

DF8HA

Working Distance [mm]	Optical Magnification	Extension Ring [mm]	Field of View [mm]											
			2/3"		1/1.8"		1/2"		1/2.5"		1/3"			
			H	V	H	V	H	V	H	V	H	V		
1000	0.006x	-	-	-	-	-	-	1109.0	815.7	979.9	722.9	815.7	604.2	
950	0.006x	-	-	-	-	-	-	1054.4	775.5	931.6	687.2	775.5	574.4	
900	0.007x	-	-	-	-	-	-	999.8	735.3	883.3	651.6	735.3	544.6	
850	0.007x	-	-	-	-	-	-	945.1	695.1	835.0	615.9	695.1	514.8	
800	0.008x	-	-	-	-	-	-	890.5	654.9	786.7	580.3	654.9	485.0	
750	0.008x	-	-	-	-	-	-	835.9	614.7	738.5	544.7	614.7	455.2	
700	0.009x	-	-	-	-	-	-	781.2	574.5	690.2	509.0	574.5	425.4	
650	0.009x	-	-	-	-	-	-	726.6	534.3	641.9	473.4	534.3	395.6	
600	0.010x	-	-	-	-	-	-	672.0	494.0	593.6	437.8	494.0	365.9	
550	0.011x	-	-	-	-	-	-	617.3	453.8	545.3	402.1	453.8	336.1	
500	0.012x	-	-	-	-	-	-	562.7	413.6	497.0	366.5	413.6	306.3	
450	0.013x	-	-	-	-	-	-	508.0	373.4	448.7	330.8	373.4	276.5	
400	0.015x	-	-	-	-	-	-	453.4	333.2	400.4	295.2	333.2	246.7	
350	0.017x	-	-	-	-	-	-	398.8	293.0	352.1	259.6	293.0	216.9	
300	0.020x	-	-	-	-	-	-	344.1	252.8	303.8	223.9	252.8	187.1	
250	0.023x	-	-	-	-	-	-	289.5	212.6	255.6	188.3	212.6	157.3	
200	0.029x	-	-	-	-	-	-	234.9	172.3	207.3	152.6	172.3	127.5	
150	0.038x	-	-	-	-	-	-	180.2	132.1	159.0	117.0	132.1	97.7	
100	0.054x	-	-	-	-	-	-	125.6	91.9	110.7	81.4	91.9	67.9	

HF12.5HA

Working Distance [mm]	Optical Magnification	Extension Ring [mm]	Field of View [mm]											
			2/3"		1/1.8"		1/2"		1/2.5"		1/3"			
			H	V	H	V	H	V	H	V	H	V		
1000	0.013x	-	723.2	532.3	576.5	427.0	515.4	382.6	457.1	340.1	382.6	285.3		
950	0.013x	-	687.5	506.0	548.1	405.9	489.9	363.8	434.6	323.3	363.8	271.3		
900	0.014x	-	651.9	479.8	519.6	384.9	464.5	344.9	412.0	306.5	344.9	257.2		
850	0.015x	-	616.2	453.5	491.2	363.8	439.1	326.0	389.5	289.8	326.0	243.1		
800	0.016x	-	580.6	427.2	462.8	342.7	413.7	307.1	366.9	273.0	307.1	229.0		
750	0.017x	-	544.9	401.0	434.3	321.7	388.3	288.3	344.4	256.2	288.3	215.0		
700	0.018x	-	509.2	374.7	405.9	300.6	362.9	269.4	321.8	239.4	269.4	200.9		
650	0.019x	-	473.6	348.5	377.5	279.6	337.4	250.5	299.3	222.7	250.5	186.8		
600	0.021x	-	437.9	322.2	349.0	258.5	312.0	231.6	276.7	205.9	231.6	172.7		
550	0.023x	-	402.3	296.0	320.6	237.4	286.6	212.8	254.2	189.1	212.8	158.7		
500	0.025x	-	366.6	269.7	292.2	216.4	261.2	193.9	231.7	172.3	193.9	144.6		
450	0.028x	-	331.0	243.5	263.7	195.3	235.8	175.0	209.1	155.5	175.0	130.5		
400	0.031x	-	295.3	217.2	235.3	174.2	210.3	156.1	186.6	138.8	156.1	116.4		
350	0.035x	-	259.6	191.0	206.9	153.2	184.9	137.3	164.0	122.0	137.3	102.3		
300	0.041x	-	224.0	164.7	178.4	132.1	159.5	118.4	141.5	105.2	118.4	88.3		
250	0.049x	-	188.3	138.5	150.0	111.1	134.1	99.5	118.9	88.4	99.5	74.2		
200	0.060x	-	152.7	112.2	121.6	90.0	108.6	80.6	96.4	71.7	80.6	60.1		
150	0.079x	-	117.0	86.0	93.1	68.9	83.2	61.8	73.8	54.9	61.8	46.0		
100	0.114x	-	81.3	59.7	64.7	47.9	57.8	42.9	51.2	38.1	42.9	32.0		

HF25HA

Working Distance [mm]	Optical Magnification	Extension Ring [mm]	Field of View [mm]											
			2/3"		1/1.8"		1/2"		1/2.5"		1/3"			
			H	V	H	V	H	V	H	V	H	V		
1000	0.026x	-	344.8	258.0	278.4	208.5	250.1	187.3	222.8	166.9	187.3	140.4		
950	0.027x	-	327.7	245.2	264.6	198.1	237.7	178.0	211.7	158.6	178.0	133.4		
900	0.028x	-	310.6	232.3	250.8	187.8	225.3	168.7	200.6	150.3	168.7	126.4		
850	0.030x	-	293.4	219.5	236.9	177.4	212.8	159.4	189.6	142.0	159.4	119.5		
800	0.032x	-	276.3	206.7	223.1	167.0	200.4	150.1	178.5	133.7	150.1	112.5		
750	0.034x	-	259.2	193.9	209.3	156.7	188.0	140.8	167.4	125.4	140.8	105.5		
700	0.037x	-	242.1	181.1	195.4	146.3	175.5	131.5	156.3	117.1	131.5	98.5		
650	0.039x	-	224.9	168.2	181.6	136.0	163.1	122.2	145.3	108.8	122.2	91.5		
600	0.043x	-	207.8	155.4	167.8	125.6	150.7	112.8	134.2	100.5	112.8	84.6		
550	0.046x	-	180.7	142.6	153.9	115.2	138.2	103.5	123.1	92.2	103.5	77.6		
500	0.051x	-	173.5	129.8	140.1	104.9	125.8	94.2	112.1	83.9	94.2	70.6		
450	0.057x	-	156.4	117.0	126.3	94.5	113.4	84.1	101.0	75.6	84.9	63.6		
400	0.064x	-	139.3	104.1	112.4	84.1	101.0	75.6	89.9	67.3	75.6	56.6		
350	0.073x	-	122.2	91.3	98.6	73.8	88.5	66.3	78.8	59.0	66.3	49.7		
300	0.084x	-	105.0	78.5	84.7	63.4	76.1	57.0	67.8	50.7	57.0	42.7		
250	0.101x	-	87.9	65.7	70.9	53.0	63.7	47.6	56.7	42.4	47.6	35.7		
200	0.129x	-	70.7	52.8	57.0	42.7	51.2	38.3	45.6	34.1	38.3	28.7		
150	0.166x	-	53.6	40.0	43.2	32.9	38.8	29.0	34.5	25.8	29.0	21.7		
100	0.245x	-	36.4	27.2	29.3	21.9	26.3	19.7	23.4	17.5	19.7	14.7		

HF30HA

Working Distance [mm]	Optical Magnification	Extension Ring [mm]	Field of View [mm]											
			2/3"		1/1.8"		1/2"		1/2.5"		1/3"			
[mm]		[mm]	H	V	H	V	H	V	H	V	H	V		
1500	0.034x	-	254.9	191.2	206.3	154.8	185.4	139.1	165.3	124.0	139.1	104.4		
1450	0.036x	-	246.0	184.6	199.1	149.4	179.0	134.3	159.6	119.7	134.3	100.7		
1400	0.037x	-	237.1	177.9	191.9	144.0	172.5	129.5	153.8	115.4	129.5	97.1		
1350	0.038x	-	228.3	171.3	184.8	138.6	166.1	124.6	148.1	111.1	124.6	93.5		
1300	0.040x	-	218.4	164.6	177.6	133.2	159.7	119.8	142.3	106.8	119.8	89.9		
1250	0.042x	-	210.6	158.0	170.4	127.9	153.2	114.9	136.6	102.4	114.9	86.2		
1200	0.044x	-	201.7	151.3	163.2	122.5	146.8	110.1	130.8	98.1	110.1	82.6		
1150	0.046x	-	192.8	144.7	156.1	117.1	140.3	105.3	125.1	93.8	105.3	79.0		
1100	0.048x	-	184.0	138.0	148.9	111.7	133.9	100.4	119.3	89.5	100.4	75.3		
1050	0.050x	-	175.1	131.4	141.7	106.3	127.4	95.6	113.6	85.2	95.6	71.7		
1000	0.053x	-	166.3	124.7	134.5	100.9	121.0	90.7	107.8	80.9	90.7	68.1		
950	0.056x	-	157.4	118.1	127.4	95.6	114.5	85.9	102.1	76.6	85.9	64.4		
900	0.059x	-	148.5	111.4	120.2	90.2	108.1	81.1	96.3	72.3	81.1	60.8		
850	0.063x	-	139.7	104.8	113.0	84.8	101.6	76.2	90.6	67.9	76.2	57.2		
800	0.067x	-	130.8	98.1	105.9	79.4	95.2	71.4	84.8	63.6	71.4	53.5		
750	0.072x	-	121.9	91.5	98.7	74.0	88.7	66.5	79.1	59.3	66.5	49.9		
700	0.078x	-	113.1	84.8	91.5	68.6	82.3	61.7	73.3	55.0	61.7	46.3		
650	0.084x	-	104.2	78.2	84.3	63.3	75.8	56.9	67.6	50.7	56.9	42.7		
600	0.092x	-	95.4	71.5	77.2	57.9	69.4	52.0	61.8	46.4	52.0	39.0		
550	0.102x	-	86.5	64.9	70.0	52.5	62.9	47.2	56.1	42.1	47.2	35.4		
500	0.113x	-	77.6	58.2	62.8	47.1	56.5	42.3	50.3	37.7	42.3	31.8		
450	0.128x	-	68.8	51.6	55.6	41.7	50.0	37.5	44.6	33.4	37.5	28.1		
400	0.147x	1	59.9	44.9	48.5	36.3	43.6	32.7	38.8	29.1	32.7	24.5		
350	0.172x	5	51.0	38.3	41.3	31.0	37.1	27.8	33.1	24.8	27.8	20.9		
300	0.209x	9	42.1	31.6	34.1	25.6	30.6	23.0	27.3	20.5	23.0	17.2		
250	0.265x	10	33.3	24.9	26.9	20.2	24.2	18.1	21.6	16.2	18.1	13.6		
200	0.361x	15	24.4	18.3	19.7	14.8	17.7	13.3	15.8	11.9	13.3	10.0		
150	0.533x	20	16.5	12.4	13.4	10.0	12.0	9.0	10.7	8.0	9.0	6.8		