

● Standard type model number list (connecting threads: 1/8 to 1)

●: 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	0.1	0.3	0.5	0.7
	KSF	KSFHS	KSFS	KSFG	KSFH	KSFI													
1/8	●	●	●	●	●	●	00865	0.5		0.50	0.67	0.80	1.00	1.15	1.34	55°	65°	57°	43°
	●	●	●	●	●	●	00890	0.5		0.50	0.67	0.80	1.00	1.15	1.34	80°	90°	74°	56°
	●	●	●	●	●	●	0165	0.6		0.62	0.84	1.00	1.25	1.44	1.68	55°	65°	57°	43°
	●	●	●	●	●	●	0190	0.6		0.62	0.84	1.00	1.25	1.44	1.68	80°	90°	74°	56°
	●	●	●	●	●	●	01565	0.7		0.94	1.26	1.50	1.87	2.2	2.5	55°	65°	57°	43°
	●	●	●	●	●	●	01590	0.7		0.94	1.26	1.50	1.87	2.2	2.5	80°	90°	74°	56°
	●	●	●	●	●	●	0265	0.8		1.25	1.68	2.0	2.5	2.9	3.4	55°	65°	57°	43°
	●	●	●	●	●	●	0290	0.8		1.25	1.68	2.0	2.5	2.9	3.4	80°	90°	74°	56°
	●	●	●	●	●	●	0365	1.0		1.87	2.5	3.0	3.7	4.3	5.0	58°	65°	58°	45°
	●	●	●	●	●	●	0390	1.0		1.87	2.5	3.0	3.7	4.3	5.0	82°	90°	74°	56°
1/4	●	●	●	●	●	●	0465	1.2	1.85	2.5	3.4	4.0	5.0	5.8	6.7	58°	65°	58°	45°
	●	●	●	●	●	●	0490	1.2	1.85	2.5	3.4	4.0	5.0	5.8	6.7	82°	90°	74°	56°
	●	●	●	●	●	●	04120W	1.2	1.85	2.5	3.4	4.0	5.0	5.8	6.7	115°	120°	105°	90°
	●	●	●	●	●	●	0665	1.4	2.8	3.7	5.0	6.0	7.5	8.6	10.1	58°	65°	58°	45°
	●	●	●	●	●	●	0690	1.4	2.8	3.7	5.0	6.0	7.5	8.6	10.1	82°	90°	76°	60°
	●	●	●	●	●	●	06120W	1.4	2.8	3.7	5.0	6.0	7.5	8.6	10.1	115°	120°	105°	90°
	●	●	●	●	●	●	0865	1.6	3.7	5.0	6.7	8.0	10.0	11.5	13.4	58°	65°	58°	45°
	●	●	●	●	●	●	0890	1.6	3.7	5.0	6.7	8.0	10.0	11.5	13.4	82°	90°	76°	60°
	●	●	●	●	●	●	08120W	1.6	3.7	5.0	6.7	8.0	10.0	11.5	13.4	117°	120°	107°	92°
3/8	●	●	●	●	●	●	1065	1.9	4.6	6.2	8.4	10.0	12.5	14.4	16.8	60°	65°	60°	48°
	●	●	●	●	●	●	1090	1.9	4.6	6.2	8.4	10.0	12.5	14.4	16.8	84°	90°	76°	60°
	●	●	●	●	●	●	10120W	1.9	4.6	6.2	8.4	10.0	12.5	14.4	16.8	117°	120°	107°	92°
	●	●	●	●	●	●	1565	2.2	6.9	9.4	12.6	15.0	18.7	21.6	25.2	60°	65°	60°	48°
	●	●	●	●	●	●	1590	2.2	6.9	9.4	12.6	15.0	18.7	21.6	25.2	84°	90°	76°	60°
	●	●	●	●	●	●	15120W	2.2	6.9	9.4	12.6	15.0	18.7	21.6	25.2	117°	120°	107°	92°
1/2	●	●	●	●	●	●	2065	2.5	9.3	12.5	16.8	20.0	24.9	28.8	33.6	60°	65°	60°	48°
	●	●	●	●	●	●	2090	2.5	9.3	12.5	16.8	20.0	24.9	28.8	33.6	84°	90°	76°	60°
	●	●	●	●	●	●	20120W	2.5	9.3	12.5	16.8	20.0	24.9	28.8	33.6	117°	120°	107°	92°
	●	●	●	●	●	●	2565	2.8	11.6	15.6	21.0	25.0	31.2	36.0	42.0	60°	65°	60°	48°
	●	●	●	●	●	●	2590	2.8	11.6	15.6	21.0	25.0	31.2	36.0	42.0	84°	90°	76°	60°
	●	●	●	●	●	●	25120W	2.8	11.6	15.6	21.0	25.0	31.2	36.0	42.0	119°	120°	109°	94°
3/4	●	●	●	●	●	●	3065	3.1	13.9	18.7	25.2	30.0	37.4	43.2	50.4	62°	65°	60°	48°
	●	●	●	●	●	●	3090	3.1	13.9	18.7	25.2	30.0	37.4	43.2	50.4	86°	90°	76°	60°
	●	●	●	●	●	●	30120W	3.1	13.9	18.7	25.2	30.0	37.4	43.2	50.4	119°	120°	109°	94°
	●	●	●	●	●	●	3565	3.4	16.2	21.8	29.4	35.0	43.6	50.4	58.8	62°	65°	60°	48°
	●	●	●	●	●	●	3590	3.4	16.2	21.8	29.4	35.0	43.6	50.4	58.8	86°	90°	76°	60°
	●	●	●	●	●	●	35120W	3.4	16.2	21.8	29.4	35.0	43.6	50.4	58.8	119°	120°	109°	94°
	●	●	●	●	●	●	4070	3.7	18.5	25.0	33.6	40.0	49.9	57.6	67.2	68°	70°	65°	53°
	●	●	●	●	●	●	4090	3.7	18.5	25.0	33.6	40.0	49.9	57.6	67.2	86°	90°	78°	65°
	●	●	●	●	●	●	40120W	3.7	18.5	25.0	33.6	40.0	49.9	57.6	67.2	121°	120°	111°	96°
	●	●	●	●	●	●	4570	4.0	20.8	28.1	37.8	45.0	56.1	64.8	75.6	68°	70°	65°	53°
	●	●	●	●	●	●	4590	4.0	20.8	28.1	37.8	45.0	56.1	64.8	75.6	88°	90°	78°	65°
	●	●	●	●	●	●	45120W	4.0	20.8	28.1	37.8	45.0	56.1	64.8	75.6	121°	120°	111°	96°
	●	●	●	●	●	●	5070	4.3	23.2	31.2	42.0	50.0	62.3	72.0	84.0	68°	70°	65°	53°
	●	●	●	●	●	●	5090	4.3	23.2	31.2	42.0	50.0	62.3	72.0	84.0	88°	90°	78°	65°
●	●	●	●	●	●	50120W	4.3	23.2	31.2	42.0	50.0	62.3	72.0	84.0	121°	120°	111°	96°	
1	●	●	●	●	●	●	6070	4.6	27.8	37.4	50.4	60.0	74.8	86.4	101	68°	70°	65°	53°
	●	●	●	●	●	●	6090	4.6	27.8	37.4	50.4	60.0	74.8	86.4	101	88°	90°	78°	65°
	●	●	●	●	●	●	60120W	4.6	27.8	37.4	50.4	60.0	74.8	86.4	101	123°	120°	113°	98°
	●	●	●	●	●	●	7070	4.9	32.4	43.7	58.8	70.0	87.3	101	118	70°	70°	65°	55°
	●	●	●	●	●	●	7090	4.9	32.4	43.7	58.8	70.0	87.3	101	118	90°	90°	78°	65°
	●	●	●	●	●	●	70120W	4.9	32.4	43.7	58.8	70.0	87.3	101	118	123°	120°	113°	98°
	●	●	●	●	●	●	8070	5.2	37.1	49.9	67.3	80.0	99.7	115	134	70°	70°	65°	55°
	●	●	●	●	●	●	8090	5.2	37.1	49.9	67.3	80.0	99.7	115	134	90°	90°	78°	65°
	●	●	●	●	●	●	80120W	5.2	37.1	49.9	67.3	80.0	99.7	115	134	123°	120°	113°	98°
					●	●	9070	5.6	41.7	56.2	75.7	90.0	112	130	151	70°	70°	65°	55°
					●	●	9090	5.6	41.7	56.2	75.7	90.0	112	130	151	90°	90°	78°	65°
				●	●	90120W	5.6	41.7	56.2	75.7	90.0	112	130	151	125°	120°	109°	98°	

● Standard type model number list (connecting threads: 1 1/4 to 2 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	Flange			0.05	0.1	0.2	0.3	0.5	0.7	1.0	0.05	0.1	0.3	0.5
	KSFS	KSFI	KSF...F													
1 1/4	●			9070	5.6	41.7	56.2	75.7	90.0	112	130	151	65°	70°	70°	65°
	●			9090	5.6	41.7	56.2	75.7	90.0	112	130	151	80°	92°	90°	80°
	●			90120W	5.6	41.7	56.2	75.7	90.0	112	130	151	112°	125°	120°	109°
	●	●		10070	5.9	46.3	62.4	84.1	100	125	144	168	65°	70°	70°	65°
	●	●		10090	5.9	46.3	62.4	84.1	100	125	144	168	80°	92°	90°	80°
	●	●		100120W	5.9	46.3	62.4	84.1	100	125	144	168	112°	125°	120°	109°
	●	●		12570	6.6	57.9	78.0	105	125	156	180	210	67°	72°	70°	67°
	●	●		12590	6.6	57.9	78.0	105	125	156	180	210	82°	94°	90°	81°
	●	●		125120W	6.6	57.9	78.0	105	125	156	180	210	115°	128°	120°	110°
1 1/2	●	●		15070	7.2	69.5	93.6	126	150	187	216	252	67°	72°	70°	67°
	●	●		15090	7.2	69.5	93.6	126	150	187	216	252	82°	94°	90°	81°
	●	●		150120W	7.2	69.5	93.6	126	150	187	216	252	115°	128°	120°	110°
		●		17570	7.8	81.1	109	147	175	218	252	294	67°	72°	70°	67°
		●		17590	7.8	81.1	109	147	175	218	252	294	84°	96°	90°	82°
		●		175120W	7.8	81.1	109	147	175	218	252	294	118°	131°	120°	111°
		●		20070	8.4	92.6	125	168	200	249	288	336	67°	72°	70°	67°
		●		20090	8.4	92.6	125	168	200	249	288	336	84°	96°	90°	82°
		●		200120W	8.4	92.6	125	168	200	249	288	336	118°	131°	120°	111°
		●		22570	8.9	104	140	189	225	280	324	378	67°	72°	70°	67°
		●		22590	8.9	104	140	189	225	280	324	378	84°	96°	90°	82°
		●		225120W	8.9	104	140	189	225	280	324	378	118°	131°	120°	111°
		●		25070	9.4	116	156	210	250	312	360	420	67°	72°	70°	67°
		●		25090	9.4	116	156	210	250	312	360	420	84°	96°	90°	82°
		●		250120W	9.4	116	156	210	250	312	360	420	118°	131°	120°	111°
		●		27570	9.9	127	172	231	275	343	396	462	67°	72°	70°	67°
		●		27590	9.9	127	172	231	275	343	396	462	84°	96°	90°	82°
		●		275120W	9.9	127	172	231	275	343	396	462	118°	131°	120°	111°
2		●	●	30070	10.3	139	187	252	300	374	432	504	67°	74°	70°	67°
		●	●	30090	10.3	139	187	252	300	374	432	504	86°	98°	90°	83°
		●	●	300120W	10.3	139	187	252	300	374	432	504	121°	134°	120°	112°
		●	●	32570	10.7	151	203	273	325	405	468	546	67°	74°	70°	67°
		●	●	32590	10.7	151	203	273	325	405	468	546	86°	98°	90°	83°
		●	●	325120W	10.7	151	203	273	325	405	468	546	121°	134°	120°	112°
		●	●	35070	11.1	162	218	294	350	436	504	588	67°	74°	70°	67°
		●	●	35090	11.1	162	218	294	350	436	504	588	86°	98°	90°	83°
		●	●	350120W	11.1	162	218	294	350	436	504	588	121°	134°	120°	112°
		●	●	40070	11.9	185	250	336	400	499	576	672	67°	74°	70°	67°
		●	●	40090	11.9	185	250	336	400	499	576	672	86°	98°	90°	83°
		●	●	400120W	11.9	185	250	336	400	499	576	672	121°	134°	120°	112°
		●	●	45070	12.6	208	281	378	450	561	648	756	67°	74°	70°	67°
		●	●	45090	12.6	208	281	378	450	561	648	756	86°	98°	90°	83°
		●	●	450120W	12.6	208	281	378	450	561	648	756	121°	134°	120°	112°
		●	●	50070	13.3	232	312	420	500	623	720	840	67°	76°	70°	67°
		●	●	50090	13.3	232	312	420	500	623	720	840	88°	100°	90°	84°
		●	●	500120W	13.3	232	312	420	500	623	720	840	123°	136°	120°	113°
2 1/2		●	●	60070	14.5	278	374	504	600	748	864	1008	67°	76°	70°	67°
		●	●	60090	14.5	278	374	504	600	748	864	1008	88°	100°	90°	84°
		●	●	600120W	14.5	278	374	504	600	748	864	1008	123°	136°	120°	113°
		●	●	70070	15.7	324	437	588	700	873	1008	1176	67°	76°	70°	67°
		●	●	70090	15.7	324	437	588	700	873	1008	1176	88°	100°	90°	84°
		●	●	700120W	15.7	324	437	588	700	873	1008	1176	123°	136°	120°	113°
		●	●	80070	16.8	371	499	673	800	997	1153	1344	67°	76°	70°	67°
		●	●	80090	16.8	371	499	673	800	997	1153	1344	88°	100°	90°	84°
		●	●	800120W	16.8	371	499	673	800	997	1153	1344	123°	136°	120°	113°

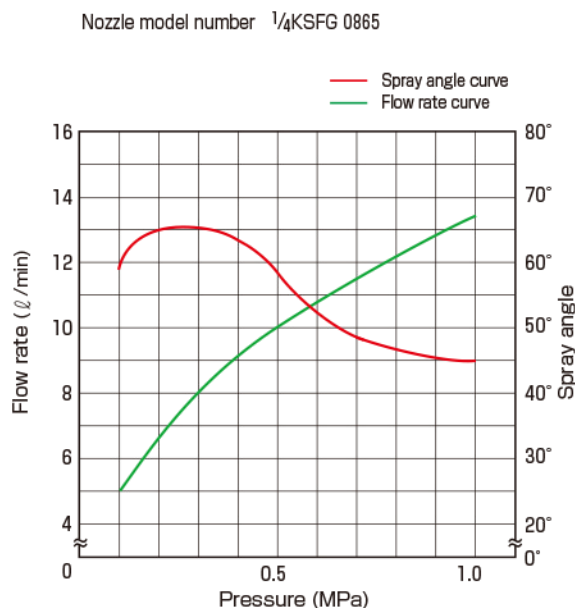
● Standard type model number list (connecting threads: 3 to 8)

●: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)			
	Rc threads	Flange			0.03	0.05	0.07	0.1	0.15	0.2	0.3	0.03	0.07	0.15	0.3
	KSFI	KSF...F													
3	●	●	90090	17	335	417	482	562	669	757	900	73°	90°	95°	92°
	●	●	900120W	17	335	417	482	562	669	757	900	108°	120°	127°	114°
	●	●	100090	18	372	463	535	624	743	841	1000	73°	90°	94°	90°
	●	●	1000120W	18	372	463	535	624	743	841	1000	110°	120°	124°	112°
4	●	●	125090	20	465	579	669	780	929	1051	1250	67°	90°	94°	90°
	●	●	1250120W	20	465	579	669	780	929	1051	1250	110°	120°	124°	112°
	●	●	150090	22	558	695	803	936	1114	1261	1500	73°	90°	93°	88°
	●	●	1500120W	22	558	695	803	936	1114	1261	1500	112°	120°	121°	110°
5	●	●	175090	24	651	811	937	1092	1300	1471	1750	73°	90°	93°	88°
	●	●	1750120W	24	651	811	937	1092	1300	1471	1750	112°	120°	121°	110°
	●	●	200090	26	744	926	1071	1248	1486	1681	2000	79°	90°	92°	86°
	●	●	2000120W	26	744	926	1071	1248	1486	1681	2000	115°	120°	118°	107°
	●	●	250090	29	930	1158	1338	1560	1857	2102	2500	79°	90°	92°	86°
	●	●	2500120W	29	930	1158	1338	1560	1857	2102	2500	115°	120°	118°	107°
6	●	●	300090	32	1115	1390	1606	1872	2229	2522	3000	85°	90°	90°	85°
	●	●	3000120W	32	1115	1390	1606	1872	2229	2522	3000	117°	120°	115°	105°
	●	●	350090	34	1301	1621	1873	2184	2600	2942	3500	85°	90°	90°	85°
	●	●	3500120W	34	1301	1621	1873	2184	2600	2942	3500	117°	120°	115°	105°
	●	●	400090	37	1487	1853	2141	2496	2971	3363	4000	89°	90°	88°	83°
	●	●	4000120W	37	1487	1853	2141	2496	2971	3363	4000	119°	120°	113°	103°
8	●	●	450090	39	1673	2084	2409	2808	3343	3783	4500	89°	90°	88°	83°
	●	●	4500120W	39	1673	2084	2409	2808	3343	3783	4500	119°	120°	113°	103°
	●	●	500090	41	1859	2316	2676	3120	3714	4203	5000	90°	90°	85°	82°
	●	●	5000120W	41	1859	2316	2676	3120	3714	4203	5000	120°	120°	111°	101°
	●	●	600090	45	2231	2779	3212	3744	4457	5044	6000	90°	90°	85°	82°
	●	●	6000120W	45	2231	2779	3212	3744	4457	5044	6000	120°	120°	111°	101°

● Performance data

Characteristic curves



Flow distribution

