



# Heat Pipes

ATS' high performance **Round and Flat Heat Pipes** are used to transfer heat with minimal temperature difference or spread the heat across a surface. ATS' heat pipes are low profile and easily attach to a heat sink.

## FEATURES & BENEFITS

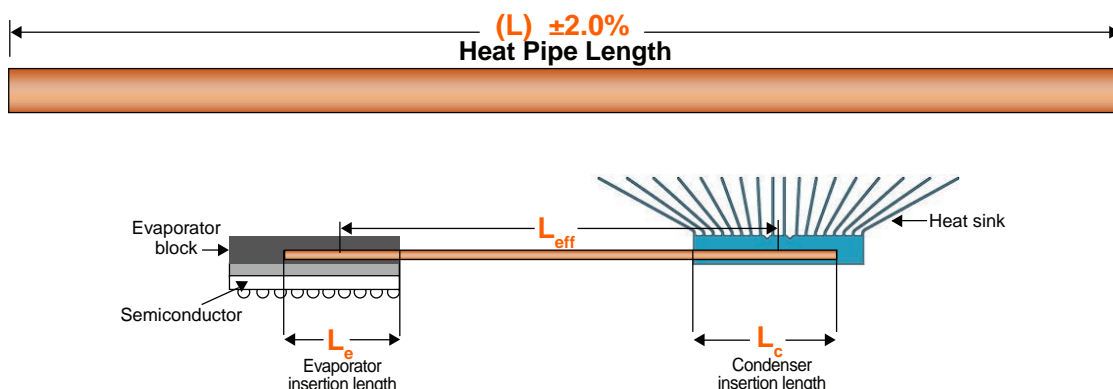
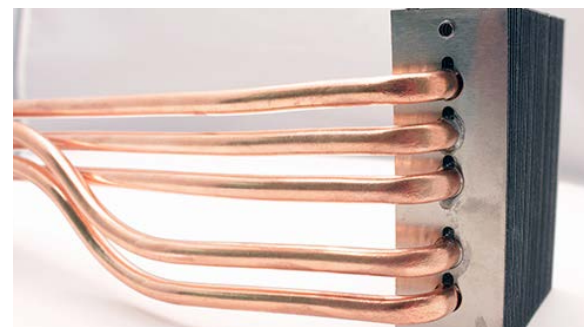
- » Tube material: copper
- » Wick structures: grooved or sintered copper powder
- » High thermal conductivity
- » Light weight
- » Fast thermal response

## ROUND HEAT PIPES



$$Q_{max} = \frac{Q_t}{L_{eff}} \times 1000$$

$$L_{eff} = L - (L_e + L_c) / 2$$

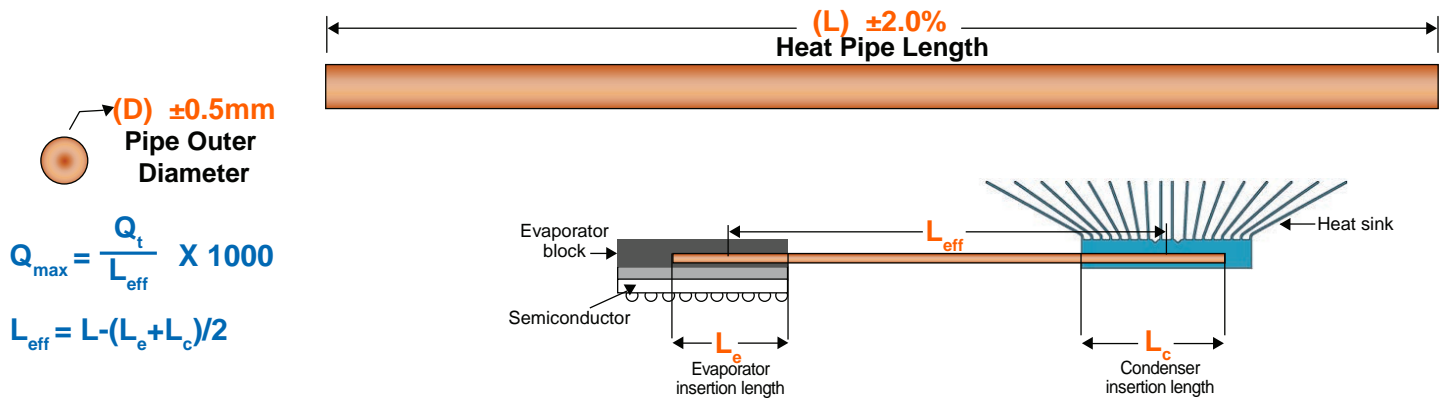


## PRODUCT SPECIFICATIONS

L=Length (mm); D=Diameter (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR=Temperature Range (°C)

Part Number	L	D	WT	WF	TR	QT (W·m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-D4L200G30W-001	200	4.0	G	Distilled H <sub>2</sub> O	30-120	4.1	100	41	125	32	150	27.0
ATS-HP-D4L300G20W-002	300	4.0	G	Distilled H <sub>2</sub> O	30-120	4.1	150	27	200	20	250	16.0
ATS-HP-D5L200G40W-003	200	5.0	G	Distilled H <sub>2</sub> O	30-120	4.7	100	47	125	38	150	32.0
ATS-HP-D5L300G25W-004	300	5.0	G	Distilled H <sub>2</sub> O	30-120	4.5	150	30	200	23	250	18.0
ATS-HP-D6L200G45W-005	200	6.0	G	Distilled H <sub>2</sub> O	30-120	6.4	100	64	125	51	150	42.0
ATS-HP-D6L300G30W-006	300	6.0	G	Distilled H <sub>2</sub> O	30-120	7.9	150	53	200	39	250	32.0
ATS-HP-D5L200S40W-007	200	5.0	S	Distilled H <sub>2</sub> O	30-120	4.1	100	41	125	32	150	27.0
ATS-HP-D5L300S25W-008	300	5.0	S	Distilled H <sub>2</sub> O	30-120	5.6	150	38	200	28	250	23.0
ATS-HP-D6L200S45W-009	200	6.0	S	Distilled H <sub>2</sub> O	30-120	2.0	100	20	125	16	150	14.0
ATS-HP-D6L300S30W-010	300	6.0	S	Distilled H <sub>2</sub> O	30-120	3.2	150	21	200	16	250	13.0
ATS-HP-D8L300S55W-011	300	8.0	S	Distilled H <sub>2</sub> O	30-120	7.2	150	48	200	36	250	29.0

## Round Heat Pipes

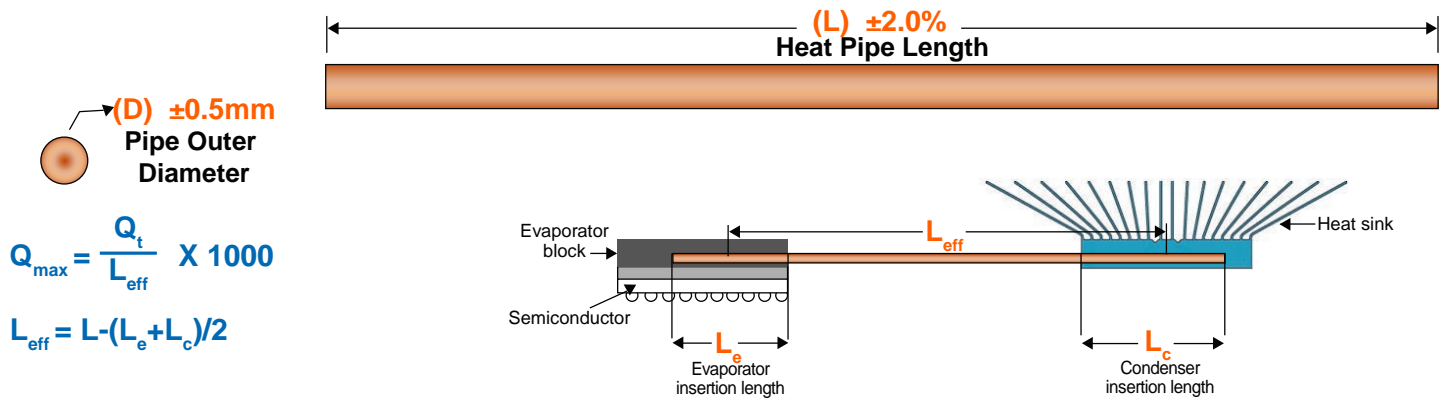


### PRODUCT SPECIFICATIONS

L=Length (mm); D=Diameter (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR=Temperature Range (°C)

Part Number	L	D	WT	WF	TR	QT (W•m)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)
ATS-HP-D3L70S26W-111	70	3	S	Distilled H <sub>2</sub> O	30-120	0.93	35	27	28	33	42	22
ATS-HP-D3L100S18W-112	100	3	S	Distilled H <sub>2</sub> O	30-120	0.94	50	19	40	23	60	16
ATS-HP-D3L150S12W-113	150	3	S	Distilled H <sub>2</sub> O	30-120	0.93	75	12	60	16	90	10
ATS-HP-D3L200S9W-114	200	3	S	Distilled H <sub>2</sub> O	30-120	0.94	100	9	80	12	120	8
ATS-HP-D4L70S71W-115	70	4	S	Distilled H <sub>2</sub> O	30-120	2.50	35	71	28	89	42	60
ATS-HP-D4L100S50W-116	100	4	S	Distilled H <sub>2</sub> O	30-120	2.50	50	50	40	63	60	42
ATS-HP-D4L150S33W-117	150	4	S	Distilled H <sub>2</sub> O	30-120	2.50	75	33	60	42	90	28
ATS-HP-D4L200S25W-118	200	4	S	Distilled H <sub>2</sub> O	30-120	2.50	100	25	80	31	120	21
ATS-HP-D4L250S20W-119	250	4	S	Distilled H <sub>2</sub> O	30-120	2.50	125	20	100	25	150	17
ATS-HP-D5L70S115W-120	70	5	S	Distilled H <sub>2</sub> O	30-120	4.05	35	116	28	145	42	96
ATS-HP-D5L100S80W-121	100	5	S	Distilled H <sub>2</sub> O	30-120	4.05	50	81	40	101	60	67
ATS-HP-D5L200S40W-123	200	5	S	Distilled H <sub>2</sub> O	30-120	4.05	100	40	80	51	120	34
ATS-HP-D5L250S32W-124	250	5	S	Distilled H <sub>2</sub> O	30-120	4.05	125	32	100	40	150	27
ATS-HP-D5L300S26W-125	300	5	S	Distilled H <sub>2</sub> O	30-120	4.05	150	27	120	34	180	22
ATS-HP-D5L350S23W-126	350	5	S	Distilled H <sub>2</sub> O	30-120	4.05	175	23	140	29	210	19
ATS-HP-D6L70S153W-127	70	6	S	Distilled H <sub>2</sub> O	30-120	5.38	35	154	28	192	42	128
ATS-HP-D6L100S107W-128	100	6	S	Distilled H <sub>2</sub> O	30-120	5.38	50	108	40	134	60	90
ATS-HP-D6L150S71W-129	150	6	S	Distilled H <sub>2</sub> O	30-120	5.38	75	72	60	90	90	60
ATS-HP-D6L200S53W-130	200	6	S	Distilled H <sub>2</sub> O	30-120	5.38	100	54	80	67	120	45
ATS-HP-D6L250S43W-131	250	6	S	Distilled H <sub>2</sub> O	30-120	5.38	125	43	100	54	150	36
ATS-HP-D6L300S35W-132	300	6	S	Distilled H <sub>2</sub> O	30-120	5.38	150	36	120	45	180	30
ATS-HP-D6L350S30W-133	350	6	S	Distilled H <sub>2</sub> O	30-120	5.38	175	31	140	38	210	26

## Round Heat Pipes



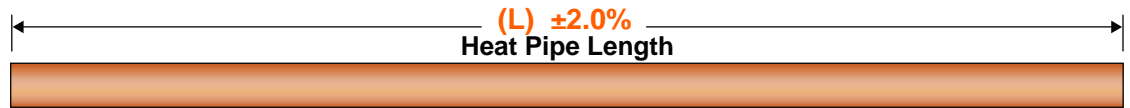
### PRODUCT SPECIFICATIONS

L=Length (mm); D=Diameter (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR=Temperature Range (°C)

Part Number	L	D	WT	WF	TR	QT (W•m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-D6L400S26W-134	400	6	S	Distilled H <sub>2</sub> O	30-120	5.38	200	27	160	34	240	22
ATS-HP-D7L70S185W-135	70	7	S	Distilled H <sub>2</sub> O	30-120	6.49	35	185	28	232	42	154
ATS-HP-D7L100S129W-136	100	7	S	Distilled H <sub>2</sub> O	30-120	6.49	50	130	40	162	60	108
ATS-HP-D7L150S86W-137	150	7	S	Distilled H <sub>2</sub> O	30-120	6.49	75	87	60	108	90	72
ATS-HP-D7L200S64W-138	200	7	S	Distilled H <sub>2</sub> O	30-120	6.49	100	65	80	81	120	54
ATS-HP-D7L250S51W-139	250	7	S	Distilled H <sub>2</sub> O	30-120	6.49	125	52	100	65	150	43
ATS-HP-D7L300S43W-140	300	7	S	Distilled H <sub>2</sub> O	30-120	6.49	150	43	120	54	180	36
ATS-HP-D7L350S37W-141	350	7	S	Distilled H <sub>2</sub> O	30-120	6.49	175	37	140	46	210	31
ATS-HP-D7L400S32W-142	400	7	S	Distilled H <sub>2</sub> O	30-120	6.49	200	32	160	41	240	27
ATS-HP-D7L450S28W-143	450	7	S	Distilled H <sub>2</sub> O	30-120	6.49	225	29	180	36	270	24
ATS-HP-D7L500S25W-144	500	7	S	Distilled H <sub>2</sub> O	30-120	6.49	250	26	200	32	300	22
ATS-HP-D8L70S222W-145	70	8	S	Distilled H <sub>2</sub> O	30-120	7.79	35	223	28	278	42	185
ATS-HP-D8L100S155W-146	100	8	S	Distilled H <sub>2</sub> O	30-120	7.79	50	156	40	195	60	130
ATS-HP-D8L150S103W-147	150	8	S	Distilled H <sub>2</sub> O	30-120	7.79	75	104	60	130	90	87
ATS-HP-D8L200S77W-148	200	8	S	Distilled H <sub>2</sub> O	30-120	7.79	100	78	80	97	120	65
ATS-HP-D8L250S62W-149	250	8	S	Distilled H <sub>2</sub> O	30-120	7.79	125	62	100	78	150	52
ATS-HP-D8L300S51W-150	300	8	S	Distilled H <sub>2</sub> O	30-120	7.79	150	52	120	65	180	43
ATS-HP-D8L350S44W-151	350	8	S	Distilled H <sub>2</sub> O	30-120	7.79	175	45	140	56	210	37
ATS-HP-D8L400S38W-152	400	8	S	Distilled H <sub>2</sub> O	30-120	7.79	200	39	160	49	240	32
ATS-HP-D8L450S34W-153	450	8	S	Distilled H <sub>2</sub> O	30-120	7.79	225	35	180	43	270	29
ATS-HP-D8L500S31W-154	500	8	S	Distilled H <sub>2</sub> O	30-120	7.79	250	31	200	39	300	26

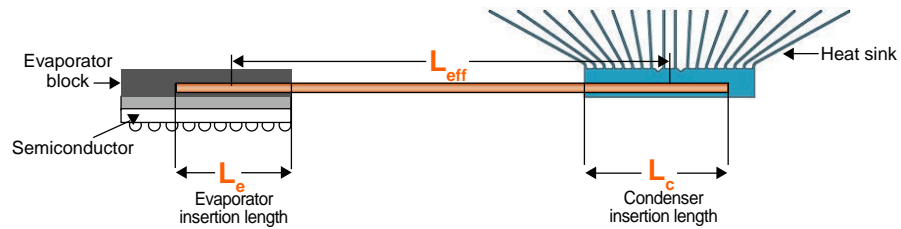
## Round Heat Pipes

(D) ±0.5mm  
Pipe Outer Diameter



$$Q_{\max} = \frac{Q_t}{L_{\text{eff}}} \times 1000$$

$$L_{\text{eff}} = L - (L_e + L_c) / 2$$

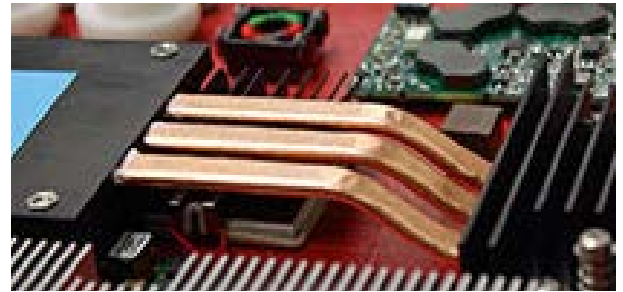
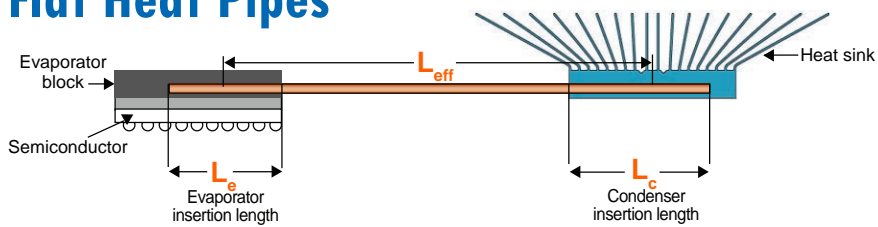


### PRODUCT SPECIFICATIONS

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Part Number	L	D	WT	WF	TR	QT (W•m)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)
ATS-HP-D9.5L100S174W-155	100	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	50	174	40	218	60	145
ATS-HP-D9.5L150S116W-156	150	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	75	116	60	145	90	97
ATS-HP-D9.5L200S87W-157	200	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	100	87	80	109	120	73
ATS-HP-D9.5L250S69W-158	250	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	125	70	100	87	150	58
ATS-HP-D9.5L300S58W-159	300	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	150	58	120	73	180	48
ATS-HP-D9.5L350S49W-160	350	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	175	50	140	62	210	42
ATS-HP-D9.5L400S43W-161	400	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	200	44	160	54	240	36
ATS-HP-D9.5L450S38W-162	450	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	225	39	180	48	270	32
ATS-HP-D9.5L500S34W-163	500	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	250	35	200	44	300	29
ATS-HP-D9.5L550S31W-164	550	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	275	32	220	40	330	26
ATS-HP-D9.5L600S29W-165	600	9.5	S	Distilled H <sub>2</sub> O	30-120	8.72	300	29	240	36	360	24
ATS-HP-D10L100S199W-166	100	10	S	Distilled H <sub>2</sub> O	30-120	9.98	50	200	40	249	60	166
ATS-HP-D10L150S133W-167	150	10	S	Distilled H <sub>2</sub> O	30-120	9.98	75	133	60	166	90	111
ATS-HP-D10L200S99W-168	200	10	S	Distilled H <sub>2</sub> O	30-120	9.98	100	100	80	125	120	83
ATS-HP-D10L250S79W-169	250	10	S	Distilled H <sub>2</sub> O	30-120	9.98	125	80	100	100	150	67
ATS-HP-D10L300S66W-170	300	10	S	Distilled H <sub>2</sub> O	30-120	9.98	150	67	120	83	180	55
ATS-HP-D10L350S57W-171	350	10	S	Distilled H <sub>2</sub> O	30-120	9.98	175	57	140	71	210	48
ATS-HP-D10L400S49W-172	400	10	S	Distilled H <sub>2</sub> O	30-120	9.98	200	50	160	62	240	42
ATS-HP-D10L450S44W-173	450	10	S	Distilled H <sub>2</sub> O	30-120	9.98	225	44	180	55	270	37
ATS-HP-D10L500S39W-174	500	10	S	Distilled H <sub>2</sub> O	30-120	9.98	250	40	200	50	300	33
ATS-HP-D10L550S36W-175	550	10	S	Distilled H <sub>2</sub> O	30-120	9.98	275	36	220	45	330	30
ATS-HP-D10L600S33W-176	600	10	S	Distilled H <sub>2</sub> O	30-120	9.98	300	33	240	42	360	28

## Flat Heat Pipes



(W) ±0.5mm

Heat Pipe Width



(H) ±0.5mm

Heat Pipe Height

(L) ±2.0%

Heat Pipe Length

$$Q_{\max} = \frac{Q_t}{L_{\text{eff}}} \times 1000$$

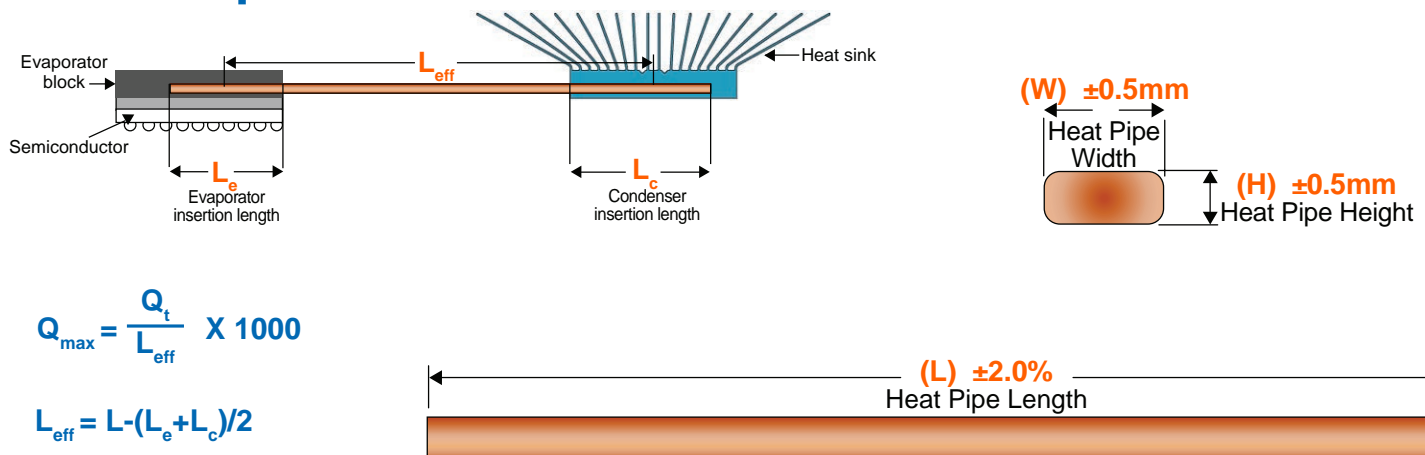
$$L_{\text{eff}} = L - (L_e + L_c) / 2$$

### PRODUCT SPECIFICATIONS

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Part Number	L	W	H	WT	WF	TR	QT (W•m)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)
ATS-HP-F9L100S80W-012	100	10.50	4.50	S	Distilled H <sub>2</sub> O	30-120	3.08	50	62	62.50	49	75	41
ATS-HP-F9L150S70W-013	150	10.50	4.50	S	Distilled H <sub>2</sub> O	30-120	5.51	75	74	106.25	52	125	44
ATS-HP-F9L200S70W-014	200	10.50	4.50	S	Distilled H <sub>2</sub> O	30-120	9.10	100	91	125	73	150	61
ATS-HP-F9L250S70W-015	250	10.50	4.50	S	Distilled H <sub>2</sub> O	30-120	10.01	125	80	150	67	200	50
ATS-HP-F7L100S70W-016	100	11.20	3.50	S	Distilled H <sub>2</sub> O	30-120	3.05	50	61	62.50	49	75	41
ATS-HP-F7L150S65W-017	150	11.20	3.50	S	Distilled H <sub>2</sub> O	30-120	6.37	75	85	106.25	60	125	51
ATS-HP-F7L200S65W-018	200	11.20	3.50	S	Distilled H <sub>2</sub> O	30-120	9.14	100	91	125	73	150	61
ATS-HP-F7L250S65W-019	250	11.20	3.50	S	Distilled H <sub>2</sub> O	30-120	12.46	125	100	150	83	200	62
ATS-HP-F6L100S70W-020	100	8	3	S	Distilled H <sub>2</sub> O	30-120	3.50	50	70	62.50	56	75	47
ATS-HP-F6L150S60W-021	150	8	3	S	Distilled H <sub>2</sub> O	30-120	3.68	75	49	106.25	35	125	29
ATS-HP-F6L200S50W-022	200	8	3	S	Distilled H <sub>2</sub> O	30-120	3.80	100	38	125	30	150	25
ATS-HP-F6L250S50W-023	250	8	3	S	Distilled H <sub>2</sub> O	30-120	9.35	125	75	150	62	200	47
ATS-HP-F5L100S45W-024	100	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	2.18	50	44	62.50	35	75	29
ATS-HP-F5L150S40W-025	150	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	7.35	75	98	106.25	69	125	59
ATS-HP-F5L200S35W-026	200	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	1.66	100	17	125	13	150	11
ATS-HP-F5L250S35W-027	250	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	2.67	125	21	150	18	200	13
ATS-HP-F6L100S40W-028	100	8	3	S	Distilled H <sub>2</sub> O	30-120	2.39	50	48	62.50	38	75	32
ATS-HP-F6L150S30W-029	150	8	3	S	Distilled H <sub>2</sub> O	30-120	2.21	75	29	106.25	21	125	18
ATS-HP-F6L200S30W-030	200	8	3	S	Distilled H <sub>2</sub> O	30-120	2.93	100	29	125	23	150	20
ATS-HP-F5L100S30W-031	100	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	3.48	50	70	62.50	56	75	46
ATS-HP-F5L150S25W-032	150	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	2.57	75	34	106.25	24	125	21
ATS-HP-F5L200S25W-033	200	8.20	2.50	S	Distilled H <sub>2</sub> O	30-120	3.92	100	39	125	31	150	26

## Flat Heat Pipes



$$Q_{max} = \frac{Q_t}{L_{eff}} \times 1000$$

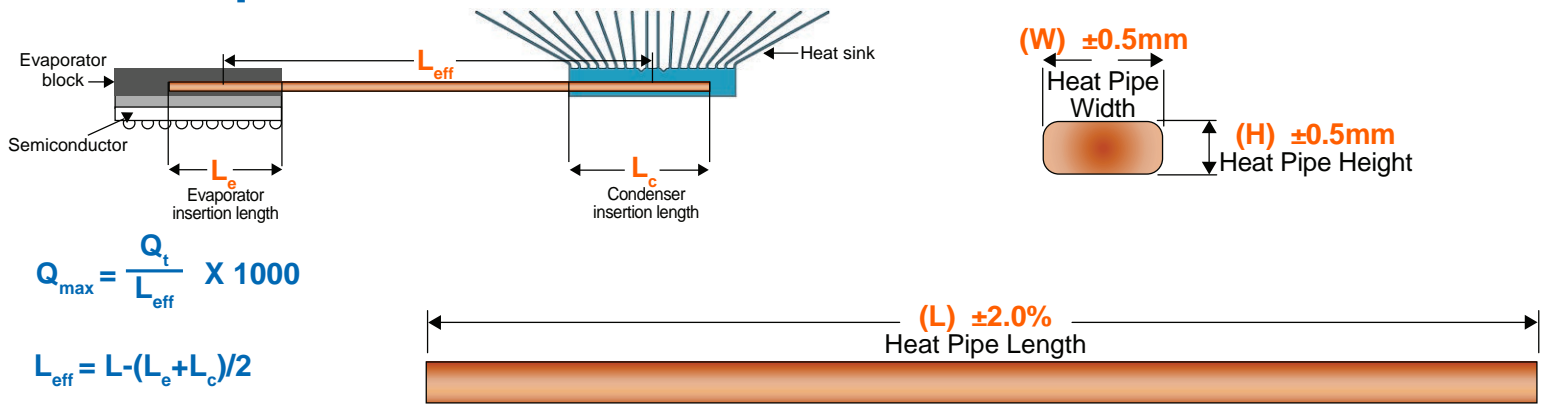
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Part Number	L	W	H	WT	WF	TR	QT (W•m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F4L70S35W-178	70	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	53	35	42	44	63	29
ATS-HP-F4L100S25W-179	100	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	75	25	60	31	90	21
ATS-HP-F4L150S16W-180	150	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	113	16	90	21	135	14
ATS-HP-F4L200S12W-181	200	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	150	12	120	15	180	10
ATS-HP-F4L250S10W-182	250	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	188	10	150	12	225	8
ATS-HP-F4L300S8W-183	300	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	225	8	180	10	270	7
ATS-HP-F4L350S7W-184	350	5.39	2	S	Distilled H <sub>2</sub> O	30-120	1.86	263	7	210	9	315	6
ATS-HP-F4L70S39W-185	70	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	53	39	42	49	63	33
ATS-HP-F4L100S27W-186	100	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	75	27	60	34	90	23
ATS-HP-F4L150S18W-187	150	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	113	18	90	23	135	15
ATS-HP-F4L200S14W-188	200	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	150	14	120	17	180	11
ATS-HP-F4L250S11W-189	250	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	188	11	150	14	225	9
ATS-HP-F4L300S9W-190	300	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	225	9	180	11	270	8
ATS-HP-F4L350S8W-191	350	5.1	2.5	S	Distilled H <sub>2</sub> O	30-120	2.05	263	8	210	10	315	7
ATS-HP-F4L70S41W-192	70	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	53	41	42	52	63	34
ATS-HP-F4L100S29W-193	100	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	75	29	60	36	90	24
ATS-HP-F4L150S19W-194	150	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	113	19	90	24	135	16
ATS-HP-F4L200S14W-195	200	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	150	14	120	18	180	12
ATS-HP-F4L250S12W-196	250	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	188	12	150	14	225	10
ATS-HP-F4L300S10W-197	300	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	225	10	180	12	270	8
ATS-HP-F4L350S8W-198	350	4.83	3	S	Distilled H <sub>2</sub> O	30-120	2.17	263	8	210	10	315	7
ATS-HP-F5L70S45W-199	70	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	53	45	42	57	63	38
ATS-HP-F5L100S32W-200	100	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	75	32	60	40	90	26
ATS-HP-F5L150S21W-201	150	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	113	21	90	26	135	18
ATS-HP-F5L200S16W-202	200	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	150	16	120	20	180	13

## Flat Heat Pipes

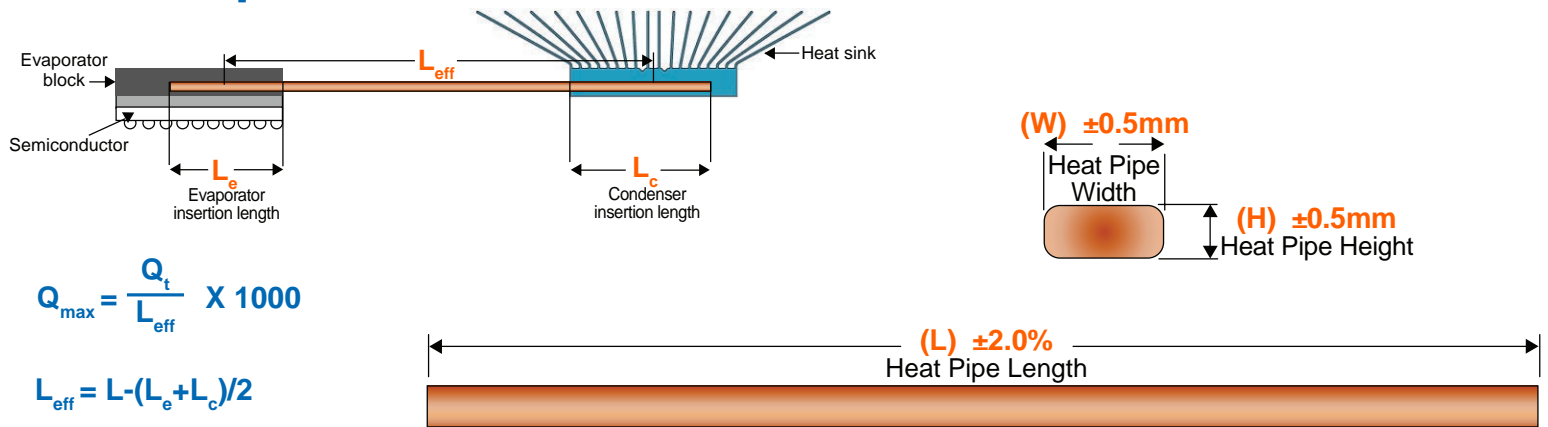


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W·m)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)
ATS-HP-F5L250S13W-203	250	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	188	13	150	16	225	11
ATS-HP-F5L300S11W-204	300	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	225	11	180	13	270	9
ATS-HP-F5L350S9W-205	350	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	263	9	210	11	315	8
ATS-HP-F5L400S8W-206	400	6.95	2	S	Distilled H <sub>2</sub> O	30-120	2.38	300	8	240	10	360	7
ATS-HP-F5L70S50W-207	70	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	53	50	42	62	63	41
ATS-HP-F5L100S35W-208	100	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	75	35	60	44	90	29
ATS-HP-F5L150S23W-209	150	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	113	23	90	29	135	19
ATS-HP-F5L200S17W-210	200	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	150	17	120	22	180	15
ATS-HP-F5L250S14W-211	250	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	188	14	150	17	225	12
ATS-HP-F5L300S12W-212	300	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	225	12	180	15	270	10
ATS-HP-F5L350S10W-213	350	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	263	10	210	12	315	8
ATS-HP-F5L400S9W-214	400	6.69	2.5	S	Distilled H <sub>2</sub> O	30-120	2.61	300	9	240	11	360	7
ATS-HP-F5L70S52W-215	70	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	53	52	42	65	63	44
ATS-HP-F5L100S37W-216	100	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	75	37	60	46	90	30
ATS-HP-F5L150S24W-217	150	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	113	24	90	30	135	20
ATS-HP-F5L200S18W-218	200	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	150	18	120	23	180	15
ATS-HP-F5L250S15W-219	250	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	188	15	150	18	225	12
ATS-HP-F5L300S12W-220	300	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	225	12	180	15	270	10
ATS-HP-F5L350S10W-221	350	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	263	10	210	13	315	9
ATS-HP-F5L400S9W-222	400	6.44	3	S	Distilled H <sub>2</sub> O	30-120	2.74	300	9	240	11	360	8
ATS-HP-F5L70S54W-223	70	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	53	54	42	68	63	45
ATS-HP-F5L100S38W-224	100	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	75	38	60	47	90	32
ATS-HP-F5L150S25W-225	150	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	113	25	90	32	135	21
ATS-HP-F5L200S19W-226	200	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	150	19	120	24	180	16
ATS-HP-F5L250S15W-227	250	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	188	15	150	19	225	13

## Flat Heat Pipes



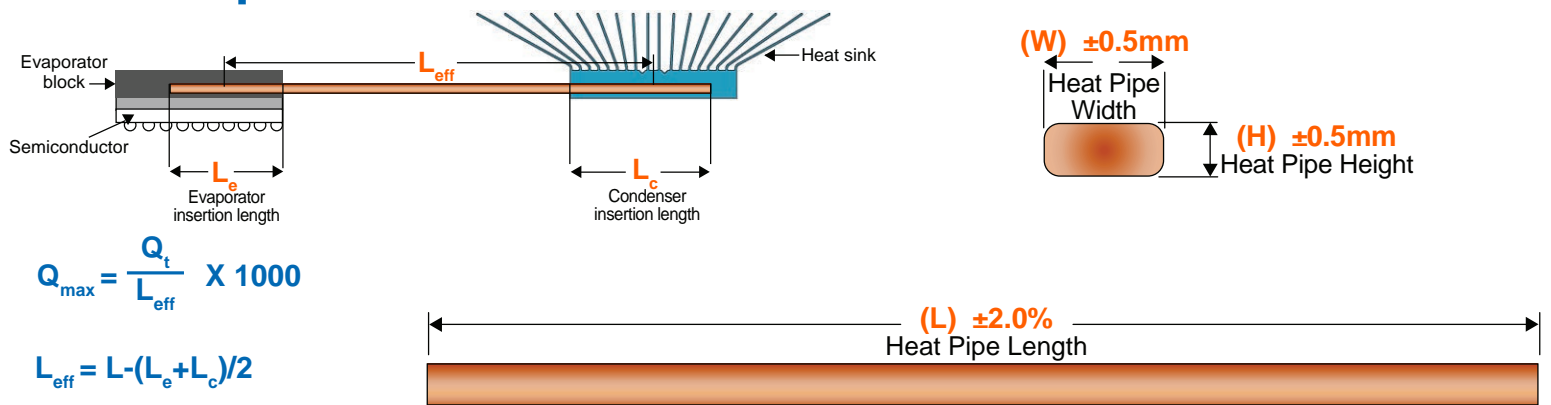
### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	W	WT	WF	TR	QT (W·m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F5L300S13W-228	300	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	225	13	180	16	270	11
ATS-HP-F5L350S11W-229	350	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	263	11	210	14	315	9
ATS-HP-F5L400S9W-230	400	6.18	3.5	S	Distilled H <sub>2</sub> O	30-120	2.85	300	9	240	12	360	8
ATS-HP-F5L70S56W-231	70	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	53	56	42	70	63	47
ATS-HP-F5L100S39W-232	100	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	75	39	60	49	90	33
ATS-HP-F5L150S26W-233	150	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	113	26	90	33	135	22
ATS-HP-F5L200S20W-234	200	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	150	20	120	24	180	16
ATS-HP-F5L250S16W-235	250	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	188	16	150	20	225	13
ATS-HP-F5L300S13W-236	300	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	225	13	180	16	270	11
ATS-HP-F5L350S11W-237	350	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	263	11	210	14	315	9
ATS-HP-F5L400S10W-238	400	5.9	4	S	Distilled H <sub>2</sub> O	30-120	2.93	300	10	240	12	360	8
ATS-HP-F6L70S56W-239	70	8.6	2	S	Distilled H <sub>2</sub> O	30-120	2.93	53	56	42	70	63	46
ATS-HP-F6L100S39W-240	100	8.6	2	S	Distilled H <sub>2</sub> O	30-120	2.93	75	39	60	49	90	33
ATS-HP-F6L150S26W-241	150	8.6	2	S	Distilled H <sub>2</sub> O	30-120	2.93	113	26	90	33	135	22
ATS-HP-F6L200S20W-242	200	8.6	2	S	Distilled H <sub>2</sub> O	30-120	2.93	150	20	120	24	180	16
ATS-HP-F6L250S16W-243	250	8.6	2	S	Distilled H <sub>2</sub> O	30-120	2.93	188	16	150	20	225	13
ATS-HP-F6L300S13W-244	300	8.6	2	S	Distilled H <sub>2</sub> O	30-120	2.93	225	13	180	16	270	11
ATS-HP-F6L70S59W-245	70	8.37	2.3	S	Distilled H <sub>2</sub> O	30-120	3.09	53	59	42	74	63	49
ATS-HP-F6L100S41W-246	100	8.37	2.3	S	Distilled H <sub>2</sub> O	30-120	3.09	75	41	60	51	90	34
ATS-HP-F6L150S27W-247	150	8.37	2.3	S	Distilled H <sub>2</sub> O	30-120	3.09	113	27	90	34	135	23
ATS-HP-F6L200S21W-248	200	8.37	2.3	S	Distilled H <sub>2</sub> O	30-120	3.09	150	21	120	26	180	17
ATS-HP-F6L250S16W-249	250	8.37	2.3	S	Distilled H <sub>2</sub> O	30-120	3.09	188	16	150	21	225	14
ATS-HP-F6L300S14W-250	300	8.37	2.3	S	Distilled H <sub>2</sub> O	30-120	3.09	225	14	180	17	270	11
ATS-HP-F6L70S60W-251	70	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	53	60	42	75	63	50



## Flat Heat Pipes



$$Q_{max} = \frac{Q_t}{L_{eff}} \times 1000$$

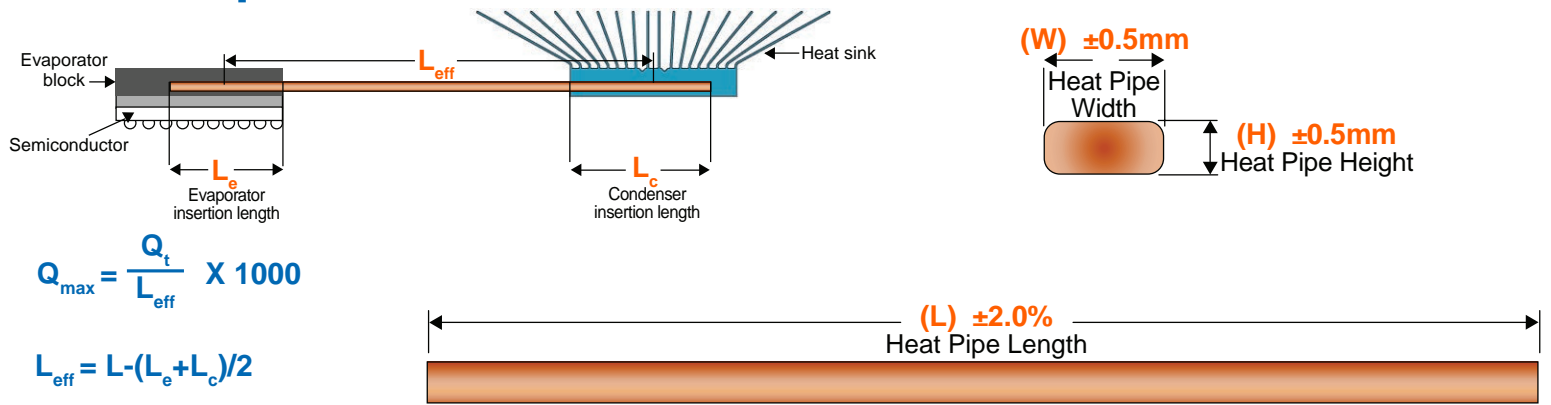
$$L_{eff} = L - (L_e + L_c) / 2$$

### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W•m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F6L100S42W-252	100	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	75	42	60	53	90	35
ATS-HP-F6L150S28W-253	150	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	113	28	90	35	135	23
ATS-HP-F6L200S21W-254	200	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	150	21	120	26	180	18
ATS-HP-F6L250S17W-255	250	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	188	17	150	21	225	14
ATS-HP-F6L300S14W-256	300	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	225	14	180	18	270	12
ATS-HP-F6L350S12W-257	350	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	263	12	210	15	315	10
ATS-HP-F6L400S11W-258	400	8.28	2.5	S	Distilled H <sub>2</sub> O	30-120	3.17	300	11	240	13	360	9
ATS-HP-F6L70S62W-259	70	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	53	62	42	77	63	51
ATS-HP-F6L100S43W-260	100	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	75	43	60	54	90	36
ATS-HP-F6L150S29W-261	150	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	113	29	90	36	135	24
ATS-HP-F6L200S22W-262	200	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	150	22	120	27	180	18
ATS-HP-F6L250S17W-263	250	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	188	17	150	22	225	14
ATS-HP-F6L300S14W-264	300	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	225	14	180	18	270	12
ATS-HP-F6L350S12W-265	350	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	263	12	210	15	315	10
ATS-HP-F6L400S11W-266	400	8.19	2.7	S	Distilled H <sub>2</sub> O	30-120	3.23	300	11	240	13	360	9
ATS-HP-F6L70S62W-267	70	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	53	62	42	78	63	52
ATS-HP-F6L100S43W-268	100	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	75	43	60	54	90	36
ATS-HP-F6L150S29W-269	150	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	113	29	90	36	135	24
ATS-HP-F6L200S22W-270	200	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	150	22	120	27	180	18
ATS-HP-F6L250S17W-271	250	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	188	17	150	22	225	14
ATS-HP-F6L300S14W-272	300	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	225	14	180	18	270	12
ATS-HP-F6L350S12W-273	350	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	263	12	210	16	315	10
ATS-HP-F6L400S11W-274	400	8.13	2.8	S	Distilled H <sub>2</sub> O	30-120	3.26	300	11	240	14	360	9
ATS-HP-F6L70S63W-275	70	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	53	63	42	79	63	53
ATS-HP-F6L100S44W-276	100	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	75	44	60	55	90	37

## Flat Heat Pipes

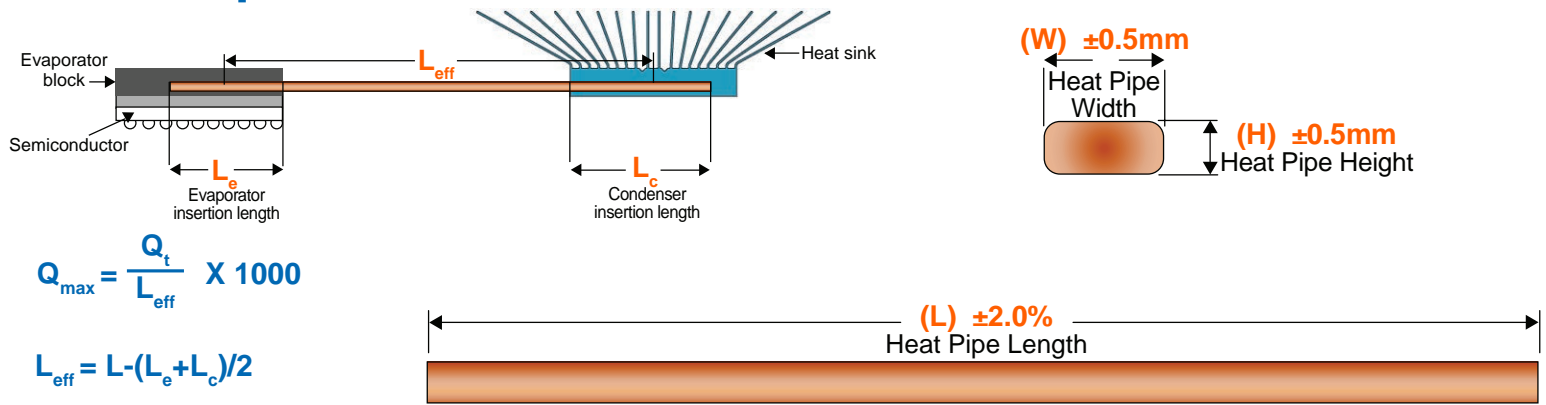


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W·m)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)	$L_{\text{eff}}$ (mm)	$Q_{\max}$ (W)
ATS-HP-F6L150S29W-277	150	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	113	29	90	37	135	25
ATS-HP-F6L200S22W-278	200	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	150	22	120	28	180	18
ATS-HP-F6L250S18W-279	250	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	188	18	150	22	225	15
ATS-HP-F6L300S15W-280	300	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	225	15	180	18	270	12
ATS-HP-F6L350S13W-281	350	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	263	13	210	16	315	11
ATS-HP-F6L400S11W-282	400	8.05	3	S	Distilled H <sub>2</sub> O	30-120	3.31	300	11	240	14	360	9
ATS-HP-F6L70S64W-283	70	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	53	64	42	80	63	53
ATS-HP-F6L100S45W-284	100	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	75	45	60	56	90	37
ATS-HP-F6L150S30W-285	150	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	113	30	90	37	135	25
ATS-HP-F6L200S22W-286	200	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	150	22	120	28	180	19
ATS-HP-F6L250S18W-287	250	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	188	18	150	22	225	15
ATS-HP-F6L300S15W-288	300	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	225	15	180	19	270	12
ATS-HP-F6L350S13W-289	350	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	263	13	210	16	315	11
ATS-HP-F6L400S11W-290	400	7.9	3.2	S	Distilled H <sub>2</sub> O	30-120	3.34	300	11	240	14	360	9
ATS-HP-F6L70S65W-291	70	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	53	65	42	81	63	54
ATS-HP-F6L100S45W-292	100	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	75	45	60	57	90	38
ATS-HP-F6L150S30W-293	150	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	113	30	90	38	135	25
ATS-HP-F6L200S23W-294	200	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	150	23	120	28	180	19
ATS-HP-F6L250S18W-295	250	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	188	18	150	23	225	15
ATS-HP-F6L300S15W-296	300	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	225	15	180	19	270	13
ATS-HP-F6L350S13W-297	350	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	263	13	210	16	315	11
ATS-HP-F6L400S11W-298	400	7.75	3.5	S	Distilled H <sub>2</sub> O	30-120	3.41	300	11	240	14	360	9
ATS-HP-F6L70S66W-299	70	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	53	66	42	83	63	55
ATS-HP-F6L100S46W-300	100	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	75	46	60	58	90	39
ATS-HP-F6L150S31W-301	150	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	113	31	90	39	135	26

## Flat Heat Pipes

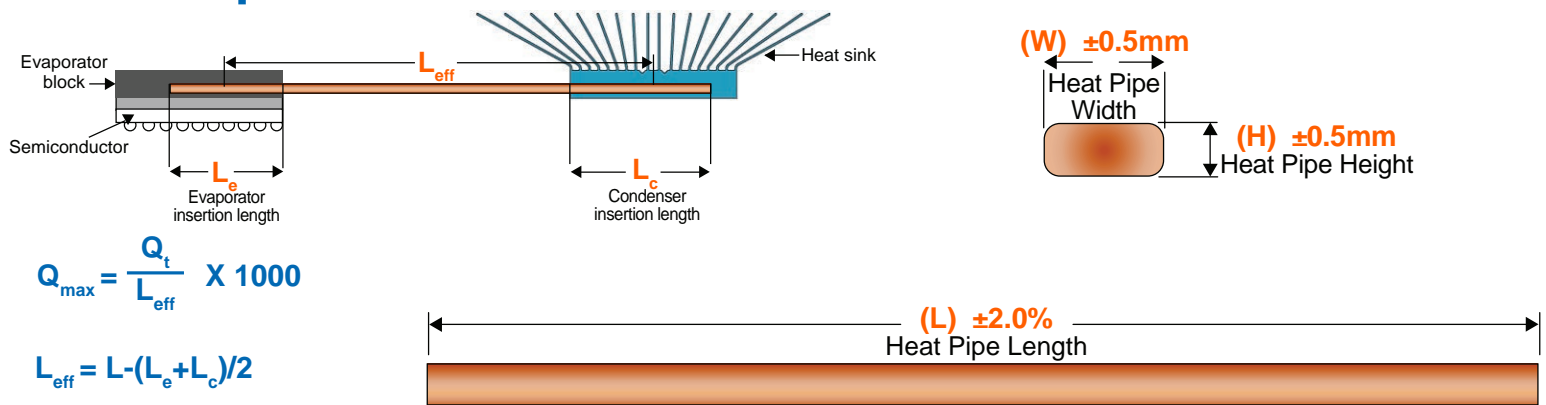


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W•m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F6L200S23W-302	200	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	150	23	120	29	180	19
ATS-HP-F6L250S18W-303	250	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	188	18	150	23	225	15
ATS-HP-F6L300S15W-304	300	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	225	15	180	19	270	13
ATS-HP-F6L350S13W-305	350	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	263	13	210	17	315	11
ATS-HP-F6L400S12W-306	400	7.61	3.8	S	Distilled H <sub>2</sub> O	30-120	3.47	300	12	240	14	360	10
ATS-HP-F6L70S67W-307	70	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	53	67	42	83	63	56
ATS-HP-F6L100S47W-308	100	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	75	47	60	58	90	39
ATS-HP-F6L150S31W-309	150	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	113	31	90	39	135	26
ATS-HP-F6L200S23W-310	200	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	150	23	120	29	180	19
ATS-HP-F6L250S19W-311	250	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	188	19	150	23	225	16
ATS-HP-F6L300S16W-312	300	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	225	16	180	19	270	13
ATS-HP-F6L350S13W-313	350	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	263	13	210	17	315	11
ATS-HP-F6L400S12W-314	400	7.49	4	S	Distilled H <sub>2</sub> O	30-120	3.50	300	12	240	15	360	10
ATS-HP-F6L70S68W-315	70	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	53	68	42	85	63	57
ATS-HP-F6L100S47W-316	100	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	75	47	60	59	90	40
ATS-HP-F6L150S32W-317	150	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	113	32	90	40	135	26
ATS-HP-F6L200S24W-318	200	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	150	24	120	30	180	20
ATS-HP-F6L250S19W-319	250	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	188	19	150	24	225	16
ATS-HP-F6L300S16W-320	300	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	225	16	180	20	270	13
ATS-HP-F6L350S14W-321	350	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	263	14	210	17	315	11
ATS-HP-F6L400S12W-322	400	7.35	4.3	S	Distilled H <sub>2</sub> O	30-120	3.56	300	12	240	15	360	10
ATS-HP-F6L70S68W-323	70	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	53	68	42	85	63	57
ATS-HP-F6L100S48W-324	100	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	75	48	60	60	90	40
ATS-HP-F6L150S32W-325	150	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	113	32	90	40	135	27

## Flat Heat Pipes

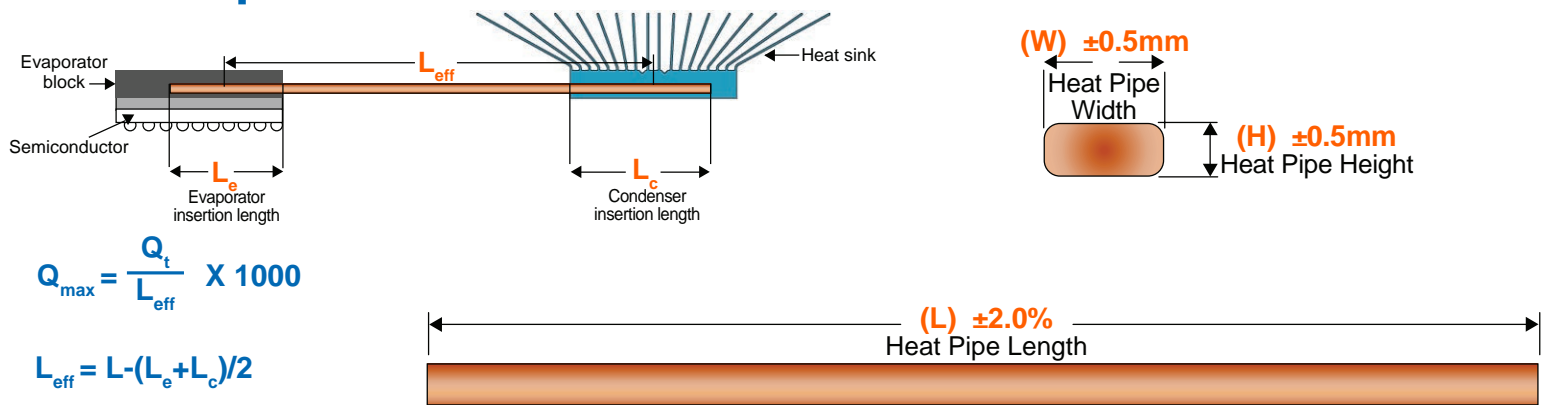


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W*m)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)
ATS-HP-F6L200S24W-326	200	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	150	24	120	30	180	20
ATS-HP-F6L250S19W-327	250	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	188	19	150	24	225	16
ATS-HP-F6L300S16W-328	300	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	225	16	180	20	270	13
ATS-HP-F6L350S14W-329	350	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	263	14	210	17	315	11
ATS-HP-F6L400S12W-330	400	7.23	4.5	S	Distilled H <sub>2</sub> O	30-120	3.59	300	12	240	15	360	10
ATS-HP-F6L70S69W-331	70	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	53	69	42	87	63	58
ATS-HP-F6L100S49W-332	100	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	75	49	60	61	90	40
ATS-HP-F6L150S32W-333	150	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	113	32	90	40	135	27
ATS-HP-F6L200S24W-334	200	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	150	24	120	30	180	20
ATS-HP-F6L250S19W-335	250	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	188	19	150	24	225	16
ATS-HP-F6L300S16W-336	300	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	225	16	180	20	270	13
ATS-HP-F6L350S14W-337	350	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	263	14	210	17	315	12
ATS-HP-F6L400S12W-338	400	7.07	4.8	S	Distilled H <sub>2</sub> O	30-120	3.64	300	12	240	15	360	10
ATS-HP-F6L70S70W-339	70	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	53	70	42	88	63	58
ATS-HP-F6L100S49W-340	100	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	75	49	60	61	90	41
ATS-HP-F6L150S33W-341	150	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	113	33	90	41	135	27
ATS-HP-F6L200S25W-342	200	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	150	25	120	31	180	20
ATS-HP-F6L250S20W-343	250	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	188	20	150	25	225	16
ATS-HP-F6L300S16W-344	300	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	225	16	180	20	270	14
ATS-HP-F6L350S14W-345	350	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	263	14	210	18	315	12
ATS-HP-F6L400S12W-346	400	6.97	5	S	Distilled H <sub>2</sub> O	30-120	3.68	300	12	240	15	360	10
ATS-HP-F6L70S71W-347	70	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	53	71	42	88	63	59
ATS-HP-F6L100S50W-348	100	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	75	50	60	62	90	41
ATS-HP-F6L150S33W-349	150	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	113	33	90	41	135	28
ATS-HP-F6L200S25W-350	200	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	150	25	120	31	180	21

## Flat Heat Pipes

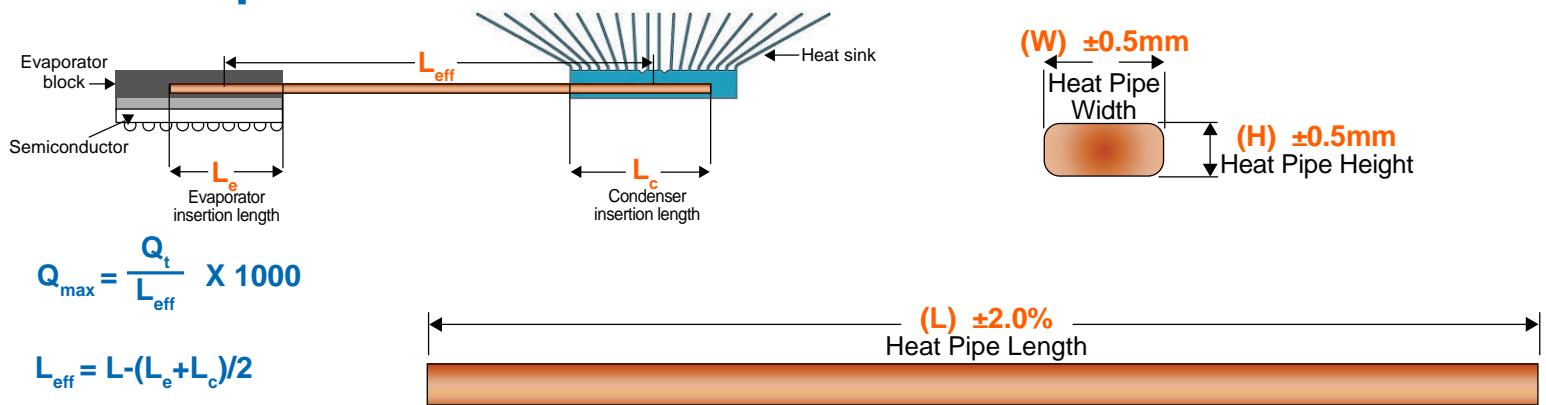


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W*m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F6L250S20W-351	250	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	188	20	150	25	225	17
ATS-HP-F6L300S17W-352	300	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	225	17	180	21	270	14
ATS-HP-F6L350S14W-353	350	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	263	14	210	18	315	12
ATS-HP-F6L400S12W-354	400	6.77	5.3	S	Distilled H <sub>2</sub> O	30-120	3.72	300	12	240	15	360	10
ATS-HP-F8L75S76W-355	75	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	56	76	45	95	68	63
ATS-HP-F8L150S38W-356	150	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	113	38	90	47	135	32
ATS-HP-F8L200S28W-357	200	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	150	28	120	36	180	24
ATS-HP-F8L250S23W-358	250	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	188	23	150	28	225	19
ATS-HP-F8L300S19W-359	300	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	225	19	180	24	270	16
ATS-HP-F8L350S16W-360	350	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	263	16	210	20	315	14
ATS-HP-F8L400S14W-361	400	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	300	14	240	18	360	12
ATS-HP-F8L450S13W-362	450	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	338	13	270	16	405	11
ATS-HP-F8L500S11W-363	500	11.41	2.5	S	Distilled H <sub>2</sub> O	30-120	4.26	375	11	300	14	450	9
ATS-HP-F8L75S79W-364	75	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	56	79	45	99	68	66
ATS-HP-F8L150S40W-365	150	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	113	40	90	49	135	33
ATS-HP-F8L200S30W-366	200	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	150	30	120	37	180	25
ATS-HP-F8L250S24W-367	250	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	188	24	150	30	225	20
ATS-HP-F8L300S20W-368	300	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	225	20	180	25	270	16
ATS-HP-F8L350S17W-369	350	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	263	17	210	21	315	14
ATS-HP-F8L400S15W-370	400	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	300	15	240	19	360	12
ATS-HP-F8L450S13W-371	450	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	338	13	270	16	405	11
ATS-HP-F8L500S12W-372	500	11.25	3	S	Distilled H <sub>2</sub> O	30-120	4.45	375	12	300	15	450	10
ATS-HP-F8L75S79W-373	75	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	56	79	45	99	68	66
ATS-HP-F8L150S40W-374	150	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	113	40	90	50	135	33
ATS-HP-F8L200S30W-375	200	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	150	30	120	37	180	25

## Flat Heat Pipes

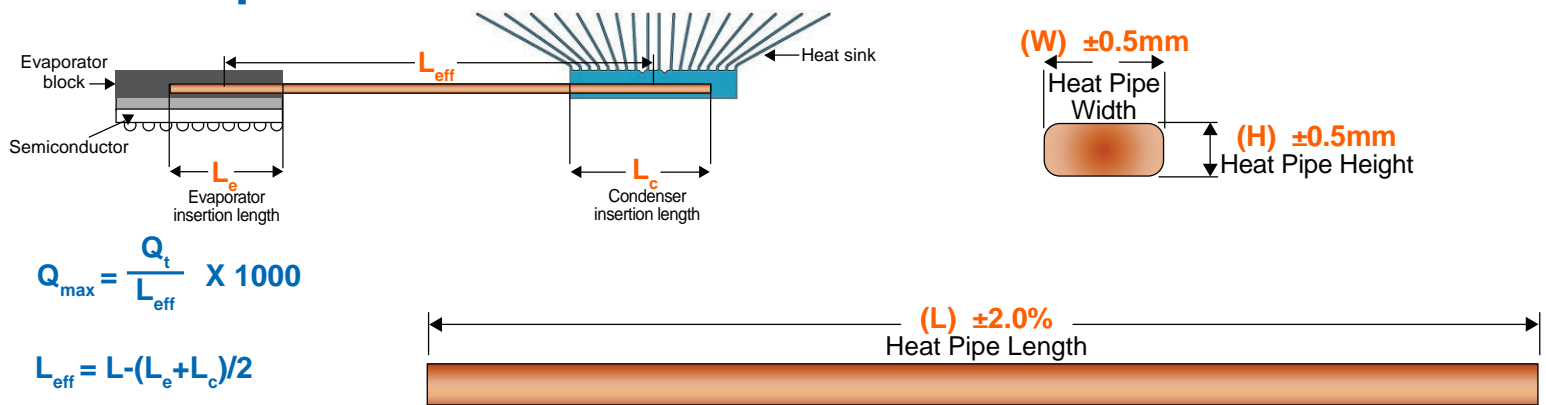


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W*m)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)
ATS-HP-F8L250S24W-376	250	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	188	24	150	30	225	20
ATS-HP-F8L300S20W-377	300	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	225	20	180	25	270	17
ATS-HP-F8L350S17W-378	350	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	263	17	210	21	315	14
ATS-HP-F8L400S15W-379	400	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	300	15	240	19	360	12
ATS-HP-F8L450S13W-380	450	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	338	13	270	17	405	11
ATS-HP-F8L500S12W-381	500	11.05	3.2	S	Distilled H <sub>2</sub> O	30-120	4.46	375	12	300	15	450	10
ATS-HP-F8L75S80W-382	75	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	56	80	45	100	68	67
ATS-HP-F8L150S40W-383	150	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	113	40	90	50	135	33
ATS-HP-F8L200S30W-384	200	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	150	30	120	38	180	25
ATS-HP-F8L250S24W-385	250	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	188	24	150	30	225	20
ATS-HP-F8L300S20W-386	300	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	225	20	180	25	270	17
ATS-HP-F8L350S17W-387	350	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	263	17	210	21	315	14
ATS-HP-F8L400S15W-388	400	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	300	15	240	19	360	13
ATS-HP-F8L450S13W-389	450	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	338	13	270	17	405	11
ATS-HP-F8L500S12W-390	500	10.86	3.5	S	Distilled H <sub>2</sub> O	30-120	4.51	375	12	300	15	450	10
ATS-HP-F8L75S82W-391	75	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	56	82	45	103	68	69
ATS-HP-F8L150S41W-392	150	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	113	41	90	51	135	34
ATS-HP-F8L200S31W-393	200	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	150	31	120	39	180	26
ATS-HP-F8L250S25W-394	250	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	188	25	150	31	225	21
ATS-HP-F8L300S21W-395	300	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	225	21	180	26	270	17
ATS-HP-F8L350S18W-396	350	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	263	18	210	22	315	15
ATS-HP-F8L400S15W-397	400	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	300	15	240	19	360	13
ATS-HP-F8L450S14W-398	450	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	338	14	270	17	405	11

## Flat Heat Pipes

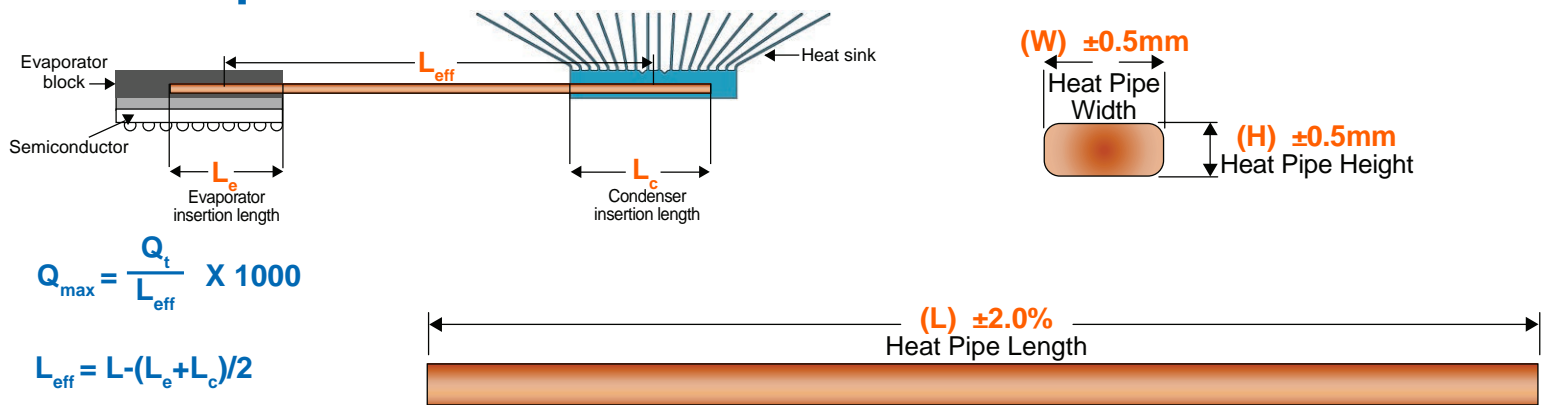


### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W*m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F8L500S12W-399	500	10.86	3.8	S	Distilled H <sub>2</sub> O	30-120	4.62	375	12	300	15	450	10
ATS-HP-F8L75S82W-400	75	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	56	82	45	103	68	69
ATS-HP-F8L150S41W-401	150	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	113	41	90	51	135	34
ATS-HP-F8L200S31W-402	200	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	150	31	120	39	180	26
ATS-HP-F8L250S25W-403	250	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	188	25	150	31	225	21
ATS-HP-F8L300S21W-404	300	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	225	21	180	26	270	17
ATS-HP-F8L350S18W-405	350	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	263	18	210	22	315	15
ATS-HP-F8L400S15W-406	400	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	300	15	240	19	360	13
ATS-HP-F8L450S14W-407	450	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	338	14	270	17	405	11
ATS-HP-F8L500S12W-408	500	10.65	4	S	Distilled H <sub>2</sub> O	30-120	4.62	375	12	300	15	450	10
ATS-HP-F8L75S83W-409	75	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	56	83	45	104	68	69
ATS-HP-F8L150S42W-410	150	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	113	42	90	52	135	35
ATS-HP-F8L200S31W-411	200	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	150	31	120	39	180	26
ATS-HP-F8L250S25W-412	250	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	188	25	150	31	225	21
ATS-HP-F8L300S21W-413	300	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	225	21	180	26	270	17
ATS-HP-F8L350S18W-414	350	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	263	18	210	22	315	15
ATS-HP-F8L400S16W-415	400	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	300	16	240	20	360	13
ATS-HP-F8L450S14W-416	450	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	338	14	270	17	405	12
ATS-HP-F8L500S12W-417	500	10.6	4.2	S	Distilled H <sub>2</sub> O	30-120	4.68	375	12	300	16	450	10
ATS-HP-F8L75S84W-418	75	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	56	84	45	104	68	70
ATS-HP-F8L150S42W-419	150	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	113	42	90	52	135	35
ATS-HP-F8L200S31W-420	200	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	150	31	120	39	180	26
ATS-HP-F8L250S25W-421	250	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	188	25	150	31	225	21
ATS-HP-F8L300S21W-422	300	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	225	21	180	26	270	17
ATS-HP-F8L350S18W-423	350	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	263	18	210	22	315	15

## Flat Heat Pipes



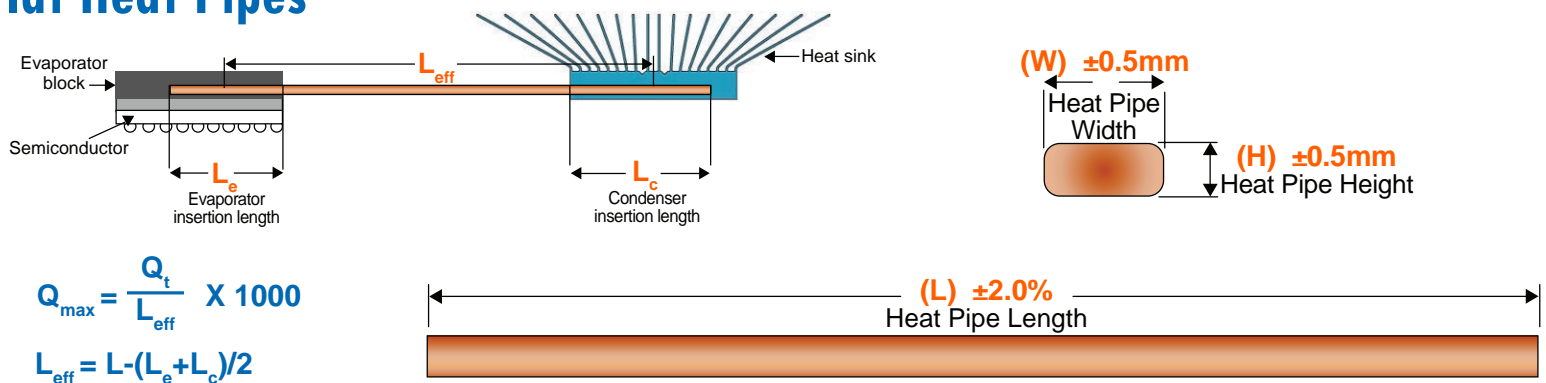
### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

Part Number	L	W	H	WT	WF	TR	QT (W*m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F8L400S16W-424	400	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	300	16	240	20	360	13
ATS-HP-F8L450S14W-425	450	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	338	14	270	17	405	12
ATS-HP-F8L500S13W-426	500	10.35	4.5	S	Distilled H <sub>2</sub> O	30-120	4.70	375	13	300	16	450	10
ATS-HP-F8L75S85W-427	75	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	56	85	45	106	68	71
ATS-HP-F8L150S42W-428	150	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	113	42	90	53	135	35
ATS-HP-F8L200S32W-429	200	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	150	32	120	40	180	26
ATS-HP-F8L250S25W-430	250	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	188	25	150	32	225	21
ATS-HP-F8L300S21W-431	300	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	225	21	180	26	270	18
ATS-HP-F8L350S18W-432	350	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	263	18	210	23	315	15
ATS-HP-F8L400S16W-433	400	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	300	16	240	20	360	13
ATS-HP-F8L450S14W-434	450	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	338	14	270	18	405	12
ATS-HP-F8L500S13W-435	500	10.31	4.7	S	Distilled H <sub>2</sub> O	30-120	4.76	375	13	300	16	450	11
ATS-HP-F8L75S85W-436	75	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	56	85	45	107	68	71
ATS-HP-F8L150S43W-437	150	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	113	43	90	53	135	36
ATS-HP-F8L200S32W-438	200	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	150	32	120	40	180	27
ATS-HP-F8L250S26W-439	250	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	188	26	150	32	225	21
ATS-HP-F8L300S21W-440	300	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	225	21	180	27	270	18
ATS-HP-F8L350S18W-441	350	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	263	18	210	23	315	15
ATS-HP-F8L400S16W-442	400	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	300	16	240	20	360	13
ATS-HP-F8L450S14W-443	450	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	338	14	270	18	405	12
ATS-HP-F8L500S13W-444	500	10.11	5	S	Distilled H <sub>2</sub> O	30-120	4.80	375	13	300	16	450	11
ATS-HP-F8L75S88W-445	75	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	56	88	45	111	68	74
ATS-HP-F8L150S44W-446	150	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	113	44	90	55	135	37
ATS-HP-F8L200S33W-447	200	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	150	33	120	41	180	28
ATS-HP-F8L250S27W-448	250	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	188	27	150	33	225	22



## Flat Heat Pipes



### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

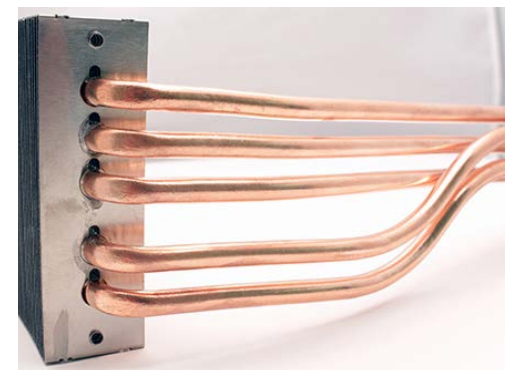
Part Number	L	W	H	WT	WF	TR	QT (W*m)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)	$L_{eff}$ (mm)	$Q_{max}$ (W)
ATS-HP-F8L300S22W-449	300	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	225	22	180	28	270	18
ATS-HP-F8L350S19W-450	350	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	263	19	210	24	315	16
ATS-HP-F8L400S17W-451	400	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	300	17	240	21	360	14
ATS-HP-F8L450S15W-452	450	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	338	15	270	18	405	12
ATS-HP-F8L500S13W-453	500	9.6	6	S	Distilled H <sub>2</sub> O	30-120	4.98	375	13	300	17	450	11
ATS-HP-F8L75S91W-454	75	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	56	91	45	113	68	76
ATS-HP-F8L150S45W-455	150	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	113	45	90	57	135	38
ATS-HP-F8L200S34W-456	200	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	150	34	120	43	180	28
ATS-HP-F8L250S27W-457	250	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	188	27	150	34	225	23
ATS-HP-F8L300S23W-458	300	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	225	23	180	28	270	19
ATS-HP-F8L350S19W-459	350	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	263	19	210	24	315	16
ATS-HP-F8L400S17W-460	400	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	300	17	240	21	360	14
ATS-HP-F8L450S15W-461	450	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	338	15	270	19	405	13
ATS-HP-F8L500S14W-462	500	9.45	6.5	S	Distilled H <sub>2</sub> O	30-120	5.10	375	14	300	17	450	11

### SUGGESTED MINIMUM BEND RADIUS ON ATS HEAT PIPES

Heat Pipe Diameter in mm	Minimum Bend Radius in mm
4	12
5	15
6	18
7	21
8	24

### HEAT PIPE JOINING TECHNIQUES

- 1) For small batches/prototypes, heat pipes can be joined to heat sinks or other pieces with thermal epoxy.
- 2) For optimal results, heat pipes should be soldered using low temperature solder at temperatures above 139°C but no greater than 250°C.



For further technical information, please contact Advanced Thermal Solutions, Inc. by phone: 1-781-769-2800, email [ats-hq@qats.com](mailto:ats-hq@qats.com) or visit [www.qats.com](http://www.qats.com).

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