

## H SYSTEM EXTENSION TUBES

DATASHEET

METRIC UNITS

H 13MM  
H 26MM  
H 52MM

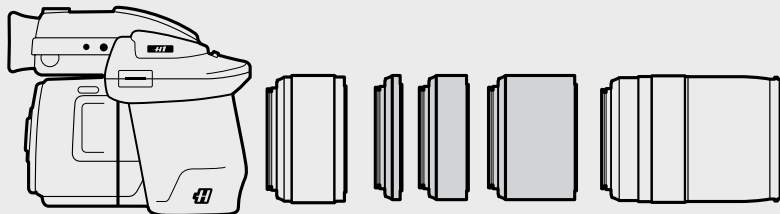


**PHYSICAL DATA:**

	H 13MM	H 26MM	H 52MM
Extension	13 mm	26 mm	52 mm
Weight (including covers)	125 g	150 g	195 g
External dimensions (including covers)	84 x 34 mm	84 x 47 mm	84 x 73 mm

**EXTENSION TUBES & CONVERTER**

When the extension tubes are used together with a converter, they should be mounted between the converter and the lens for optimum performance.

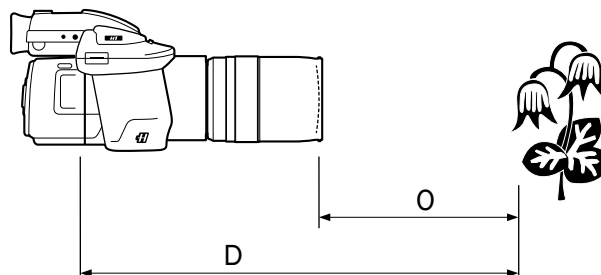


## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Table for lens and single extension tube

- D Subject to film plane distance
- O Subject to lens distance
- m Magnification
- R Exposure reduction (EV), Only used in manual exposure mode



	Lens focus setting	13 mm				26 mm				52 mm				
		D	O	m	R	D	O	m	R	D	O	m	R	
HCD 4/28 mm	∞	218	45	0.45	0.3	199	13	0.90	0.6	-	-	-	-	
	0.35	203	30	0.59	0.4	195	9	1.05	0.7	-	-	-	-	
HC 3.5/35 mm	∞	273	78	0.37	0.3	237	29	0.73	0.6	239	5	1.44	1.1	
	0.5	250	55	0.47	0.4	230	23	0.84	0.7	237	3	1.56	1.2	
HC 3.5/50 mm	∞	365	179	0.26	0.3	281	82	0.52	0.6	259	34	1.03	1.0	
	0.6	304	119	0.38	0.4	264	65	0.64	0.7	255	30	1.17	1.2	
HC 3.5/50 + 1.7x	∞	415	179	0.44	0.3	331	82	0.87	0.6	309	34	1.74	1.0	
	0.6	354	118	0.63	0.4	313	65	1.08	0.7	305	30	1.96	1.2	
HC 2.8/80 mm	∞	681	552	0.16	0.4	435	294	0.32	0.7	333	165	0.63	1.3	
	0.7	440	298	0.31	0.7	364	210	0.47	1.0	320	140	0.78	1.5	
HC 2.8/80 mm + 1.7x	∞	731	551	0.27	0.4	486	294	0.53	0.7	383	165	1.06	1.3	
	0.7	490	298	0.52	0.7	414	210	0.79	1.0	370	140	1.32	1.6	
HC 2.2/100 mm	∞	947	796	0.13	0.35	578	415	0.26	0.67	414	224	0.52	1.23	
	0.9	567	403	0.27	0.69	460	282	0.40	0.98	387	184	0.66	1.49	
HC 2.2/100 mm + 1.7x	∞	996	798	0.22	0.35	628	415	0.44	0.67	464	224	0.88	1.24	
	0.9	617	403	0.45	0.69	510	282	0.67	0.99	438	184	1.11	1.50	
HC Macro 4/120	∞	1353	1154	0.11	0.28	825	613	0.22	0.54	580	343	0.44	1.00	
	0.39	390	133	1.16	1.48	394	124	1.31	1.69	408	112	1.61	2.07	
HC Macro 4/120 + 1.7x	∞	1402	1154	0.18	0.28	875	613	0.37	0.54	630	343	0.73	1.00	
	0.39	440	133	1.94	1.47	444	124	2.20	1.68	458	112	2.71	2.07	
HC 3.2/150 mm	∞	1980	1786	0.09	0.3	1133	925	0.17	0.5	728	495	0.35	1.0	
	1.3	926	731	0.23	0.3	764	557	0.32	0.5	625	392	0.49	1.0	
HC 3.2/150 mm + 1.7x	∞	2030	1785	0.15	0.3	1182	925	0.29	0.5	778	495	0.58	1.0	
	1.3	976	731	0.39	0.3	814	557	0.54	0.5	675	392	0.83	1.0	
HC 4/210 mm	∞	3810	3574	0.06	0.3	2114	1865	0.12	0.5	1285	1010	0.25	0.9	
	1.8	1378	1142	0.21	0.3	1162	914	0.27	0.5	952	677	0.40	0.9	
HC 4/210 mm + 1.7x	∞	3859	3574	0.10	0.3	2163	1865	0.21	0.5	1335	1010	0.41	0.9	
	1.8	1428	1142	0.35	0.3	1212	914	0.46	0.5	1002	677	0.68	0.9	
HC 4.5/300 mm	∞	7178	6910	0.045	0.25	3917	3636	0.089	0.48	2306	1999	0.18	0.90	
	2.45	1949	1681	0.19	0.24	1670	1390	0.24	0.47	1377	1070	0.34	0.88	
HC 4.5/300 mm + 1.7x	∞	7227	6909	0.075	0.25	3967	3636	0.15	0.48	2356	1999	0.30	0.89	
	2.45	1999	1681	0.31	0.22	1721	1389	0.40	0.45	1427	1070	0.57	0.86	
HC 3.5-4.5/50-110 mm	50	∞	410	182	0.25	0.4	322	80	0.51	0.8	297	30	1.01	1.4
		0.7	336	96	0.38	0.4	296	43	0.66	0.8	290	11	1.22	1.4
	80	∞	719	500	0.16	0.3	486	255	0.33	0.6	390	132	0.65	1.0
		0.7	432	202	0.33	0.3	370	127	0.52	0.6	341	72	0.90	1.0
	110	∞	1162	935	0.12	0.2	725	486	0.24	0.5	527	261	0.48	0.8
		0.7	515	277	0.34	0.2	449	198	0.49	0.5	407	129	0.78	0.8

Blue numbers : AF not possible

- : incompatible combination

## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Table for lens and combination of extension tubes

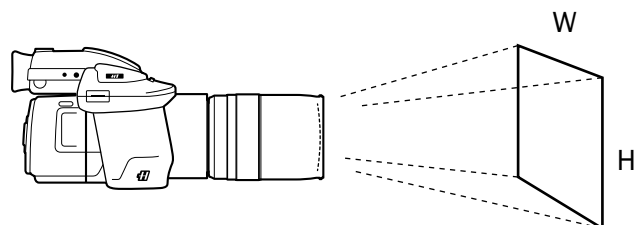
	Lens focus setting	13 + 26 mm				13 + 52 mm				26 + 52 mm				13 + 26 + 52 mm				
		D	O	m	R	D	O	m	R	D	O	m	R	D	O	m	R	
HCD 4/28 mm	∞	201	2	1.35	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.35	200	0	1.50	1	-	-	-	-	-	-	-	-	-	-	-	-	-
HC 3.5/35 mm	∞	234	13	1.09	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5	231	10	1.20	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-
HC 3.5/50 mm	∞	262	50	0.78	0.8	262	24	1.29	1.3	269	18	1.55	1.4	277	13	1.80	1.6	
	0.6	254	42	0.91	1.0	260	22	1.43	1.5	268	17	1.69	1.7	277	13	1.95	1.9	
HC 3.5/50 + 1.7x	∞	312	50	1.30	0.8	312	24	2.16	1.3	319	18	2.59	1.4	327	13	3.01	1.6	
	0.6	304	42	1.52	1.0	310	22	2.4	1.5	318	17	2.83	1.7	327	13	3.27	1.9	
HC 2.8/80 mm	∞	363	208	0.48	1.0	320	139	0.79	1.5	316	122	0.95	1.8	316	109	1.10	2.0	
	0.7	333	166	0.63	1.3	316	122	0.94	1.8	316	110	1.10	2.0	320	100	1.25	2.2	
HC 2.8/80 mm + 1.7x	∞	413	208	0.80	1.0	370	139	1.33	1.6	366	122	1.59	1.8	366	109	1.85	2.0	
	0.7	383	166	1.05	1.3	366	122	1.58	1.8	366	110	1.84	2.0	370	100	2.09	2.2	
HC 2.2/100 mm	∞	464	288	0.39	1.0	389	182	0.65	1.5	376	161	0.78	1.7	371	143	0.91	1.9	
	0.9	412	221	0.53	1.2	376	159	0.79	1.7	371	142	0.92	1.9	370	128	1.05	2.1	
HC 2.2/100 mm + 1.7x	∞	514	288	0.66	1.0	439	186	1.10	1.5	426	161	1.31	1.7	421	143	1.53	1.9	
	0.9	462	221	0.89	1.3	426	159	1.33	1.7	421	142	1.55	2.0	421	128	1.76	2.2	
HC Macro 4/120	∞	657	433	0.33	0.8	539	289	0.55	1.2	516	253	0.66	1.4	503	227	0.77	1.6	
	0.39	400	117	1.46	1.9	416	107	1.77	2.2	425	103	1.92	2.4	435	100	2.07	2.6	
HC Macro 4/120 + 1.7x	∞	707	433	0.55	0.8	589	289	0.92	1.2	566	253	1.10	1.4	553	227	1.28	1.6	
	0.39	450	117	2.45	1.9	466	107	2.97	2.2	475	103	3.22	2.4	485	100	3.48	2.6	
HC 3.2/150 mm	∞	859	638	0.26	0.8	655	409	0.43	1.2	611	351	0.52	1.4	582	310	0.61	1.5	
	1.3	677	457	0.41	0.8	593	346	0.58	1.2	572	312	0.67	1.4	559	287	0.75	1.5	
HC 3.2/150 mm + 1.7x	∞	909	638	0.44	0.8	705	408	0.73	1.2	660	351	0.87	1.4	632	310	1.02	1.5	
	1.3	727	457	0.68	0.8	643	346	0.98	1.2	622	312	1.12	1.4	610	286	1.26	1.5	
HC 4/210 mm	∞	1557	1295	0.19	0.7	1127	839	0.31	1.1	1026	725	0.37	1.3	958	644	0.43	1.4	
	1.8	1034	773	0.34	0.7	896	608	0.47	1.1	856	556	0.53	1.3	828	515	0.60	1.4	
HC 4/210 mm + 1.7x	∞	1607	1295	0.31	0.7	1177	839	0.52	1.1	1076	725	0.62	1.3	1007	644	0.73	1.4	
	1.8	1084	773	0.57	0.7	946	608	0.78	1.1	906	556	0.89	1.3	878	515	1.00	1.4	
HC 4.5/300 mm	∞	2839	2545	0.13	0.7	1991	1671	0.22	1.1	1786	1453	0.27	1.3	1643	1297	0.31	1.4	
	2.45	1495	1201	0.29	0.7	1293	973	0.39	0.1	1231	898	0.44	1.2	1185	839	0.50	1.4	
HC 4.5/300 mm + 1.7x	∞	2888	2544	0.22	0.7	2041	1671	0.37	1.1	1836	1453	0.45	1.3	1693	1297	0.52	1.4	
	2.45	1545	1201	0.49	0.7	1343	973	0.66	1.0	1281	898	0.75	1.2	1235	839	0.84	1.4	
50	∞	301	47	0.76	1.1	300	20	1.26	1.6	-	-	-	-	-	-	-	-	
	0.7	288	22	0.94	1.1	295	4	1.49	1.6	-	-	-	-	-	-	-	-	
80	∞	418	173	0.49	0.8	378	107	0.81	1.2	375	91	0.97	1.4	376	79	1.14	1.6	
	0.7	348	92	0.71	0.8	341	59	1.09	1.2	354	49	1.27	1.4	351	43	1.46	1.6	
110	∞	589	336	0.36	0.7	495	216	0.60	1.0	478	186	0.72	1.2	469	164	0.84	1.3	
	0.7	420	156	0.63	0.7	402	111	0.92	1.0	401	98	1.07	1.2	404	88	1.21	1.3	

Blue numbers : AF not possible  
 - : incompatible combination

## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Area of coverage  
Single extension tube  
Film format: 56 × 41.5 mm



W Covered area width  
H Covered area height  
m Magnification

	Lens focus setting	13 mm			26 mm			52 mm			
		W	H	m	W	H	m	W	H	m	
HCD 4/28 mm	∞	116	85	0.45	59	43	0.90	-	-	-	
	0.35	90	65	0.59	51	37	1.05	-	-	-	
HC 3.5/35 mm	∞	151	112	0.37	77	57	0.73	39	29	1.44	
	0.5	119	88	0.47	67	49	0.84	36	27	1.56	
HC 3.5/50 mm	∞	215	160	0.26	108	80	0.52	54	40	1.03	
	0.6	147	109	0.38	88	65	0.64	48	35	1.17	
HC 3.5/50 + 1.7×	∞	127	94	0.44	64	48	0.87	32	24	1.74	
	0.6	89	66	0.63	52	38	1.08	29	21	1.96	
HC 2.8/80 mm	∞	350	259	0.16	175	130	0.32	89	66	0.63	
	0.7	181	134	0.31	119	88	0.47	72	53	0.78	
HC 2.8/80 mm + 1.7×	∞	207	154	0.27	106	78	0.53	53	39	1.06	
	0.7	108	80	0.52	71	53	0.79	42	31	1.32	
HC 2.2/100 mm	∞	428	317	0.13	214	159	0.26	107	79	0.52	
	0.9	207	154	0.27	140	104	0.40	85	63	0.66	
HC 2.2/100 mm + 1.7×	∞	255	189	0.22	127	94	0.44	64	47	0.88	
	0.9	123	91	0.45	83	62	0.67	50	37	1.11	
HC Macro 4/120	∞	510	378	0.11	255	189	0.22	128	95	0.44	
	0.39	48	36	1.16	43	32	1.31	35	26	1.61	
HC Macro 4/120 + 1.7×	∞	304	226	0.18	152	113	0.37	76	56	0.73	
	0.39	26	21	1.94	25	19	2.20	21	15	2.71	
HC 3.2/150 mm	∞	622	461	0.09	329	244	0.17	160	119	0.35	
	1.3	243	180	0.23	175	130	0.32	114	85	0.49	
HC 3.2/150 mm + 1.7×	∞	373	277	0.15	193	143	0.29	97	72	0.58	
	1.3	144	106	0.39	104	77	0.54	67	50	0.83	
HC 4/210 mm	∞	933	692	0.06	467	346	0.12	224	166	0.25	
	1.8	267	198	0.21	207	154	0.27	140	104	0.40	
HC 4/210 mm + 1.7×	∞	560	415	0.10	267	198	0.21	137	101	0.41	
	1.8	160	119	0.35	122	90	0.46	82	61	0.68	
HC 4.5/300 mm	∞	1256	931	0.045	628	465	0.089	314	233	0.18	
	2.4	299	222	0.19	235	174	0.24	164	121	0.34	
HC 4.5/300 mm + 1.7×	∞	750	555	0.075	375	278	0.15	187	139	0.30	
	2.4	178	132	0.31	140	103	0.40	97	72	0.57	
HC 3.5-4.5/50-110 mm	50	∞	224	166	0.25	110	81	0.51	55	41	1.01
		0.7	147	109	0.38	85	63	0.66	46	34	1.22
	80	∞	350	259	0.16	170	126	0.33	86	64	0.65
		0.7	170	126	0.33	108	80	0.52	62	46	0.90
	110	∞	467	346	0.12	233	173	0.24	117	86	0.48
		0.7	165	122	0.34	114	85	0.49	72	53	0.78

Blue numbers : AF not possible  
- : incompatible combination

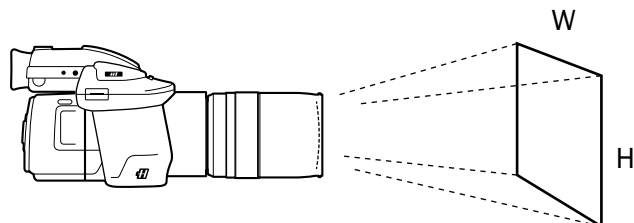
## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Area of coverage

Single extension tube

Digital format: 44.2 × 33.1 mm



W Covered area width  
H Covered area height  
m Magnification

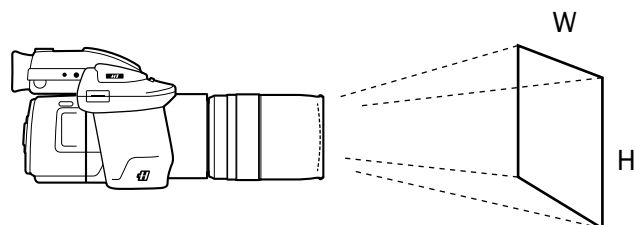
	Lens focus setting	13 mm			26 mm			52 mm			
		W	H	m	W	H	m	W	H	m	
HCD 4/28 mm	∞	92	68	0.45	47	34	0.90	-	-	-	
	0.35	71	52	0.59	40	30	1.05	-	-	-	
HC 3.5/35 mm	∞	119	89	0.37	61	45	0.73	31	23	1.44	
	0.5	94	70	0.47	53	39	0.84	28	22	1.56	
HC 3.5/50 mm	∞	170	128	0.26	85	64	0.52	43	32	1.03	
	0.6	116	87	0.38	69	52	0.64	38	28	1.17	
HC 3.5/50 + 1.7×	∞	100	75	0.44	51	38	0.87	25	19	1.74	
	0.6	70	53	0.63	41	30	1.08	23	17	1.96	
HC 2.8/80 mm	∞	276	207	0.16	138	104	0.32	70	53	0.63	
	0.7	143	107	0.31	94	70	0.47	57	42	0.78	
HC 2.8/80 mm + 1.7×	∞	163	123	0.27	84	62	0.53	42	31	1.06	
	0.7	85	64	0.52	56	42	0.79	33	25	1.32	
HC 2.2/100 mm	∞	338	253	0.13	169	127	0.26	84	63	0.52	
	0.9	163	123	0.27	111	83	0.40	67	50	0.66	
HC 2.2/100 mm + 1.7×	∞	201	151	0.22	100	75	0.44	51	37	0.88	
	0.9	97	73	0.45	66	49	0.67	39	30	1.11	
HC Macro 4/120	∞	403	301	0.11	201	151	0.22	101	76	0.44	
	0.39	38	29	1.16	34	26	1.31	28	21	1.61	
HC Macro 4/120 + 1.7×	∞	240	180	0.18	120	90	0.37	60	45	0.73	
	0.39	21	17	1.94	20	15	2.20	17	12	2.71	
HC 3.2/150 mm	∞	491	368	0.09	260	195	0.17	126	95	0.35	
	1.3	192	144	0.23	138	104	0.32	90	68	0.49	
HC 3.2/150 mm + 1.7×	∞	294	221	0.15	152	114	0.29	77	57	0.58	
	1.3	114	85	0.39	82	61	0.54	53	40	0.83	
HC 4/210 mm	∞	736	552	0.06	369	276	0.12	177	132	0.25	
	1.8	211	158	0.21	163	123	0.27	111	83	0.40	
HC 4/210 mm + 1.7×	∞	442	331	0.10	211	158	0.21	108	81	0.41	
	1.8	126	95	0.35	96	72	0.46	65	49	0.68	
HC 4.5/300 mm	∞	991	743	0.045	496	371	0.089	248	186	0.18	
	2.4	236	177	0.19	185	139	0.24	129	97	0.34	
HC 4.5/300 mm + 1.7×	∞	592	443	0.075	296	222	0.15	148	111	0.30	
	2.4	140	105	0.31	111	82	0.40	77	57	0.57	
HC 3.5-4.5/50-110 mm	50	∞	177	132	0.25	87	65	0.51	43	33	1.01
		0.7	116	87	0.38	67	50	0.66	36	27	1.22
	80	∞	276	207	0.16	134	100	0.33	68	51	0.65
		0.7	134	100	0.33	85	64	0.52	49	37	0.90
	110	∞	369	276	0.12	184	138	0.24	92	69	0.48
		0.7	130	97	0.34	90	68	0.49	57	42	0.78

Blue numbers : AF not possible  
- : incompatible combination

## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Area of coverage  
Single extension tube  
Digital format 49 × 36.7 mm



W Covered area width  
H Covered area height  
m Magnification

	Lens focus setting	13 mm			26 mm			52 mm			
		W	H	m	W	H	m	W	H	m	
HCD 4/28 mm	∞	102	75	0.45	52	38	0.90	-	-	-	
	0.35	79	58	0.59	45	33	1.05	-	-	-	
HC 3.5/35 mm	∞	132	99	0.37	67	50	0.73	34	26	1.44	
	0.5	104	78	0.47	59	43	0.84	32	24	1.56	
HC 3.5/50 mm	∞	188	142	0.26	95	71	0.52	47	35	1.03	
	0.6	129	96	0.38	77	57	0.64	42	31	1.17	
HC 3.5/50 + 1.7×	∞	111	83	0.44	56	42	0.87	28	21	1.74	
	0.6	78	58	0.63	46	34	1.08	25	19	1.96	
HC 2.8/80 mm	∞	306	229	0.16	153	115	0.32	78	58	0.63	
	0.7	158	118	0.31	104	78	0.47	63	47	0.78	
HC 2.8/80 mm + 1.7×	∞	181	136	0.27	93	69	0.53	46	34	1.06	
	0.7	95	71	0.52	62	47	0.79	37	27	1.32	
HC 2.2/100 mm	∞	375	280	0.13	187	141	0.26	94	70	0.52	
	0.9	181	136	0.27	123	92	0.40	74	56	0.66	
HC 2.2/100 mm + 1.7×	∞	223	167	0.22	111	83	0.44	56	42	0.88	
	0.9	108	80	0.45	73	55	0.67	44	33	1.11	
HC Macro 4/120	∞	446	334	0.11	223	167	0.22	112	84	0.44	
	0.39	42	32	1.16	38	28	1.31	31	23	1.61	
HC Macro 4/120 + 1.7×	∞	266	200	0.18	133	100	0.37	67	50	0.73	
	0.39	23	19	1.94	22	17	2.20	18	13	2.71	
HC 3.2/150 mm	∞	544	408	0.09	288	216	0.17	140	105	0.35	
	1.3	213	159	0.23	153	115	0.32	100	75	0.49	
HC 3.2/150 mm + 1.7×	∞	326	245	0.15	169	126	0.29	85	64	0.58	
	1.3	126	94	0.39	91	68	0.54	59	44	0.83	
HC 4/210 mm	∞	816	612	0.06	409	306	0.12	196	147	0.25	
	1.8	234	175	0.21	181	136	0.27	123	92	0.40	
HC 4/210 mm + 1.7×	∞	490	367	0.10	234	175	0.21	120	89	0.41	
	1.8	140	105	0.35	107	80	0.46	72	54	0.68	
HC 4.5/300 mm	∞	1099	823	0.045	550	411	0.089	275	206	0.18	
	2.4	262	196	0.19	206	154	0.24	144	107	0.34	
HC 4.5/300 mm + 1.7×	∞	656	491	0.075	328	246	0.15	164	123	0.30	
	2.4	156	117	0.31	123	91	0.40	85	64	0.57	
HC 3.5-4.5/50-110 mm	50	∞	196	147	0.25	96	72	0.51	48	36	1.01
		0.7	129	96	0.38	74	56	0.66	40	30	1.22
	80	∞	306	229	0.16	149	111	0.33	75	57	0.65
		0.7	149	111	0.33	95	71	0.52	54	41	0.90
	110	∞	409	306	0.12	204	153	0.24	102	76	0.48
		0.7	144	108	0.34	100	75	0.49	63	47	0.78

Blue numbers : AF not possible  
- : incompatible combination

## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Area of coverage – Combination of extension tubes. Film format: 56 × 41.5 mm

	Lens focus setting	13 + 26 mm			13 + 52 mm			26 + 52 mm			13 + 26 + 52 mm		
		W	H	m	W	H	m	W	H	m	W	H	m
HCD 4/28 mm	∞	39.3	28.6	1.3	-	-	-	-	-	-	-	-	-
	0.35	35.6	25.8	1.5	-	-	-	-	-	-	-	-	-
HC 3.5/35 mm	∞	51.4	38.1	1.09	-	-	-	-	-	-	-	-	-
	0.5	46.7	34.6	1.20	-	-	-	-	-	-	-	-	-
HC 3.5/50 mm	∞	71.8	53.2	0.78	43.4	32.2	1.29	36.1	26.8	1.55	31.1	23.1	1.80
	0.6	61.5	45.6	0.91	39.2	29.0	1.43	33.1	24.6	1.69	28.7	21.3	1.95
HC 3.5/50 + 1.7x	∞	43.1	31.9	1.30	25.9	19.2	2.16	21.6	16.0	2.59	18.6	13.8	3.01
	0.6	36.8	27.3	1.52	23.3	17.3	2.40	19.8	14.7	2.83	17.1	12.7	3.27
HC 2.8/80 mm	∞	117	86.5	0.48	70.9	52.5	0.79	58.9	43.7	0.95	50.9	37.7	1.10
	0.7	88.9	65.9	0.63	59.6	44.1	0.94	50.9	37.7	1.10	44.8	33.2	1.25
HC 2.8/80 mm + 1.7x	∞	70.0	51.9	0.80	42.1	31.2	1.33	35.2	26.1	1.59	30.3	22.4	1.85
	0.7	53.3	39.5	1.05	35.4	26.3	1.58	30.4	22.6	1.84	26.8	19.9	2.09
HC 2.2/100 mm	∞	143	106	0.39	86	64	0.65	72	53	0.78	61	46	0.91
	0.9	106	78	0.53	71	52	0.79	61	45	0.92	53	40	1.05
HC 2.2/100 mm + 1.7x	∞	85	63	0.66	51	38	1.10	43	32	1.31	37	27	1.53
	0.9	63	46	0.89	42	31	1.33	36	27	1.55	32	24	1.76
HC Macro 4/120	∞	170	126	0.33	102	76	0.55	85	63	0.66	73	54	0.77
	0.39	38	28	1.46	32	24	1.77	29	22	1.92	27	20	2.07
HC Macro 4/120 + 1.7x	∞	102	75	0.55	61	45	0.92	51	38	1.10	44	32	1.28
	0.39	23	17	2.45	19	14	2.97	17	13	3.22	16	12	3.48
HC 3.2/150 mm	∞	215	160	0.26	130	96.5	0.43	108	79.8	0.52	91.8	68.0	0.61
	1.3	137	101	0.41	96.6	71.6	0.58	83.6	61.9	0.67	74.7	55.3	0.75
HC 3.2/150 mm + 1.7x	∞	127	94.3	0.44	76.7	56.8	0.73	64.4	47.7	0.87	54.9	40.7	1.02
	1.3	82.4	61.0	0.68	57.1	42.3	0.98	50.0	37.1	1.12	44.4	32.9	1.26
HC 4/210 mm	∞	295	218	0.19	181	134	0.31	151	112	0.37	130	96.5	0.43
	1.8	165	122	0.34	119	88.3	0.47	106	78.3	0.53	93.3	69.2	0.60
HC 4/210 mm + 1.7x	∞	181	134	0.31	108	79.8	0.52	90.3	66.9	0.62	76.7	56.8	0.73
	1.8	98.2	72.8	0.57	71.8	53.2	0.78	62.9	46.6	0.89	56.0	41.5	1.00
HC 4.5/300 mm	∞	419	310	0.13	251	186	0.22	210	155	0.27	180	133	0.31
	2.45	193	143	0.29	142	106	0.39	126	93	0.44	113	84	0.50
HC 4.5/300 mm + 1.7x	∞	250	185	0.22	150	111	0.37	125	93	0.45	107	79	0.52
	2.45	115	85	0.49	85	63	0.66	75	55	0.75	67	50	0.84
50	∞	73.7	54.6	0.76	44.4	32.9	1.26	-	-	-	-	-	-
	0.7	59.6	44.1	0.94	37.6	27.9	1.49	-	-	-	-	-	-
80	∞	114	84.7	0.49	69.1	51.2	0.81	57.7	42.8	0.97	49.1	36.4	1.14
	0.7	78.9	58.5	0.71	51.4	38.1	1.09	44.1	32.7	1.27	38.4	28.4	1.46
110 mm	∞	156	115	0.36	93.3	69.2	0.60	77.8	57.6	0.72	66.7	49.4	0.84
	0.7	88.9	65.9	0.63	60.9	45.1	0.92	52.3	38.8	1.07	46.3	34.3	1.21

Blue numbers : AF not possible  
 - : incompatible combination



## H SYSTEM EXTENSION TUBES

### METRIC UNITS

Area of coverage – Combination of extension tubes. Digital format: 44.2 × 33.1 mm

	Lens focus setting	13 + 26 mm			13 + 52 mm			26 + 52 mm			13 + 26 + 52 mm		
		W	H	m	W	H	m	W	H	m	W	H	m
HCD 4/28 mm	∞	31.0	22.8	1.3	-	-	-	-	-	-	-	-	-
	0.35	28.1	20.6	1.5	-	-	-	-	-	-	-	-	-
HC 3.5/35 mm	∞	40.6	30.4	1.09	-	-	-	-	-	-	-	-	-
	0.5	36.9	27.6	1.20	-	-	-	-	-	-	-	-	-
HC 3.5/50 mm	∞	56.7	42.4	0.78	34.3	25.7	1.29	28.5	21.4	1.55	24.5	18.4	1.80
	0.6	48.5	36.4	0.91	30.9	23.1	1.43	26.1	19.6	1.69	22.7	17.0	1.95
HC 3.5/50 + 1.7x	∞	34.0	25.4	1.30	20.4	15.3	2.16	17.0	12.8	2.59	14.7	11.0	3.01
	0.6	29.0	21.8	1.52	18.4	13.8	2.40	15.6	11.7	2.83	13.5	10.1	3.27
HC 2.8/80 mm	∞	92.1	69.0	0.48	56.0	41.9	0.79	46.5	34.9	0.95	40.2	30.1	1.10
	0.7	70.2	52.6	0.63	47.0	35.2	0.94	40.2	30.1	1.10	35.4	26.5	1.25
HC 2.8/80 mm + 1.7x	∞	55.3	41.4	0.80	33.2	24.9	1.33	27.8	20.8	1.59	23.9	17.9	1.85
	0.7	42.1	31.5	1.05	27.9	21.0	1.58	24.0	18.0	1.84	21.2	15.9	2.09
HC 2.2/100 mm	∞	113	84.5	0.39	67.9	51.0	0.65	56.8	42.3	0.78	48.1	36.7	0.91
	0.9	83.7	62.2	0.53	56.0	41.5	0.79	48.1	35.9	0.92	41.8	31.9	1.05
HC 2.2/100 mm + 1.7x	∞	67.1	50.2	0.66	40.3	30.3	1.10	33.9	25.5	1.31	29.2	21.5	1.53
	0.9	49.7	36.7	0.89	33.2	24.7	1.33	28.4	21.5	1.55	25.3	19.1	1.76
HC Macro 4/120	∞	134	100	0.33	80.5	60.6	0.55	67.1	50.2	0.66	57.6	43.1	0.77
	0.39	30.0	22.3	1.46	25.3	19.1	1.77	22.9	17.5	1.92	21.3	16.0	2.07
HC Macro 4/120 + 1.7x	∞	80.5	59.8	0.55	48.1	35.9	0.92	40.3	30.3	1.10	34.7	25.5	1.28
	0.39	18.2	13.6	2.45	15.0	11.2	2.97	13.4	10.4	3.22	12.6	9.6	3.48
HC 3.2/150 mm	∞	170	127	0.26	103	77.0	0.43	85.0	63.6	0.52	72.5	54.2	0.61
	1.3	108	80.7	0.41	76.2	57.1	0.58	66.0	49.4	0.67	59.0	44.1	0.75
HC 3.2/150 mm + 1.7x	∞	100	75.2	0.44	60.5	45.3	0.73	50.8	38.0	0.87	43.3	32.5	1.02
	1.3	65.0	48.7	0.68	45.1	33.7	0.98	39.5	29.6	1.12	35.0	26.2	1.26
HC 4/210 mm	∞	233	174	0.19	142	107	0.31	120	89.5	0.37	103	77.0	0.43
	1.8	130	97.4	0.34	94.0	70.4	0.47	83.4	62.5	0.53	73.6	55.2	0.60
HC 4/210 mm + 1.7x	∞	142	107	0.31	85.0	63.6	0.52	71.3	53.4	0.62	60.5	45.3	0.73
	1.8	77.5	58.1	0.57	56.7	42.4	0.78	49.6	37.2	0.89	44.2	33.1	1.00
HC 4.5/300 mm	∞	331	247	0.13	198	148	0.22	166	124	0.27	142	106	0.31
	2.45	152	114	0.29	112	84.5	0.39	99.5	74.2	0.44	89.2	67.0	0.50
HC 4.5/300 mm + 1.7x	∞	197	148	0.22	118	88.5	0.37	98.7	74.2	0.45	84.5	63.0	0.52
	2.45	90.8	67.8	0.49	67.1	50.2	0.66	59.2	43.9	0.75	52.9	39.9	0.84
50	∞	58.2	43.5	0.76	35.0	26.2	1.26	-	-	-	-	-	-
	0.7	47.0	35.2	0.94	29.7	22.3	1.49	-	-	-	-	-	-
80	∞	90.2	67.6	0.49	54.5	40.8	0.81	45.5	34.1	0.97	38.8	29.0	1.14
	0.7	62.3	46.7	0.71	40.6	30.4	1.09	34.8	26.1	1.27	30.3	22.7	1.46
110	∞	123	92.0	0.36	73.6	55.2	0.60	61.4	45.9	0.72	52.6	39.4	0.84
	0.7	70.2	52.6	0.63	48.1	36.0	0.92	41.3	30.9	1.07	36.5	27.4	1.21

Blue numbers : AF not possible  
 - : incompatible combination



## H SYSTEM EXTENSION TUBES

DATASHEET

### METRIC UNITS

Area of coverage – Combination of extension tubes. Digital format 49 × 36.7 mm

Lens focus setting	13 + 26 mm			13 + 52 mm			26 + 52 mm			13 + 26 + 52 mm		
	W	H	m	W	H	m	W	H	m	W	H	m
HCD 4/28 mm	34.4	25.3	1.3	-	-	-	-	-	-	-	-	-
HC 3.5/35 mm	45.0	33.7	1.09	-	-	-	-	-	-	-	-	-
HC 3.5/50 mm	62.8	47.0	0.78	38.0	28.5	1.29	31.6	23.7	1.55	27.2	20.4	1.80
HC 3.5/50 + 1.7x	53.8	40.3	0.91	34.3	25.6	1.43	29.0	21.8	1.69	25.1	18.8	1.95
HC 2.8/80 mm	37.7	28.2	1.30	22.7	17.0	2.16	18.9	14.1	2.59	16.3	12.2	3.01
HC 2.8/80 mm + 1.7x	32.2	24.1	1.52	20.4	15.3	2.40	17.3	13.0	2.83	15.0	11.2	3.27
HC 2.2/100 mm	102	76.5	0.48	62.0	46.4	0.79	51.5	38.6	0.95	44.5	33.3	1.10
HC 2.2/100 mm + 1.7x	77.8	58.3	0.63	52.2	39.0	0.94	44.5	33.3	1.10	39.2	29.4	1.25
HC Macro 4/120	61.3	45.9	0.80	36.8	27.6	1.33	30.8	23.1	1.59	26.5	19.8	1.85
HC Macro 4/120 + 1.7x	46.6	34.9	1.05	31.0	23.3	1.58	26.6	20.0	1.84	23.5	17.6	2.09
HC 3.2/150 mm	125	93.7	0.39	75.3	56.6	0.65	63.0	46.9	0.78	53.4	40.7	0.91
HC 3.2/150 mm + 1.7x	92.8	69.0	0.53	62.1	46.0	0.79	53.4	39.8	0.92	46.4	35.4	1.05
HC 4/210 mm	74.4	55.7	0.66	44.6	33.6	1.10	37.6	28.3	1.31	32.4	23.9	1.53
HC 4/210 mm + 1.7x	55.1	40.7	0.89	36.8	27.4	1.33	31.5	23.9	1.55	28.0	21.2	1.76
HC 3.2/150 mm	149	111	0.33	89.3	67.2	0.55	74.4	55.7	0.66	63.9	47.8	0.77
HC 3.2/150 mm + 1.7x	33.3	24.8	1.46	28.0	21.2	1.77	25.4	19.5	1.92	23.6	17.7	2.07
HC 4/210 mm	89.3	66.3	0.55	53.4	39.8	0.92	44.6	33.6	1.10	38.5	28.3	1.28
HC 4/210 mm + 1.7x	20.1	15.0	2.45	16.6	12.4	2.97	14.9	11.5	3.22	14.0	10.6	3.48
HC 3.2/150 mm	188	141	0.26	113	85.3	0.43	94.2	70.6	0.52	80.3	60.1	0.61
HC 3.2/150 mm + 1.7x	120	89.5	0.41	84.5	63.3	0.58	73.2	54.7	0.67	65.4	48.9	0.75
HC 4/210 mm	111	83.4	0.44	67.1	50.2	0.73	56.4	42.2	0.87	48.0	36.0	1.02
HC 4/210 mm + 1.7x	72.1	53.9	0.68	50.0	37.4	0.98	43.8	32.8	1.12	38.9	29.1	1.26
HC 4.5/300 mm	258	193	0.19	158	118.4	0.31	132	99.2	0.37	114	85.3	0.43
HC 4.5/300 mm + 1.7x	144	108	0.34	104	78.1	0.47	92.5	69.2	0.53	81.6	61.2	0.60
HC 4.5/300 mm	158	118	0.31	94.2	70.6	0.52	79.0	59.2	0.62	67.1	50.2	0.73
HC 4.5/300 mm + 1.7x	85.9	64.4	0.57	62.8	47.0	0.78	55.0	41.2	0.89	49.0	36.7	1.00
HC 50	367	274	0.13	220	164.5	0.22	184	137	0.27	158	118	0.31
HC 80	169	126	0.29	124	93.7	0.39	110	82.2	0.44	98.9	74.3	0.50
HC 110	219	164	0.22	131	98.2	0.37	109.4	82.2	0.45	93.6	69.9	0.52
HC 50	101	75.2	0.49	74.4	55.7	0.66	65.6	48.6	0.75	58.6	44.2	0.84
HC 80	64.5	48.3	0.76	38.9	29.1	1.26	-	-	-	-	-	-
HC 110	52.2	39.0	0.94	32.9	24.7	1.49	-	-	-	-	-	-
HC 50	100	74.9	0.49	60.5	45.3	0.81	50.5	37.8	0.97	43.0	32.2	1.14
HC 80	69.0	51.7	0.71	45.0	33.7	1.09	38.6	28.9	1.27	33.6	25.1	1.46
HC 110	136	102	0.36	81.6	61.2	0.60	68.1	50.9	0.72	58.4	43.7	0.84
HC 50	77.8	58.3	0.63	53.3	39.9	0.92	45.8	34.3	1.07	40.5	30.3	1.21

Blue numbers : AF not possible  
 - : incompatible combination