47°	50°	53°	54°	54°
	●	●	6065	6.0	24.5	34.6	49.0	60.0	77.5	91.7	110	134	57°	62°	65°	68°	70°	70°
	●	●	6080	5.5	24.5	34.6	49.0	60.0	77.5	91.7	110	134	72°	77°	80°	83°	84°	84°
	●	●	7050	6.8	28.6	40.4	57.2	70.0	90.4	107	128	157	42°	47°	50°	53°	54°	54°
	●	●	7065	6.5	28.6	40.4	57.2	70.0	90.4	107	128	157	57°	62°	65°	68°	70°	70°
	●	●	7080	6.1	28.6	40.4	57.2	70.0	90.4	107	128	157	72°	77°	80°	83°	84°	84°
	●	●	8050	7.5	32.7	46.2	65.3	80.0	103	122	146	179	42°	47°	50°	53°	54°	54°
3/4	●	●	8065	7.1	32.7	46.2	65.3	80.0	103	122	146	179	57°	62°	65°	68°	70°	70°
	●	●	8080	6.7	32.7	46.2	65.3	80.0	103	122	146	179	72°	77°	80°	83°	84°	84°
	●	●	9050	8.0	36.7	52.0	73.5	90.0	116	137	164	201	42°	47°	50°	53°	54°	54°
	●	●	9065	7.6	36.7	52.0	73.5	90.0	116	137	164	201	57°	62°	65°	68°	70°	70°
	●	●	9080	7.1	36.7	52.0	73.5	90.0	116	137	164	201	72°	77°	80°	83°	84°	84°
	●	●	10050	8.5	40.8	57.7	81.6	100	129	153	183	224	42°	47°	50°	53°	54°	54°
	●	●	10065	8.0	40.8	57.7	81.6	100	129	153	183	224	57°	62°	65°	68°	70°	70°
	●	●	10080	7.5	40.8	57.7	81.6	100	129	153	183	224	72°	77°	80°	83°	84°	84°
	●	●	15050	10.4	61.2	86.6	122	150	194	229	274	335	43°	47°	50°	53°	54°	54°
●	●	15080	9.7	61.2	86.6	122	150	194	229	274	335	73°	77°	80°	83°	84°	84°	
1	●	●	20050	12.6	81.6	115	163	200	258	306	365	447	43°	48°	50°	52°	53°	53°
	●	●	20080	11.0	81.6	115	163	200	258	306	365	447	73°	77°	80°	82°	83°	83°
1 1/4	●		25050	13.2	102	144	204	250	323	382	456	559	43°	48°	50°	52°	53°	53°
	●		25080	11.7	102	144	204	250	323	382	456	559	73°	77°	80°	82°	83°	83°
	●		30050	14.1	122	173	245	300	387	458	548	671	45°	48°	50°	51°	52°	52°
	●		30080	12.5	122	173	245	300	387	458	548	671	75°	78°	80°	81°	82°	82°
1 1/2	●		35050	14.7	143	202	286	350	452	535	639	783	45°	48°	50°	51°	52°	52°
	●		35080	13.5	143	202	286	350	452	535	639	783	75°	78°	80°	81°	82°	82°
	●		40050	15.3	163	231	327	400	516	611	730	894	45°	48°	50°	51°	52°	52°
●		40080	14.5	163	231	327	400	516	611	730	894	75°	78°	80°	81°	82°	82°	

● Standard type model number list (spray angle: 95° to 110°)

●: Model availability

Connecting threads	Model		Model number	Minimum orifice diameter (mm)	Flow rate (L/min) at following pressure (MPa)								Spray angle at following pressure (MPa)							
	R threads	Rc threads			0.05		0.1		0.2		0.3		0.5		0.7		1.0		1.5	
	KSH	KSH...H			0.05	0.1	0.2	0.3	0.5	0.7	1.0	1.5	0.1	0.2	0.3	0.5	1.0	1.5		
1/8	●	●	01595	0.5	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	80°	89°	95°	100°	103°	103°		
	●	●	015110	0.4	0.61	0.87	1.22	1.50	1.94	2.3	2.7	3.4	95°	105°	110°	115°	118°	118°		
	●	●	0295	0.7	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	80°	89°	95°	100°	103°	103°		
	●	●	02110	0.6	0.82	1.15	1.63	2.0	2.6	3.1	3.7	4.5	95°	105°	110°	115°	118°	118°		
1/4	●	●	0395	0.9	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	80°	89°	95°	100°	103°	103°		
	●	●	03110	0.8	1.22	1.73	2.4	3.0	3.9	4.6	5.5	6.7	95°	105°	110°	115°	118°	118°		
	●	●	0495	1.1	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	80°	89°	95°	100°	103°	103°		
	●	●	04110	1.0	1.63	2.3	3.3	4.0	5.2	6.1	7.3	8.9	95°	105°	110°	115°	118°	118°		
	●	●	0695	1.2	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	81°	90°	95°	100°	102°	102°		
	●	●	06110	1.1	2.4	3.5	4.9	6.0	7.7	9.2	11.0	13.4	96°	105°	110°	115°	117°	117°		
	●	●	0895	1.5	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	81°	90°	95°	100°	102°	102°		
	●	●	08110	1.4	3.3	4.6	6.5	8.0	10.3	12.2	14.6	17.9	96°	105°	110°	115°	117°	117°		
	●	●	1095	2.0	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	82°	90°	95°	99°	101°	101°		
	●	●	10110	1.8	4.1	5.8	8.2	10.0	12.9	15.3	18.3	22.4	97°	105°	110°	114°	116°	116°		
	●	●	1595	2.2	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	82°	90°	95°	99°	101°	101°		
	●	●	15110	2.0	6.1	8.7	12.2	15.0	19.4	22.9	27.4	33.5	97°	105°	110°	114°	116°	116°		
●	●	2095	2.6	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	82°	90°	95°	99°	101°	101°			
●	●	20110	2.4	8.2	11.5	16.3	20.0	25.8	30.6	36.5	44.7	97°	105°	110°	114°	116°	116°			
3/8	●	●	2595	3.0	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	83°	91°	95°	99°	101°	101°		
	●	●	25110	2.7	10.2	14.4	20.4	25.0	32.3	38.2	45.6	55.9	98°	106°	110°	114°	116°	116°		
1/2	●	●	3095	3.5	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	83°	91°	95°	99°	101°	101°		
	●	●	30110	3.0	12.2	17.3	24.5	30.0	38.7	45.8	54.8	67.1	98°	106°	110°	114°	116°	116°		
	●	●	4095	4.0	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	83°	91°	95°	99°	101°	101°		
	●	●	40110	3.6	16.3	23.1	32.7	40.0	51.6	61.1	73.0	89.4	98°	106°	110°	114°	116°	116°		
	●	●	5095	4.5	20.4	28.9	40.8	50.0	64.5	76.4	91.3	112	84°	92°	95°	98°	101°	101°		
	●	●	50110	4.0	20.4	28.9	40.8	50.0	64.5	76.4	91.3	112	99°	107°	110°	113°	116°	116°		
	●	●	6095	5.1	24.5	34.6	49.0	60.0	77.5	91.7	110	134	84°	92°	95°	98°	100°	100°		
	●	●	60110	4.5	24.5	34.6	49.0	60.0	77.5	91.7	110	134	99°	107°	110°	113°	115°	115°		
3/4	●	●	7595	5.8	30.6	43.3	61.2	75.0	96.8	115	137	168	86°	92°	95°	98°	100°	100°		
	●	●	75110	4.9	30.6	43.3	61.2	75.0	96.8	115	137	168	100°	107°	110°	113°	115°	115°		
	●	●	10095	6.8	40.8	57.7	81.6	100	129	153	183	224	87°	92°	95°	97°	99°	99°		
	●	●	100110	5.9	40.8	57.7	81.6	100	129	153	183	224	100°	107°	110°	112°	114°	114°		
1	●	●	15095	8.5	61.2	86.6	122	150	194	229	274	335	87°	92°	95°	97°	99°	99°		
	●	●	150110	7.3	61.2	86.6	122	150	194	229	274	335	100°	107°	110°	112°	114°	114°		
	●	●	20095	10.8	81.6	115	163	200	258	306	365	447	88°	92°	95°	97°	98°	98°		
	●	●	200110	10.1	81.6	115	163	200	258	306	365	447	103°	107°	110°	112°	113°	113°		
1 1/4	●	●	30095	11.8	122	173	245	300	387	458	548	671	90°	93°	95°	96°	97°	97°		
	●	●	300110	11.4	122	173	245	300	387	458	548	671	105°	108°	110°	111°	112°	112°		
1 1/2	●	●	40095	14.6	163	231	327	400	516	611	730	894	90°	93°	95°	96°	97°	97°		
	●	●	400110	14.1	163	231	327	400	516	611	730	894	105°	108°	110°	111°	112°	112°		

● Performance data

