

**Example:**  
 Horizontal FOV = 1 in  
 Working Dist. = 14 in  
**Best Lens:**  
 50 mm plus  
 5 mm Extension Tube

**Directions:**

1. Determine Field-of-View (FOV) in inches.
2. Determine working distance in inches.
3. Locate FOV in the first column of the table at right.
4. Scan across the row to the working distance closest to desired application.
5. Use the lens size and extension tube indicated for that row.

**Definitions:**

**Field-of-View (FOV):**

The area of the inspection to be captured by the sensor.

**Working Distance (WD):** The distance between the front of the sensor and the target object.

**Extension Tubes:**

Spacers between the lens and the sensor that allow the lens to focus at closer working distances.



Horizontal x Vertical FOV (in)	Working Distance in Inches (+ Extension Tube in Millimeters)							
	Lens Choices							
	4mm	6.5mm	8mm	12mm	16mm	25mm	50mm	75mm
0.10 X 0.08								
0.20 X 0.15								
0.30 X 0.23							7.7 30*	11.4 40*
0.40 X 0.30							8.7 20*	12.8 25*
0.50 X 0.38						3.9 7*	9.7 15*	14.2 20*
1.0 X 0.80					4.3 4.0*	6.5 3*	14.8 5*	21.4 5*
1.5 X 1.1				4.3 2.0*	6.0 4.0*	9.1 2*	19.9 5*	28.5 1*
2.0 X 1.5		5.0 0.5*	5.0 0.5*	5.6 2.0*	7.7 2.0*	11.8 2*	25.0	35.7
2.5 X 1.9		5.6 0.5*	5.7 0.25*	6.9 0.5*	9.4 2.0*	14.4 2*	30.1	42.8
3.0 X 2.3		6.2 0.25*	6.5	8.1 0.5*	11.1 2.0*	17.0	35.2	50.0
3.5 X 2.6		6.8 0.25*	7.2	9.4 0.5*	12.8 2.0*	19.6	40.3	57.1
4.0 X 3.0			8.0	10.6 0.5*	14.5 2.0*	22.2	45.4	64.3
4.5 X 3.4			8.8	11.9 0.5*	16.3 2.0*	24.8	50.5	71.4
5.0 X 3.8			9.5	13.2	18.0	27.5	55.6	78.6
5.5 X 4.1			10.3	14.4	19.7	30.1	60.7	85.7
6.0 X 4.5			11.1	15.7	21.4	32.7	65.8	92.9
6.5 X 4.9			11.8	17.0	23.1	35.3	70.9	100.0
7.0 X 5.3			12.6	18.2	24.8	37.9	76.0	107.2
7.5 X 5.6	5.0		13.4	19.5	26.5	40.5	81.1	114.3
8.0 X 6.0	5.4	11.9	14.1	20.8	28.2	43.1	86.2	121.5
8.5 X 6.4	5.7	12.5	14.9	22.0	29.9	45.8	91.3	128.6
9.0 X 6.8	6.1	13.1	15.7	23.3	31.6	48.4	96.4	135.8
9.5 X 7.1	6.5	13.7	16.4	24.6	33.4	51.0	101.5	142.9
10.0 X 7.5	6.9	14.2	17.2	25.8	35.1	53.6	106.6	150.1
10.5 X 7.9	7.3	14.8	18.0	27.1	36.8	56.2	111.7	157.2
11.0 X 8.3	7.7	15.4	18.7	28.4	38.5	58.8	116.8	164.4
11.5 X 8.6	8.1	16.0	19.5	29.6	40.2	61.4	121.9	171.5
12.0 X 9.0	8.5	16.5	20.3	30.9	41.9	64.1	127.0	178.7
12.5 X 9.4	8.9	17.1	21.0	32.2	43.6	66.7	132.1	185.8
13.0 X 9.8	9.3	17.7	21.8	33.4	45.3	69.3	137.2	193.0
13.5 X 10.1	9.7	18.3	22.5	34.7	47.0	71.9	142.3	200.1
14.0 X 10.5	10.1	18.8	23.3	35.9	48.7	74.5	147.4	207.3
14.5 X 10.9	10.4	19.4	24.1	37.2	50.5	77.1	152.5	214.4
15.0 X 11.3	10.8	20.0	24.8	38.5	52.2	79.8	157.6	221.6
15.5 X 11.6	11.2	20.6	25.6	39.7	53.9	82.4	162.7	228.7
16.0 X 12.0	11.6	21.1	26.4	41.0	55.6	85.0	167.8	235.9
16.5 X 12.4	12.0	21.7	27.1	42.3	57.3	87.6	172.9	243.0
17.0 X 12.8	12.4	22.3	27.9	43.5	59.0	90.2	178.0	250.2
17.5 X 13.1	12.8	22.9	28.7	44.8	60.7	92.8	183.1	257.3
18.0 X 13.5	13.2	23.4	29.4	46.1	62.4	95.4	188.2	264.5
18.5 X 13.9	13.6	24.0	30.2	47.3	64.1	98.1	193.3	271.6
19.0 X 14.3	14.0	24.6	31.0	48.6	65.8	100.7	198.4	278.8
19.5 X 14.6	14.4	25.2	31.7	49.9	67.6	103.3	203.5	285.9
20.0 X 15.0	14.8	25.7	32.5	51.1	69.3	105.9	208.6	293.1