

**Tabla A3.8** Tablas de tiempo interferencia de máquinas (*i*) y tiempo de operación de máquina (*m*) para constantes de servicio seleccionadas ( $k = l/m$ )(Los valores se expresan como porcentaje del tiempo total, donde  $m + l + i = 100\%$ )

(a)			(b)		(a)			(b)		(a)			(b)	
<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>	<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>	<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>
$k = 0.01$					$k = 0.02$ (cont.)					$k = 0.03$ (cont.)				
1	0.0	99.0	0.0	99.0	10	0.2	97.8	0.4	97.6	32			8.9	88.5
10	0.1	99.0	0.1	98.9	15	0.4	97.7	0.7	97.4	33			9.7	87.7
20	0.1	98.9	0.2	98.8	20	0.6	97.5	1.1	97.0	34			10.6	86.8
30	0.2	98.8	0.4	98.6	25	0.8	97.2	1.6	96.5	35			11.6	85.9
40			0.6	98.4	30	1.2	96.9	2.2	95.9	36			12.6	84.9
50			0.9	98.1	35			3.1	95.0	37			13.7	83.8
60			1.3	97.8	40			4.3	93.8	38			14.9	86.8
70			1.8	97.2	45			6.1	92.0	39			16.1	81.4
80			2.7	96.3	50			8.7	89.5	40			17.4	80.2
85			3.4	95.7	51			9.3	88.9	41			18.8	78.9
90			4.2	94.9	52			10.0	88.3	42			20.1	77.5
95			5.2	93.8	53			10.7	87.6	43			21.6	76.2
100			6.7	92.4	54			11.5	86.8	44			23.0	74.8
105			8.5	90.6	55			12.3	86.0	45			24.4	73.4
110			10.7	88.4	56			13.1	85.2	46			25.9	72.0
115			13.4	85.8	57			14.0	84.3	47			27.3	70.6
120			16.3	82.9	58			14.9	83.4	48			28.7	69.2
121			16.9	82.3	59			15.9	82.5	$k = 0.04$				
122			17.5	81.7	60			16.8	81.5	1	0.0	96.2	0.0	96.2
123			18.1	81.1	61			17.9	80.5	2	0.1	96.1	0.2	96.0
124			18.8	80.4	62			18.9	79.5	3	0.2	96.0	0.3	95.9
125			19.4	79.8	63			19.9	78.5	4	0.2	95.9	0.5	95.7
126			20.0	79.2	64			21.0	77.5	5	0.3	95.8	0.7	95.5
127			20.6	78.6	65			22.0	76.4	6	0.5	95.7	0.9	95.3
128			21.2	78.1	66			23.1	75.4	7	0.6	95.6	1.1	95.1
129			21.8	77.5	67			24.2	74.4	8	0.7	95.5	1.3	94.9
130			22.4	76.9	68			25.2	73.3	9	0.8	95.4	1.5	94.7
131			22.9	76.3	69			26.2	72.3	10	1.0	95.2	1.8	94.4
132			23.5	75.7	70			27.2	71.3	11	1.1	95.1	2.1	94.1
133			24.1	75.2	71			28.2	70.4	12	1.3	94.9	2.4	93.8
134			24.6	74.6	72			29.2	69.4	13	1.5	94.7	2.8	93.5
135			25.2	74.1	$k = 0.03$					14	1.8	94.5	3.2	93.1
136			25.7	73.5	1	0.0	97.1	0.0	97.1	15	2.0	94.2	3.6	92.7
137			26.3	73.0	5	0.2	96.9	0.4	96.7	16	2.3	94.0	4.0	92.3
138			26.8	72.5	10	0.5	96.6	1.0	96.2	17	2.6	93.6	4.5	91.8
139			27.3	71.9	15	1.0	96.2	1.8	95.4	18	3.0	93.3	5.1	91.3
140			27.9	71.4	20	1.6	95.5	3.0	94.2	19	3.4	92.9	5.7	90.7
141			28.4	70.9	25	2.8	94.4	4.7	92.5	20	3.9	92.4	6.4	90.0
142			28.9	70.4	26	3.1	94.1	5.2	92.1	21	4.5	91.8	7.1	89.3
143			29.4	69.9	27	3.4	93.7	5.7	91.6	22	5.2	91.2	8.0	88.5
144			29.9	69.4	28	3.8	93.4	6.2	91.1	23	6.0	90.4	8.9	87.6
$k = 0.02$					29	4.3	92.9	6.8	90.5	24	6.8	89.6	9.9	86.7
1	0.0	98.0	0.0	98.0	30	4.8	92.4	7.4	89.9	25	7.9	88.6	11.0	85.6
5	0.1	98.0	0.2	97.9	31			8.1	89.2	26	9.0	87.5	12.2	84.5

Tabla A3.8 (continuación)

(a)			(b)		(a)			(b)		(a)			(b)	
<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>	<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>	<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>
<i>k</i> = 0.04 (cont.)					<i>k</i> = 0.06 (cont.)					<i>k</i> = 0.08				
27	10.4	86.2	13.4	83.2	3	0.4	94.0	0.7	93.7	1	0.0	92.6	0.0	92.6
28	11.9	84.7	14.8	81.9	4	0.6	93.8	1.1	93.3	2	0.3	92.3	0.5	92.1
29	13.6	83.0	16.3	80.5	5	0.8	93.6	1.5	92.9	3	0.6	92.0	1.2	91.5
30	15.5	81.3	17.9	79.0	6	1.1	93.3	2.0	92.5	4	1.0	91.7	1.9	90.9
31			19.6	77.4	7	1.4	93.1	2.5	92.0	5	1.4	91.2	2.7	90.1
32			21.3	75.7	8	1.7	92.7	3.1	91.4	6	2.0	90.8	3.5	89.3
33			23.0	74.0	9	2.1	92.4	3.7	90.8	7	2.6	90.2	4.5	88.4
34			24.8	72.3	10	2.6	91.9	4.5	90.1	8	3.4	89.5	5.7	87.3
35			26.6	70.6	11	3.1	91.4	5.3	89.4	9	4.3	88.6	7.0	86.1
36			28.4	68.9	12	3.8	90.8	6.2	88.5	10	5.4	87.6	8.5	84.8
37			30.1	67.2	13	4.5	90.1	7.3	87.5	11	6.7	86.4	10.1	83.2
<i>k</i> = 0.05					14	5.4	89.2	8.4	86.4	12	8.4	84.8	12.0	81.4
1	0.0	95.2	0.0	95.2	15	6.5	88.2	9.7	85.2	13	10.4	83.0	14.2	79.5
2	0.1	95.1	0.2	95.0	16	7.8	87.0	11.2	83.8	14	12.8	80.8	16.5	77.3
3	0.2	95.0	0.5	94.8	17	9.3	85.6	12.8	82.3	15	15.6	78.2	19.0	75.0
4	0.4	94.9	0.7	94.5	18	11.1	83.9	14.6	80.6	16	18.8	75.2	21.8	72.4
5	0.5	94.7	1.0	94.3	19	13.2	81.9	16.5	78.8	17	22.2	72.0	24.6	69.8
6	0.7	94.6	1.4	94.0	20	15.6	79.7	18.6	76.8	18	25.7	68.8	27.6	67.1
7	0.9	94.4	1.7	93.6	21			20.8	74.7	19	28.2	66.5	30.5	64.4
8	1.1	94.2	2.1	93.3	22			23.1	72.5	<i>k</i> = 0.09				
9	1.4	93.9	2.5	92.9	23			25.5	70.3	1	0.0	91.5	0.0	91.7
10	1.6	93.7	3.0	92.4	24			27.9	68.0	2	0.4	91.4	0.7	91.1
11	2.0	93.4	3.5	91.9	25			30.3	65.8	3	0.8	91.0	1.4	90.4
12	2.3	93.0	4.1	91.4	<i>k</i> = 0.07					4	1.3	90.6	2.3	89.6
13	2.7	92.6	4.7	90.8	1	0.0	93.5	0.0	93.5	5	1.9	90.0	3.3	88.7
14	3.2	92.2	5.4	90.1	2	0.2	93.2	0.4	93.1	6	2.6	89.4	4.5	87.7
15	3.8	91.7	6.2	89.3	3	0.5	93.0	0.9	92.6	7	3.4	88.6	5.8	86.5
16	4.4	91.0	7.1	88.5	4	0.8	92.7	1.4	92.1	8	4.5	87.6	7.3	85.1
17	5.2	90.3	8.1	87.6	5	1.1	92.4	2.0	91.6	9	5.7	86.5	9.0	83.5
18	6.1	89.5	9.1	86.5	6	1.5	92.1	2.7	91.0	10	7.3	85.0	10.9	81.7
19	7.1	88.5	10.4	85.4	7	1.9	91.7	3.4	90.3	11	9.3	83.2	13.1	79.7
20	8.4	87.3	11.7	84.1	8	2.4	91.2	4.3	89.5	12	11.7	81.0	15.6	77.5
21	9.8	85.9	13.1	82.7	9	3.1	90.6	5.2	88.6	13	14.5	78.4	18.3	75.0
22	11.5	84.3	14.7	81.2	10	3.8	89.9	6.3	87.6	14	17.8	75.4	21.2	72.3
23	13.4	82.5	16.5	79.6	11	4.7	89.1	7.5	86.4	15	21.5	72.0	24.2	69.5
24	15.5	80.5	18.3	77.8	12	5.7	88.1	8.9	85.1	16	25.3	68.5	27.4	66.6
25	17.8	78.2	20.2	76.0	13	7.0	86.9	10.4	83.7	17	29.2	65.0	30.6	63.7
26	20.3	75.9	22.2	74.1	14	8.6	85.4	12.2	82.1	<i>k</i> = 0.10				
27	22.8	73.6	24.3	72.1	15	10.4	83.7	14.1	80.3	1	0.0	90.9	0.0	90.9
28	25.3	71.2	26.4	70.1	16	12.6	81.6	16.2	78.3	2	0.4	90.5	0.8	90.2
29	27.9	68.8	28.5	68.1	17	15.2	79.3	18.5	76.2	3	1.0	90.0	1.8	89.3
<i>k</i> = 0.06					18	18.1	76.6	21.0	73.9	4	1.6	89.5	2.8	88.3
1	0.0	94.3	0.0	94.3	19	21.1	73.7	23.5	71.5	5	2.3	88.8	4.1	87.2
2	0.2	94.2	0.3	94.0	20	24.4	70.7	26.2	69.0	6	2.2	88.0	5.5	85.9
					21			28.9	66.5					

Tabla A3.8 (continuación)

(a)			(b)		(a)			(b)		(a)			(b)	
<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>	<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>	<i>n</i>	<i>i</i>	<i>m</i>	<i>i</i>	<i>m</i>
<i>k</i> = 0.10 (cont.)					<i>k</i> = 0.15 (cont.)					<i>k</i> = 0.30				
7	4.4	86.9	7.1	84.4	6	8.0	80.0	11.8	76.7	1	0.0	76.9	0.0	76.9
8	5.8	85.7	9.0	82.7	7	11.2	72.2	15.4	73.5	2	3.0	74.6	5.1	73.0
9	7.5	84.1	11.2	80.8	8	15.2	73.7	19.5	70.0	3	7.4	71.3	11.1	68.4
10	9.7	82.1	13.6	78.5	9	20.1	69.5	23.8	66.2	4	13.3	66.7	18.0	63.1
11	12.4	79.8	16.3	76.1	10	25.5	64.8	28.4	62.3	5	21.1	60.7	25.4	57.4
12	15.6	76.8	19.3	73.4	11	31.0	60.0			6	29.9	53.9	33.0	51.6
13	19.2	73.4	22.5	70.4	<i>k</i> = 0.20					<i>k</i> = 0.40				
14	23.3	69.8	25.9	67.4	1	0.0	83.3	0.0	83.3	1	0.0	71.4	0.0	71.4
15	27.4	66.0	29.4	64.2	2	1.5	82.0	2.7	81.1	2	4.8	68.0	7.5	66.0
16	31.5	62.0			3	3.6	80.4	5.9	78.4	3	11.8	63.0	16.3	59.8
<i>k</i> = 0.15					4	6.3	78.1	9.8	75.2	4	21.2	56.3	25.6	53.1
1	0.0	87.0	0.0	87.0	5	10.0	75.0	14.2	71.5	5	31.9	48.6	34.9	46.5
2	0.9	86.2	1.7	85.5	6	14.7	71.1	19.2	67.4					
3	2.1	85.1	3.6	83.8	7	20.6	66.2	24.6	62.8					
4	3.9	83.8	6.0	81.8	8	27.3	60.6	30.3	58.1					
5	5.5	82.2	8.7	79.4	9	32.6	56.1							

*Nota:* En todas las tablas se suponen solicitudes de servicio al azar. La columna (a) es para tiempo de servicio constante y la columna (b) para una distribución exponencial de tiempos de servicio. Se espera que los valores que faltan en la columna (a) puedan obtenerse por aproximación en un futuro cercano. Cuando no aparecen datos en la columna, significa que no se disponía de las cifras.