

JCS-M BARE - SHAFT CENTRIFUGAL MONO BLOCK PUMPS
CAST IRON PUMPS & SILICON CARBID MECHANICAL SEAL

Tipo Type CS-M50A2S	Tipo Type CS-M50A2BRX
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Girante - Impeller: ø 210 mm

Apertura - Opening: 6 mm

Bocche pompa		Giri pompa/1'	m3/h	9	12	15	18	21	24	27	30
DNa	DNm		RPM	G/min	40	53	67	80	93	107	120
65 mm	50 mm	1450	H mt.	12.1	11.9	11.7	11.5	10.5	9.5	8.3	7
			H feet	40	40	39	38	35	32	28	23
			Hp ass.	1.2	1.2	1.4	1.5	1.6	1.7	1.8	1.9
		1750	H mt.		17.7	17.2	17	16.2	15.5	14.2	13
			H feet		59	57	57	54	52	47	43
			Hp ass.		2.2	2.4	2.5	2.6	2.7	2.8	3
		2000	H mt.			22.4	22.1	21.1	20.2	18.5	16.9
			H feet			75	74	70	67	62	56
Hp ass.				3.5	3.7	3.8	4	4.1	4.4		
2200	H mt.			28.2	28	27.2	26.5	25.7	25		
	H feet			94	93	91	88	86	83		
	Hp ass.			4.1	4.3	4.5	4.7	5	5.3		
2400	H mt.					32.3	31.4	30.5	29.7		
	H feet					108	105	102	99		
	Hp ass.					5	6	6.4	6.8		
2600	H mt.					37.9	36.9	35.8	34.8		
	H feet					126	123	119	116		
	Hp ass.					7.4	7.7	8.2	8.7		
2900	H mt.					49	48.5	47.7	47		
	H feet					163	162	159	157		
	Hp ass.					9.2	9.7	10	10.5		
3500	H mt.						70.8	69.8	68.8		
	H feet						236	232.7	229.3		
	Hp ass.						17.6	18.4	19.2		

Tipo Type CS-M50B2S	Tipo Type CS-M50B2BRX
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Girante - Impeller: ø 200 mm

Apertura - Opening: 6 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	9	12	15	18	21	24	27	30
DNa	DNm		RPM	G/min	40	53	67	80	93	107	120
			I/1'	150	200	250	300	350	400	450	500
		1450	H mt.	11	10.8	10.5	10.4	9.4	8.5	7.5	5.6
			H feet	37	36	35	35	31	28	25	19

65 mm	50 mm		Hp ass.	1	1.1	1.3	1.4	1.5	1.6	1.7	1.8
		1750	H mt.		16	15.5	15.3	14.3	13.3	12.3	11.2
			H feet		53	52	51	48	44	41	37
			Hp ass.		2	2.2	2.3	2.4	2.5	2.6	2.7
		2000	H mt.			20.2	19.9	18.6	17.3	16	14.6
			H feet			67	66	62	58	53	49
			Hp ass.			3.2	3.4	3.5	3.7	3.8	4
		2200	H mt.			25.8	25.3	24.6	23.9	23.2	22.5
H feet				86	84	82	80	77	75		
Hp ass.				3.7	3.8	4.1	4.3	4.5	4.7		
2400	H mt.					29.2	28.3	27.5	26.7		
	H feet					97	94	92	89		
	Hp ass.					5.3	5.5	5.8	6		
2600	H mt.					34.2	33.3	32.3	31.3		
	H feet					114	111	108	104		
	Hp ass.					6.7	7	7.4	7.7		
2900	H mt.					45.1	44.5	43.9	43.2		
	H feet					150	148	146	144		
	Hp ass.					8.4	8.7	9	9.4		
3500	H mt.						64	63	62		
	H feet						213.3	210	206.7		
	Hp ass.						16	16.8	17.6		

Tipo Type	CS-M65E2S	Tipo Type	CS-M65E2BRX
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Girante - Impeller: \varnothing 230 mm

Apertura - Opening: 9 mm

Bocche pompa Ports pump	Giri pompa/1'	RPM		Flow								
				m3/h	21	27	30	36	42	48	54	60
DNa	DNm			G/min	93	120	134	160	187	214	240	267
				l/1'	350	450	500	600	700	800	900	1000
	1450	H mt.		14.7	14.3	14	13	11	9.4	6	4	
		H feet		49	48	47	43	37	31	20	13	
		Hp ass.		2.4	2.7	2.8	3	3.2	3.5	3.7	3.8	
	1750	H mt.		22.2	21.5	21	20	18.5	17	15	13	
		H feet		74	72	70	67	62	57	50	43	
		Hp ass.		3.9	4.3	4.5	4.8	5.2	5.5	6	6.3	
	2000	H mt.			28	27.3	26	24.1	22.1	19.5	16.9	
		H feet			93	91	87	80	74	65	56	
		Hp ass.			6.4	6.7	7.1	7.7	8.1	8.9	9.3	
	2200	H mt.			35.2	35	34	33	31.5	29.5	27.5	
		H feet			117	117	113	110	105	98	92	

80 mm	65 mm		Hp ass.		7.7	8	8.5	9.2	9.8	10.4	11
		2400	H mt.					39.2	37.4	35	32.6
			H feet					131	125	117	109
			Hp ass.					11.9	12.6	13.4	14.2
		2600	H mt.					46	43.9	41.1	38.3
			H feet					153	146	137	128
			Hp ass.					15.1	16.1	17.1	18.1
		2900	H mt.					60	59	57.5	55.5
			H feet					200	197	192	185
			Hp ass.					18.5	20	21	22
		3500	H mt.							86	84
			H feet							287	280
			Hp ass.							34.4	36

Apertura - Opening: 16 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	21	27	30	36	42	48	54	60
DNa	DNm		RPM	G/min	93	120	134	160	187	214	240
			I/1'	350	450	500	600	700	800	900	1000
80 mm	65 mm	1450	H mt.	10.1	9.7	9.5	9	8	7	5.5	4
			H feet	34	32	32	30	27	23	18	13
			Hp ass.	1.4	1.6	1.7	1.8	1.9	2	2.1	2.2
		1750	H mt.	15.3	15	14.6	14.2	13.3	12.3	11	9.5
			H feet	51	50	49	47	44	41	37	32
			Hp ass.	2.2	2.5	2.7	2.8	3	3.2	3.5	3.7
		2000	H mt.		19.6	19.3	19	18.3	17.4	16.3	15
			H feet		65	64	63	61	58	54	50
			Hp ass.		3.4	3.5	3.8	4.1	4.5	4.7	5
		2200	H mt.		24.2	24	23.5	23	22	21	19.6
			H feet		81	80	78	77	73	70	65
			Hp ass.		4.3	4.5	4.9	5.3	5.7	6.1	6.5
		2400	H mt.					27.8	27	26	24.5
			H feet					93	90	87	82
			Hp ass.					6.7	7.2	7.6	8
		2600	H mt.					32.5	31.6	30.4	28.7
H feet						108	105	101	96		
Hp ass.						8.5	9.1	9.8	10		
2900	H mt.					41.5	41	40	39		
	H feet					138	137	133	130		
	Hp ass.					10.7	11.3	12	12.7		
3500	H mt.					61.2	60.6	60	58.4		
	H feet					204	202	200	195		
	Hp ass.					17.6	18.8	20	21.6		

Tipo Type	CS-M65B1S	Tipo Type	CS-M65B1BRX
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Girante - Impeller: \varnothing 170 mm

Apertura - Opening: 16 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	21	27	30	36	42	48	54	60
DNa	DNm			G/min	93	120	134	160	187	214	240	267
				I/1'	350	450	500	600	700	800	900	1000
80 mm	65 mm	1450	H mt.	9	8.6	8.3	7.7	6.7	5.5	3.9		
			H feet	30	29	28	26	22	18	13		
			Hp ass.	1.2	1.4	1.5	1.6	1.7	1.8	1.9		
		1750	H mt.	13.7	13.3	12.9	12.9	11.4	10.4	9		
			H feet	46	44	43	43	38	35	30		
			Hp ass.	2	2.2	2.3	2.4	2.6	2.8	3		
		2000	H mt.		17.7	17.4	16.9	16.1	15	13.8	12.3	
			H feet		59	58	56	54	50	46	41	
Hp ass.			2.9	3.1	3.3	3.6	3.9	4.1	4.4			
2200	H mt.		21.8	21.6	21.1	20.4	19.2	18.1	16.5			
	H feet		73	72	70	68	64	60	55			
	Hp ass.		3.8	4	4.3	4.7	5	5.4	5.7			
2400	H mt.					24.9	23.8	22.6	21.1			
	H feet					83	79	75	70			
	Hp ass.					5.9	6.7	6.7	7.1			
2600	H mt.					29	27.8	26.4	24.7			
	H feet					97	93	88	82			
	Hp ass.					7.4	8	8.4	8.9			
2900	H mt.					37.3	36.6	35.6	34.3			
	H feet					124	122	119	114			
	Hp ass.					9.5	10	10.6	11.2			
3500	H mt.					54.8	54	53.2	51.6			
	H feet					183	180	177	172			
	Hp ass.					16	16.8	17.6	18.4			

Tipo Type	CS-M65D1S	Tipo Type	CS-M65D1BRX
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Girante - Impeller: \varnothing 160 mm

Apertura - Opening: 16 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	21	27	30	36	42	48	54	60
DNa	DNm			G/min	93	120	134	160	187	214	240	267
				I/1'	350	450	500	600	700	800	900	1000
		1450	H mt.	7.4	7	6.7	5.8	4.8	3.5	1.6		
			H feet	25	23	22	19	16	12	5		

80 mm	65 mm		Hp ass.	1	1.2	1.3	1.4	1.5	1.6	1.7	
		1750	H mt.	11.4	11	10.6	9.9	8.7	7.7	6.1	
			H feet	38	37	35	33	29	26	20	
			Hp ass.	1.5	1.8	1.9	2	2.2	2.3	2.4	
		2000	H mt.		15	14.7	14	13	11.6	10.2	8.6
			H feet		50	49	47	43	39	34	29
			Hp ass.		2.3	2.5	2.7	3	3.2	3.4	3.6
		2200	H mt.		18.3	18.1	17.6	16.7	15.3	13.9	12.1
H feet			61	60	59	56	51	46	40		
Hp ass.			3.1	3.3	3.5	3.9	4.1	4.3	4.6		
2400	H mt.					20.5	19.2	17.8	17.3		
	H feet					68	64	59	58		
	Hp ass.					4.9	5.2	5.5	5.9		
2600	H mt.					24	22.5	20.8	20.2		
	H feet					80	75	69	67		
	Hp ass.					6.2	6.5	6.9	7.4		
2900	H mt.					31.3	30.4	29.3	27.7		
	H feet					104	101	98	92		
	Hp ass.					7.8	8.2	8.7	9.2		
3500	H mt.					45.6	44.8	44	42.4		
	H feet					152	149	147	141		
	Hp ass.					12	13.2	14.4	15.2		

Tipo Type	CS-M65E1S	Tipo Type	CS-M65E1BRX
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Girante - Impeller: ø 155 mm

Apertura - Opening: 16 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	21	27	30	36	42	48	54	60
DNa	DNm		RPM	G/min	93	120	134	160	187	214	240
			I/1'	350	450	500	600	700	800	900	1000
80 mm	65 mm	1450	H mt.	6.7	6.3	6	5	4	2.5	0.5	
			H feet	22	21	20	17	13	8	2	
			Hp ass.	0.9	1.1	1.2	1.3	1.4	1.5	1.6	
		1750	H mt.	10.4	9.9	9.5	8.8	7.5	6.5	4.8	
			H feet	35	33	32	29	25	22	16	
Hp ass.	1.4		1.6	1.7	1.8	2	2.1	2.2			
2000	H mt.		13.7	13.5	12.6	11.5	10	8.5	6.8		
	H feet		46	45	42	38	33	28	23		
	Hp ass.		2.1	2.3	2.5	2.7	2.9	3.1	3.3		
2200	H mt.		16.7	16.5	16	15	13.5	12	10		
	H feet		56	55	53	50	45	40	33		
	Hp ass.		2.8	3	3.2	3.5	3.7	3.9	4.1		
2400	H mt.					18.5	17	15.5	14		
	H feet					62	57	52	47		

			Hp ass.					4.4	4.7	4.9	5.3
		2600	H mt.					21.6	19.9	18.1	16.4
			H feet					72	66	60	55
			Hp ass.					5.5	5.9	6.2	6.7
		2900	H mt.					28.5	27.5	26.3	24.3
			H feet					95	92	88	81
			Hp ass.					7	7.4	7.8	8.2
		3500	H mt.					41.6	40.6	39.6	38
			H feet					139	135	132	127
			Hp ass.					11.2	12	12.8	13.6

Tipo Type	CS-M65A2S	Tipo Type	CS-M65A2BRX
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Girante - Impeller: \varnothing 260 mm

Apertura - Opening: 9 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	21	27	30	36	42	48	54	60
DNa	DNm			G/min	93	120	134	160	187	214	240	267
				I/1'	350	450	500	600	700	800	900	1000
80 mm	65 mm	1450	H mt.	22	21.7	21.5	21	19.5	18	16	14	
			H feet	73	72	72	70	65	60	53	47	
			Hp ass.	4	4.3	4.5	5	5.2	5.5	6	6.3	
		1750	H mt.	32	31.7	31.5	30.5	29.5	28	27	25.5	
			H feet	107	106	105	102	98	93	90	85	
			Hp ass.	6.7	7.3	7.5	8	8.5	9	9.5	10	
		2000	H mt.		41.3	41	39.7	38.4	36.5	35.2	33.2	
			H feet		138	137	132	128	122	117	111	
Hp ass.			10.8	11.1	11.9	12.6	13.4	14.1	14.8			
2200	H mt.		51.3	51	50.5	49.5	48	47	45			
	H feet		171	170	168	165	160	157	150			
	Hp ass.		12.6	13	14	15	16	16.5	17.5			
2400	H mt.					58.8	57	55.8	53.4			
	H feet					196	190	186	178			
	Hp ass.					19.4	20.7	18.2	22.6			
2600	H mt.					69	66.9	65.5	62.7			
	H feet					230	223	218	209			
	Hp ass.					24.7	26.3	27.1	28.2			
2900	H mt.					88	87	86	84			
	H feet					293	290	287	280			
	Hp ass.					30	31.5	33.5	35			
3500	H mt.					128	127.4	126.8	126			
	H feet					427	425	423	420			
	Hp ass.					53.6	56	58.4	60			

Tipo Type	CS-M80E3S	Tipo Type	CS-M80E3BRX
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Girante - Impeller: ø 300 mm

Apertura - Opening: 9 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	30	36	42	48	54	60	72	84
DNa	DNm			G/min	134	160	187	214	240	267	320	374
				I/1'	500	600	700	800	900	1000	1200	1400
100 mm	80 mm	1450	H mt.	28.2	28.1	28	27.3	26.6	26	24	22	
			H feet	94	94	93	91	89	87	80	73	
			Hp ass.	7.5	8	8.5	9	9.5	10	10.8	11.7	
		1750	H mt.	42	42	41.5	41	40.5	39.5	38	35.5	
			H feet	140	140	138	137	135	132	127	118	
			Hp ass.	12	12.8	13.6	14.4	15.2	16	17	18.3	
		2000	H mt.			54.1	53.4	52.8	51.5	49.5	46.2	
			H feet			180	178	176	172	165	154	
Hp ass.				20.2	21.4	22.6	23.8	25.3	27.2			
2200	H mt.			65.5	65	64.5	64	62.5	60.5			
	H feet			218	217	215	213	208	202			
	Hp ass.			24.5	25.7	27	28.3	30.5	33			
2400	H mt.				77.2	76.6	76	74.2	71.8			
	H feet				257	255	253	247	239			
	Hp ass.				33.2	34.9	36.6	39.4	42.7			
2600	H mt.				90.6	89.9	89.2	87.1	84.3			
	H feet				302	300	297	290	281			
	Hp ass.				42.3	44.4	46.6	50.2	54.3			
2900	H mt.						113	112	112			
	H feet						376	375	373			
	Hp ass.						60	64	68			
3500	H mt.						168	168	166			
	H feet						560	560	553			
	Hp ass.						96	102.4	108.8			

Tipo Type	CS-M80E2S	Tipo Type	CS-M80E2BRX
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Girante - Impeller: ø 180 mm

Apertura - Opening: 18 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	48	54	60	72	84	96	108	120
DNa	DNm			G/min	214	240	267	320	374	427	481	534
				I/1'	800	900	1000	1200	1400	1600	1800	2000
		1450	H mt.	8.5	8	7.5	6	4	1.5			
			H feet	28	27	25	20	13	5			

100 mm	80 mm		Hp ass.	2.3	2.4	2.5	2.6	2.7	3				
		1750	H mt.		13	12	11	8.7	6.5	4			
			H feet		43	40	37	29	22	13			
			Hp ass.		4	4.3	4.6	5	5.1	5.2			
		2000	H mt.			17	15.5	14	11.5	8.5	5.5		
			H feet			57	52	47	38	28	18		
			Hp ass.			6	6.5	7	7.3	7.6	8		
		2200	H mt.					20	18	16	13	10.5	
H feet						67	60	53	43	35			
Hp ass.						8	9	9.5	10	10.3			
2400	H mt.						23	21	18	15.5			
	H feet						77	70	60	52			
	Hp ass.						11	11.5	12	12.5			
2600	H mt.						28.5	26	24	21			
	H feet						95	87	80	70			
	Hp ass.						14	15	15.5	16			
2900	H mt.						36.5	34.5	32	29.5			
	H feet						122	115	107	98			
	Hp ass.						18	19	20	21			
3500	H mt.								52	48			
	H feet								173	160			
	Hp ass.								32	34.4			

Tipo Type	CS-M80A2S	Tipo Type	CS-M80A2BRX
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Girante - Impeller: ø 210 mm

Apertura - Opening: 18 mm

Bocche pompa Ports pump	Giri pompa/1'	RPM		m3/h	48	54	60	72	84	96	108	120	
				G/min	214	240	267	320	374	427	481	534	
DNa	DNm		I/1'	800	900	1000	1200	1400	1600	1800	2000		
100 mm	80 mm	1450	H mt.	14	13.5	13	12	10	8	6	3		
			H feet	47	45	43	40	33	27	20	10		
			Hp ass.	4	4.3	4.6	5	5.3	5.5	5.7	6		
		1750	H mt.		20.5	20	19	17.2	15.5	13.5	11		
			H feet		68	67	63	57	52	45	37		
Hp ass.			6.5	7.2	8	8.5	9	9.4	9.8				
2000	H mt.		27.5	26.7	26	24.5	23	20.5	18				
	H feet		92	89	87	82	77	68	60				
	Hp ass.		9	9.8	10.7	12.5	13.2	13.9	14.4				
2200	H mt.					32	30.5	29	26.7	24.5			
	H feet					107	102	97	89	82			
	Hp ass.					13.5	14.5	15.5	16.2	17			
2400	H mt.							37.5	36	34	32		
	H feet							125	120	113	107		

			Hp ass.					18	19.5	20.5	22
		2600	H mt.					44.2	42.6	41	39
			H feet					147	142	137	130
			Hp ass.					22	23.5	25	26.5
		2900	H mt.					56	55	53	51
			H feet					187	183	177	170
			Hp ass.					29	31	33	35
		3500	H mt.							82	80
			H feet							273	267
			Hp ass.							52	57.6

Tipo Type	CS-M80A4S	Tipo Type	CS-M80A4BRX
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Girante - Impeller: \varnothing 270 mm

Apertura - Opening: 18 mm

Bocche pompa Ports pump	Giri pompa/1'	RPM		m3/h	42	48	60	72	90	108	120	132	
				G/min	187	214	267	320	401	481	534	587	
DNa	DNm		I/1'	700	800	1000	1200	1500	1800	2000	2200		
100 mm	80 mm	1450	H mt.	27	26.8	26.5	26.2	25.5	24	22	19.5		
			H feet	90	89	88	87	85	80	73	65		
			Hp ass.	7.8	8	8.3	9.2	10.2	11.3	12	12.4		
		1750	H mt.		38	37.5	37.2	37	36.6	35.5	34.8		
			H feet		127	125	124	123	122	118	116		
			Hp ass.		13	13.7	14	15.8	17.5	19	19.5		
		2000	H mt.			49	48	47.5	47	46.5	45		
			H feet			163	160	158	157	155	150		
Hp ass.				20	20.5	21	23.7	26.3	28.5				
2200	H mt.			59	58.5	57.2	57	56.5	56				
	H feet			197	195	191	190	188	187				
	Hp ass.			26	27	28	31.5	33	34.9				
2400	H mt.					68.5	68	67	66	65.5			
	H feet					228	227	223	220	218			
	Hp ass.					34.5	35.5	38	41	43			
2600	H mt.					80	79	78	77	76			
	H feet					267	263	260	257	253			
	Hp ass.					46	48	50	53.5	56			
2900	H mt.						100	98.5	98	96			
	H feet						333	328	327	320			
	Hp ass.						63	66	68	76			
3500	H mt.							152	150	149			
	H feet							507	500	497			
	Hp ass.							104	109.6	114			

Tipo Type		CS-M80B4S				Tipo Type		CS-M80B4BRX			
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Girante - Impeller: \varnothing 258 mm

Apertura - Opening: 18 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM									
DNa	DNm			m3/h	42	48	60	72	90	108	120	132
			G/min	187	214	267	320	401	481	534	587	
			l/1'	700	800	1000	1200	1500	1800	2000	2200	
100 mm	80 mm	1450	H mt.	32.2	23	22.7	22.5	21.9	20.6	18.9	16.7	
			H feet	107	77	76	75	73	69	63	56	
			Hp ass.	6.3	6.5	6.6	7.4	8.2	9	9.6	10	
		1750	H mt.		32.6	32.2	32	31.8	31.4	30.3	29.9	
			H feet		109	107	107	106	105	101	100	
			Hp ass.		10.4	10.9	11.2	12.7	14	15	15.6	
		2000	H mt.		42	41.7	41.3	39.9	40.4	40.1	39.6	
			H feet		140	139	138	133	135	134	132	
Hp ass.			15.6	16	16.4	16.8	19	21	22			
2200	H mt.				50.8	50	49.1	48.4	47.6	48.2		
	H feet				169	167	164	161	159	161		
	Hp ass.				20.8	21.6	22.4	24	26	28		
2400	H mt.					60	58	57	56.5	56		
	H feet					200	193	190	188	187		
	Hp ass.					27.5	28.4	30.7	32.8	34.3		
2600	H mt.					68.8	68	67	66	65.3		
	H feet					229	227	223	220	218		
	Hp ass.					36.8	38.5	40	42.2	44.8		
2900	H mt.						86	85.1	84.3	83.1		
	H feet						287	284	281	277		
	Hp ass.						50.4	54	54.4	60		
3500	H mt.						130.4	129.6	128.8	128.4		
	H feet						435	432	429	428		
	Hp ass.						83.2	85.2	87.2	88.4		

Tipo Type		CS-M80C4S				Tipo Type		CS-M80C4BRX			
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Girante - Impeller: \varnothing 248 mm

Apertura - Opening: 18 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM									
DNa	DNm			m3/h	42	48	60	72	90	108	120	132
			G/min	187	214	267	320	401	481	534	587	
			l/1'	700	800	1000	1200	1500	1800	2000	2200	
		1450	H mt.	19.6	19.3	19	18.8	18.4	17.4	16		
			H feet	65	64	63	63	61	58	53		

100 mm	80 mm		Hp ass.	4.8	5	5.2	5.7	6.4	7	7.5	
		1750	H mt.		27.6	27.1	26.9	26.8	26.5	25.8	25.2
			H feet		92	90	90	89	88	86	84
			Hp ass.		8.1	8.5	8.7	9.8	10.9	11.5	12.1
		2000	H mt.		35.5	35	34.8	34.5	34	33.8	33
			H feet		118	117	116	115	113	113	110
			Hp ass.		12	12.3	12.7	13	14.7	16.3	16.9
		2200	H mt.			42.7	42	41.4	41	40.8	40.6
H feet				142	140	138	137	136	135		
Hp ass.				16.1	16.7	17.4	19.6	21.3	21.7		
2400	H mt.			50.7	50	49	48	47.7	47.5		
	H feet			169	167	163	160	159	158		
	Hp ass.			21	22	23	24	25.5	27		
2600	H mt.				58	57	56.5	56	55		
	H feet				193	190	188	187	183		
	Hp ass.				28.5	30	31	33	34.8		
2900	H mt.					72.5	71.8	71	70		
	H feet					242	239	237	233		
	Hp ass.					39	40.6	42.2	47		
3500	H mt.							108.4	108		
	H feet							361	360		
	Hp ass.							68	68.8		

Tipo Type	CS-M150BS	Tipo Type	CS-M150BBRX
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Girante - Impeller: ø 195 mm

Apertura - Opening: 32 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	96	108	120	135	150	165	180	195
DNa	DNm		RPM	G/min	427	481	534	601	668	734	801
			I/1'	1600	1800	2000	2250	2500	2750	3000	3250
150 mm	150 mm	1450	H mt.	8	7.5	7	6	5.5			
			H feet	27	25	23	20	18			
			Hp ass.	4	4.5	4.8	5	5.3			
		1750	H mt.	12.8	12	11	10.5	9	8	7	6
			H feet	43	40	37	35	30	27	23	20
Hp ass.	6		6.5	7	7.3	7.5	7.6	7.8	8		
2000	H mt.		16	15	14.5	13.5	12.5	11.5	11		
	H feet		53	50	48	45	42	38	37		
	Hp ass.		9.5	10	10.8	11	11.3	11.5	11.8		
2300	H mt.			22.5	21.5	21	20	19	17.5		
	H feet			75	72	70	67	63	58		
	Hp ass.			15	15.5	16	17	17.3	17.5		
2650	H mt.			27	26.5	26	25	24.5	22.5		
	H feet			90	88	87	83	82	75		

DNa	DNm	RPM	I/1'	1000	1100	1200	1400	1600	1800	2000	2250
125 mm	100 mm	1450	H mt.	60	59.5	59	58	57	56.5	56	55
			H feet	200	198	197	193	190	188	187	183
			Hp ass.	28	32	33	34	35	38.5	40	42
		1750	H mt.	86	86	85.7	85.5	84	83	82	81
			H feet	287	287	286	285	280	277	273	270
			Hp ass.	48	49	52	56.5	58	59	60	63.5
		2000	H mt.			112	111	110	108	107	106
			H feet			373	370	367	360	357	353
			Hp ass.			71	79	84	85	86.5	88

Tipo Type CS-M12531BCS

Girante - Impeller: ø 310 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	84	96	108	120	132	150	180	192
DNa	DNm			G/min	374	427	481	534	587	668	801	854
DNa	DNm	RPM	I/1'	1400	1600	1800	2000	2200	2500	3000	3200	
150 mm	125 mm	1450	H mt.	31.8	31.7	31.6	31.5	31.1	30.6	29.1	28.5	
			H feet	106	106	105	105	104	102	97	95	
			Hp ass.	17.3	18.5	19.6	20.8	21.6	22.8	25	25.8	
		1750	H mt.	46.5	46	46.2	46	45.8	45	44.5	43	
			H feet	155	153	154	153	153	150	148	143	
			Hp ass.	28.5	30.3	32.5	34.4	36.5	38	40	42	
		2000	H mt.	61	60.7	60.5	60.4	60	59.5	58.7	58.5	
			H feet	203	202	202	201	200	198	196	195	
			Hp ass.	39.5	42.5	45	48.5	51	54.5	58	58.5	
		2250	H mt.	77.5	77	76.5	76	76	75.5	75	74.5	
			H feet	258	257	255	253	253	252	250	248	
			Hp ass.	56	60	64	69	72	77	82	83	
		2500	H mt.	95.5	95	94	93.5	93.5	93	92	91.5	
			H feet	318	317	313	312	312	310	307	305	
			Hp ass.	74	77	82	87	94	98	105	112	

Tipo Type CS-M12531CCS

Girante - Impeller: ø 295 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	84	96	108	120	132	150	180	192
DNa	DNm			G/min	374	427	481	534	587	668	801	854
DNa	DNm	RPM	I/1'	1400	1600	1800	2000	2200	2500	3000	3200	
		1450	H mt.	27.9	27.8	27.7	27.6	27.2	26.5	24.9	24	
			H feet	93	93	92	92	91	88	83	80	
			Hp ass.	15.6	16.5	17.4	18.2	19	19.9	21.5	22	

150 mm	125 mm	1750	H mt.	41	40.5	40.4	40.3	40	39.5	38.5	37.2
			H feet	137	135	135	134	133	132	128	124
			Hp ass.	26	27.4	28.9	30.5	32	33	35	36
		2000	H mt.	54	53.5	53	52.7	52.5	52	51.5	51
			H feet	180	178	177	176	175	173	172	170
			Hp ass.	36	38.7	40.8	43	45.5	47.7	49	50.7
		2250	H mt.	68.5	68	67.5	67	66.5	66	65.5	65
			H feet	228	227	225	223	222	220	218	217
			Hp ass.	48.5	51	55	58	61	64.7	68	69.5
		2500	H mt.	84.5	84	83.8	83	82.5	82	81	80.5
			H feet	282	280	279	277	275	273	270	268
			Hp ass.	64	66.4	70	68	79.5	83.5	88.5	92

Tipo Type

CS-M125400ACS

Girante - Impeller: ø 400 mm

Bocche pompa Ports pump	Giri pompa/1'	m3/h	50	100	150	200	250	300	325	350	
		G/min	222	445	668	890	1,113	1,335	1,446	1,558	
		RPM	I/1'	833	1666	2500	3333	4167	5000	5416	5833
DNa	DNm										
150 mm	125 mm	1450	H mt.	59.5	59.5	58	56	52.5	46	43.5	
			H feet	198	198	193	187	175	153	145	
			Hp ass.	30	41	50	57	64	70	75	
		1750	H mt.	86	86	85.5	84.5	82	77	74	70
			H feet	287	287	285	282	273	257	247	233
			Hp ass.	50	66	79	91	102	112	115	122

Tipo Type

CS-M12540ACS

Girante - Impeller: ø 405 mm

Bocche pompa Ports pump	Giri pompa/1'	m3/h	84	96	108	120	132	150	180	192	
		G/min	374	427	481	534	587	668	801	854	
		RPM	I/1'	1400	1600	1800	2000	2200	2500	3000	3200
DNa	DNm										
150 mm	125 mm	1450	H mt.	59.2	59	59	58.9	58.7	58.2	57.2	56.7
			H feet	197	197	197	196	196	194	191	189
			Hp ass.	37	39.2	41.2	43.2	45.2	48.2	53	54.9
		1750	H mt.	86.5	86.5	86	85.8	85.7	85.5	85	84.5
			H feet	288	288	287	286	286	285	283	282
			Hp ass.	65	66	67	72	73.5	75.9	84.5	87.5
		2000	H mt.	113.5	113	113	112	112	111.5	111	110.5
			H feet	378	377	377	373	373	372	370	368
			Hp ass.	94	97	98	99.5	107	109	113	119

Tipo Type
CS-M12531BCS

Girante - Impeller: ø 310 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	84	96	108	120	132	150	180	192
DNa	DNm			G/min	374	427	481	534	587	668	801	854
				I/1'	1400	1600	1800	2000	2200	2500	3000	3200
150 mm	125 mm	1450	H mt.	31.8	31.7	31.6	31.5	31.1	30.6	29.1	28.5	
			H feet	106	106	105	105	104	102	97	95	
			Hp ass.	17.3	18.5	19.6	20.8	21.6	22.8	25	25.8	
		1750	H mt.	46.5	46	46.2	46	45.8	45	44.5	43	
			H feet	155	153	154	153	153	150	148	143	
			Hp ass.	28.5	30.3	32.5	34.4	36.5	38	40	42	
		2000	H mt.	61	60.7	60.5	60.4	60	59.5	58.7	58.5	
			H feet	203	202	202	201	200	198	196	195	
			Hp ass.	39.5	42.5	45	48.5	51	54.5	58	58.5	
		2250	H mt.	77.5	77	76.5	76	76	75.5	75	74.5	
			H feet	258	257	255	253	253	252	250	248	
			Hp ass.	56	60	64	69	72	77	82	83	
		2500	H mt.	95.5	95	94	93.5	93.5	93	92	91.5	
			H feet	318	317	313	312	312	310	307	305	
			Hp ass.	74	77	82	87	94	98	105	112	

Tipo Type
CS-M12531CCS

Girante - Impeller: ø 295 mm

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	84	96	108	120	132	150	180	192
DNa	DNm			G/min	374	427	481	534	587	668	801	854
				I/1'	1400	1600	1800	2000	2200	2500	3000	3200
150 mm	125 mm	1450	H mt.	27.9	27.8	27.7	27.6	27.2	26.5	24.9	24	
			H feet	93	93	92	92	91	88	83	80	
			Hp ass.	15.6	16.5	17.4	18.2	19	19.9	21.5	22	
		1750	H mt.	41	40.5	40.4	40.3	40	39.5	38.5	37.2	
			H feet	137	135	135	134	133	132	128	124	
			Hp ass.	26	27.4	28.9	30.5	32	33	35	36	
		2000	H mt.	54	53.5	53	52.7	52.5	52	51.5	51	
			H feet	180	178	177	176	175	173	172	170	
			Hp ass.	36	38.7	40.8	43	45.5	47.7	49	50.7	
		2250	H mt.	68.5	68	67.5	67	66.5	66	65.5	65	
			H feet	228	227	225	223	222	220	218	217	
			Hp ass.	48.5	51	55	58	61	64.7	68	69.5	
		2500	H mt.	84.5	84	83.8	83	82.5	82	81	80.5	
			H feet	282	280	279	277	275	273	270	268	
			Hp ass.	64	66.4	70	68	79.5	83.5	88.5	92	

Tipo Type**CS-M125400ACS**

Girante - Impeller: ø 400 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	50	100	150	200	250	300	325	350
DNa	DNm			RPM	G/min	222	445	668	890	1,113	1,335
					I/1'	833	1666	2500	3333	4167	5000
150 mm	125 mm	1450	H mt.	59.5	59.5	58	56	52.5	46	43.5	
			H feet	198	198	193	187	175	153	145	
			Hp ass.	30	41	50	57	64	70	75	
		1750	H mt.	86	86	85.5	84.5	82	77	74	70
			H feet	287	287	285	282	273	257	247	233
			Hp ass.	50	66	79	91	102	112	115	122

Tipo Type**CS-M12540ACS**

Girante - Impeller: ø 405 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	84	96	108	120	132	150	180	192
DNa	DNm			RPM	G/min	374	427	481	534	587	668
					I/1'	1400	1600	1800	2000	2200	2500
150 mm	125 mm	1450	H mt.	59.2	59	59	58.9	58.7	58.2	57.2	56.7
			H feet	197	197	197	196	196	194	191	189
			Hp ass.	37	39.2	41.2	43.2	45.2	48.2	53	54.9
		1750	H mt.	86.5	86.5	86	85.8	85.7	85.5	85	84.5
			H feet	288	288	287	286	286	285	283	282
			Hp ass.	65	66	67	72	73.5	75.9	84.5	87.5
		2000	H mt.	113.5	113	113	112	112	111.5	111	110.5
			H feet	378	377	377	373	373	372	370	368
			Hp ass.	94	97	98	99.5	107	109	113	119

Tipo Type**CS-M15040ACS**

Girante - Impeller: ø 415 mm

Bocche pompa Ports pump		Giri pompa/1'	m3/h	132	150	180	210	240	270	300	330
DNa	DNm			RPM	G/min	587	668	801	935	1,068	1,202
					I/1'	2200	2500	3000	3500	4000	4500
200 mm	150 mm	1450	H mt.	58.8	58.7	58.5	57.9	57	55.5	54	52
			H feet	196	196	195	193	190	185	180	173
			Hp ass.	50.9	54.2	59	64	68.6	72.5	76	79.6
		1750	H mt.	85.5	85.5	85.5	85	85	84	82.5	80.5
			H feet	285	285	285	283	283	280	275	268
			Hp ass.	85	90	97	104	110	120	125	130

Tipo Type
CS-M200ES

Bocche pompa Ports pump		Giri pompa/1'	m3/h	180	210	240	270	300	330	360	390
DNa	DNm		RPM	G/min	801	935	1,068	1,202	1,335	1,469	1,602
				I/1'	3000	3500	4000	4500	5000	5500	6000
200 mm	200 mm	1000	H mt.	11	10.9	10.8	10.5	10.2	9.4	9.1	8.5
			H feet	37	36	36	35	34	31	30	28
			Hp ass.	10.9	11.7	12.4	12.9	13.4	13.7	14	14.1
		1450	H mt.			21.6	21.4	21.2	20.8	20.5	20
			H feet			72	71	71	69	68	67
			Hp ass.			31.3	32.6	34	35.8	36.8	37.9
		1800	H mt.					32.7	32.5	32.4	31.9
			H feet					109	108	108	106
			Hp ass.					58.5	61.7	64	66.5

Tipo Type
CS-M200FS

Bocche pompa Ports pump		Giri pompa/1'	m3/h	180	210	240	270	300	330	360	390
DNa	DNm		RPM	G/min	801	935	1,068	1,202	1,335	1,469	1,602
				I/1'	3000	3500	4000	4500	5000	5500	6000
200 mm	200 mm	1000	H mt.	9.7	9.5	9.3	9	8.7	8.2	7.8	7.1
			H feet	32	32	31	30	29	27	26	24
			Hp ass.	9.8	10.3	11	11.5	12	12.3	12.5	12.5
		1450	H mt.			19.8	19.5	19.3	18.9	18.5	17.9
			H feet			66	65	64	63	62	60
			Hp ass.			28.3	29.7	31	32.1	33.5	34.4
		1800	H mt.					30.5	30.3	30	29.6
			H feet					102	101	100	99
			Hp ass.					54	56	58	60

Tipo Type
CS-M200GS

Bocche pompa Ports pump		Giri pompa/1'	m3/h	180	210	240	270	300	330	360	390
DNa	DNm		RPM	G/min	801	935	1,068	1,202	1,335	1,469	1,602
				I/1'	3000	3500	4000	4500	5000	5500	6000
		1000	H mt.	9.1	8.9	8.7	8.4	8.1	7.6	7.1	
			H feet	30	30	29	28	27	25	24	
			Hp ass.	8.9	9.6	10	10.5	10.8	11	11.2	
			H mt.			18	17.7	17.4	16.9	16.4	15.9

200 mm	200 mm	1450	H feet			60	59	58	56	55	53
			Hp ass.			26	27	28	29	30	30.8
1800			H mt.					27.5	27.1	26.8	26.2
			H feet					92	90	89	87
			Hp ass.					48	49.2	51.6	53

Tipo Type

CS-M200IS

Bocche pompa Ports pump	Giri pompa/1'	m3/h	240	270	300	330	360	390	420	480	
		G/min	1,068	1,202	1,335	1,469	1,602	1,736	1,869	2,136	
DNa	DNm	RPM	I/1'	4000	4500	5000	5500	6000	6500	7000	8000
200 mm	200 mm	1000	H mt.	6.7		6		5			
			H feet	22		20		17			
			Hp ass.	7.6		8.1		8.2			
		1450	H mt.	14	13.7	13.3	12.7	12.2	11.6	10.8	9.2
			H feet	47	46	44	42	41	39	36	31
			Hp ass.	20	20.9	21.5	22.1	22.6	23.1	23.3	24
1800	H mt.			20.7		19.8		18.6	16.8		
	H feet			69		66		62	56		
Hp ass.			37		40		42	43.7			

Tipo Type

CS-M25017S

Bocche pompa Ports pump	Giri pompa/1'	m3/h	300	330	360	420	480	540	600	660	
		G/min	1,335	1,469	1,602	1,869	2,136	2,403	2,670	2,937	
DNa	DNm	RPM	I/1'	5000	5500	6000	7000	8000	9000	10000	11000
250 mm	250 mm	1750	H mt.				21.8	21.8	21.4	21.1	20.5
			H feet				73	73	71	70	68
			Hp ass.				58.2	59	60.4	62.2	64

Tipo Type

CS-M200460DS

Girante - Impeller: \varnothing 460 mm

Bocche pompa Ports pump	Giri pompa/1'	m3/h	450	480	540	600	720	840	960		
		G/min	2,003	2,136	2,403	2,670	3,204	3,738	4,272		
DNa	DNm	RPM	I/1'	7500	8000	9000	10000	12000	14000	16000	
300 mm	250 mm	1450	H mt.	75	74	73	71	68	62	51	
			H feet	250	247	242	237	227	207	170	
			Hp ass.	195	205	208	210	240	247	256	
		H mt.			108	107.6	107.3	106.9	106.6		

		1750	H feet			360	359	358	356	355	
			Hp ass.			337	341.3	345.6	349.9	354.2	

Tipo Type CS-M200500DS

Bocche pompa Ports pump		Giri pompa/1'											
DNa	DNm		RPM	m3/h	450	480	600	720	840	960	1080	1200	
			G/min	2,003	2,136	2,670	3,204	3,738	4,272	4,806	5,340		
			I/1'	7500	8000	10000	12000	14000	16000	18000	20000		
300 mm	250 mm	1450	H mt.	90	90	89	86	83	77	69			
			H feet	300	300	297	287	277	257	230			
			Hp ass.	245	260	275	300	320	348	390			
		1750	H mt.			129.6	129.6	129.6	129.6	128.9	128.2		
			H feet			432	432	432	432	430	427		
			Hp ass.			423.4	429.8	436.3	449.3	462.2	475.2		

Tipo Type CS-M300340DS

Bocche pompa Ports pump		Giri pompa/1'											
DNa	DNm		RPM	m3/h	600	720	840	960	1080	1200	1320	1440	
			G/min	267	3,204	3,738	4,272	4,806	5,340	5,874	6,409		
			I/1'	1000	12000	14000	16000	18000	20000	22000	24000		
300 mm	300 mm	1450	H mt.	34	32	30	28	25	22	19			
			H feet	113	107	100	93	83	73	63			
			Hp ass.	115	129	137	142	142	142	142			
		1750	H mt.							48.96	47.52	46.08	
			H feet							163	158	154	
			Hp ass.							198.7	210.8	222.9	

Tipo Type CS-M300285DS

Bocche pompa Ports pump		Giri pompa/1'											
DNa	DNm		RPM	m3/h	450	600	750	900	1050	1200	1350	1500	
			G/min	2,003	2,670	3,338	4,005	4,673	5,340	6,008	6,676		
			I/1'	7500	10000	12500	15000	17500	20000	22500	25000		
300 mm	300 mm	1450	H mt.	33	32	31	28	25	22	18			
			H feet	110	107	103	93	83	73	60			
			Hp ass.	101	105	113	120	124	125	125			
		1750	H mt.				47.52	46.8	46.08	45.36	44.64		
			H feet				158	156	154	151	149		
			Hp ass.				174.5	178	181.4	188.4	195.3		

Tipo Type CS-M300315DS

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	450	600	750	900	1050	1200	1350	1500
DNa	DNm			G/min	2,003	2,670	3,338	4,005	4,673	5,340	6,008	6,676
				I/1'	7500	10000	12500	15000	17500	20000	22500	25000
300 mm	300 mm	1450	H mt.	35	34	32	31	27	25	22	17	
			H feet	117	113	107	103	90	83	73	57	
			Hp ass.	113	120	125	129	136	138	143	143	
		1750	H mt.				50.4	49.68	48.96	47.52	46.08	
			H feet				168	166	163	158	154	
			Hp ass.				195.3	201.3	207.4	211.7	216	

Tipo Type

CS-M300345DS

Bocche pompa Ports pump		Giri pompa/1'	RPM	m3/h	450	600	750	900	1050	1200	1350	1500
DNa	DNm			G/min	2,003	2,670	3,338	4,005	4,673	5,340	6,008	6,676
				I/1'	7500	10000	12500	15000	17500	20000	22500	25000
300 mm	300 mm	1450	H mt.	37	34	35	34	31	27	24	18	
			H feet	123	113	117	113	103	90	80	60	
			Hp ass.	120	126	137	147	150	154	155	163	
		1750	H mt.				53.28	51.12	48.96	49.68	50.4	
			H feet				178	170	163	166	168	
			Hp ass.				207.4	212.5	217.7	227.2	236.7	



Tipo Type	CS-M50A2TBX
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33	36	42	48	54	60	66	
147	160	187	214	240	267	294	
550	600	700	800	900	1000	1100	
5.5	4						
18	13						
2	2.1						
11.7	10.5	7					
39	35	23					
3.1	3.2	3.4					
16	13.6	9.1	3.9				
53	45	30	13				
4.6	4.7	5	5.2				
23	22	18.7	15	10.5			
77	73	62	50	35			
5.5	5.6	5.8	6.3	6.4			
27.9	26.1	22.2	17.8	12.4			
93	87	74	59	41			
6.9	7.2	7.5	8.1	8.2			
32.7	30.6	26	20.9	14.6			
109	102	87	70	49			
8.8	9.2	9.5	10.3	10.5			
45.7	44.5	41.5	38	32.3			
152	148	138	127	108			
10.8	11.2	11.8	12.5	13			
68.4	68	64.8	62.0	56.8	52.0	46.8	
228	226.7	216	206.7	189.3	173.3	156	
19.6	20	20.8	21.6	22.4	24.0	24.8	



Tipo Type	CS-M50B2TBX
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33	36	42	48	54	60	66	
147	160	187	214	240	267	294	
550	600	700	800	900	1000	1100	

20.5	19	15.5					
68	63	52					
4.8	4.9	5.2					
24.5	22.5	18.4					
82	75	61					
6.2	6.3	6.7					
28.8	26.4	21.6					
96	88	72					
7.8	8	8.5					
42.3	41.5	38.5	33				
141	138	128	110				
9.7	10	10.6	11.2				
61.6	61.2	57.2	53.2	49.2	44.8		
205.3	204	190.7	177.3	164	149.3		
18	18.4	19.2	20.0	20.8	21.6		



Tipo Type	CS-M65E2TBX
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66	72	78	84	90	96	102	108
294	320	347	374	401	427	454	481
1100	1200	1300	1400	1500	1600	1700	1800
9.8	6						
33	20						
6.5	6.7						
12.7	7.8						
42	26						
9.6	9.9						
24.5	21	18	14				
82	70	60	47				

11.5	12	12.3	12.7				
29.1	24.9	21.3	16.6	11.8			
97	83	71	55	39			
14.8	15.5	16	16.4	16.8			
34.1	29.2	25	18.5	13.9			
114	97	83	62	46			
18.9	19.7	20.4	20.9	21.4			
53	51	48	45	40.5	36	32	
177	170	160	150	135	120	107	
23	24	24.7	25.5	26.5	27.1	28	
82	80	77	74	71	68	64	60
273	267	257	247	237	227	213	200
37.2	38.4	40	41.6	42.8	44	46	48



66	72	78	84	96	102	108	112
294	320	347	374	427	454	481	499
1100	1200	1300	1400	1600	1700	1800	1867
2							
7							
2.3							
8	6						
27	20						
3.8	3.9						
13.3	11.5	9	7				
44	38	30	23				
5.2	5.5	5.6	5.7				
18.2	16.5	15	12.3				
61	55	50	41				
6.8	7.1	7.3	7.5				
23	21.5	19.5	17.5	12.5	9.5		
77	72	65	58	42	32		
8.4	8.8	9.2	9.5	9.8	10		
26.9	25.1	22.8	20.5	14.6	11.1		
90	84	76	68	49	37		
10.6	11.1	11.6	12	12.4	12.7		
37.8	36.2	34.6	32.5	28.5	25.5	23	
126	121	115	108	95	85	77	
13.3	14	14.5	15	16	16.4	16.8	
57.6	56.8	55	53.2	49.2	46.6	44	
192	189	183	177	164	155	147	
22	22.4	23.2	24	25.6	26.8	28	



Tipo Type	CS-M65B1TBX
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66	72	78	84	96	102	108	
294	320	347	374	427	454	481	
1100	1200	1300	1400	1600	1700	1800	
10.6 35 4.6	8.6 29 4.9						
15 50 5.9	13.1 44 6.2						
19.4 65 7.4	17.7 59 7.8	15.5 52 8.2	13.5 45 8.4				
22.7 76 9.3	20.7 69 9.8	18.1 60 10.3	15.8 53 10.6				
33 110 11.7	31.3 104 12.3	29.3 98 12.7	27.2 91 13.2	22.7 76 13.9	20 67 14.2	17 57 14.5	
51.6 172 18.8	51.6 172 19.2	48.6 162 20	45.6 152 20.8	41.6 139 22.4	38.8 129 23.2	36 120 24	



Tipo Type	CS-M65D1TBX
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66	72	78	84	96	102	108	
294	320	347	374	427	454	481	
1100	1200	1300	1400	1600	1700	1800	

6.8 23 3.8	4.4 15 4						
10.4 35 4.7	8.3 28 5						
14.4 48 6.1	12.3 41 6.5	9.9 33 6.7	7.7 26 6.9				
16.8 56 7.7	14.4 48 8.2	11.6 39 8.5	9 30 8.7				
26.2 87 9.5	24.3 81 9.9	21.8 73 10.2	19.6 65 10.6	14.4 48 11	11 37 11.2		
41 137 15.6	39.6 132 16	37.2 124 16.8	34.8 116 17.6	30.8 103 18.4	27.6 92 18.8	24.4 81 19.2	



Tipo Type	CS-M65E1TBX
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66	72	78	84	96	102	108	
294	320	347	374	427	454	481	
1100	1200	1300	1400	1600	1700	1800	
5 17 3.5	2.5 8 3.6						
8.2 27 4.2	6 20 4.4						
12 40	9.8 33	7.2 24	5 17				

5.5	5.9	6.1	6.2				
14	11.4	8.4	5.8				
47	38	28	19				
6.9	7.4	7.7	7.8				
23	21	18.3	16	10.5	8		
77	70	61	53	35	27		
8.5	8.8	9	9.4	9.7	9.8		
36.6	35.2	32.6	30	26	22.6	19.2	
122	117	109	100	87	75	64	
14	14.4	15.2	16	16.8	17.2	17.6	



Tipo Type	CS-M65A2TBX
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66	72	78	84	90	96	102	108
294	320	347	374	401	427	454	481
1100	1200	1300	1400	1500	1600	1700	1800
12	9						
40	30						
6.5	6.8						
23.5	22						
78	73						
10.5	11						
30.6	28.6	26	20.8				
102	95	87	69				
15.6	16.3	16.9	17.5				
43	41	36.5	36				
143	137	122	120				
18.5	19.5	20	21				
51	48.7	46.3	42.7	35.6	32	28.5	
170	162	154	142	119	107	95	
23.9	25.2	26.5	27.1	28.7	28.9	29.1	
59.9	57.1	54.3	50.1	41.8	41.5	33.4	
200	190	181	167	139	138	111	
30.4	32.1	33.7	34.5	36.5	36.8	37	
83	81	79	76	74	70	67	
277	270	263	253	247	233	223	
36.5	38	39.5	41.5	42.5	44.1	45.5	
124	122	120	118	115	112	110	108
413	407	400	393	383	373	367	360
62	64	66	68	70	72	74	76



Tipo Type	CS-M80E3TBX						
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96	108	120	135	150	168		
427	481	534	601	668	748		
1600	1800	2000	2250	2500	2800		
19.5	16						
65	53						
12.5	13						
33	29.5						
110	98						
19.5	20.5						
43	38.4	33.9	27.3				
143	128	113	91				
29	30.5	32	33.5				
58	55	52	48				
193	183	173	160				
35	37	38.5	40.5				
68.9	65.3	61.7	57	49.8			
230	218	206	190	166			
45.3	47.9	49.8	52.4	55			
80.8	76.6	72.4	66.9	58.5			
269	255	241	223	195			
57.6	60.9	63.4	66.7	69.9			
109	106	104	96	92	88		
364	355	347	320	307	293		
72	76	80	86	90	94		
164	162	158	152	147	142		
547	540	527	507	490	473		
115.2	121.6	128	136	141.2	146.4		



Tipo Type	CS-M80E2TBX						
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135	150	168					
601	668	748					
2250	2500	2800					

6 20 10.5							
11 37 13	7 23 13.3						
17 57 16.5	13 43 17	7 23 17.5					
25.5 85 22	21 70 23	13 43 23.3					
44 147 36.8	39 131 38	35 116 40					



Tipo Type	CS-M80A2TBX
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135	150	168	180				
601	668	748	801				
2250	2500	2800	3000				
7.5 25 10.5							
10 33 15.6							
21 70 18	17.5 58 19	12 40 20					
28 93	24 80	17 57					

23	24	24.8				
35.5	31.5	26	22			
118	105	87	73			
28	29	30.2	31			
48.5	45	39	34			
162	150	130	113			
36	37	41	39.5			
76	72	69	62			
253	241	229	207			
64	66	68	72			



Tipo Type	CS-M80A4TBX
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144	162	180	216				
641	721	801.1	961.3				
2400	2700	3000	3600				
31.6							
105							
20.7							
44	41						
147	137						
29	31						
55	54.9	49					
183	183	163					
37	37.9	42					
65	64.7	63					
217	216	210					
45	48.5	52					
74	72	68					
247	240	227					
61	63	69					
94	91	85					
313	303	283					
79.5	83	94					
148.8	148	148	146				
496	495	493	488				
112	119	126	140				



Tipo Type	CS-M80B4TBX						
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144	162	168	180	198	216		
641	721	748	801	881	961		
2400	2700	2800	3000	3300	3600		
27.2 91 16.6							
38.9 130 23.4	35.3 118 24.8						
47.9 160 29	47.5 158 30.1	47 157 31	42 140 33.6				
55.5 185 36	55 183 38	54.5 182 39.9	54 180 41.6				
64 213 49.2	61.9 206 50.4	60 200 52.3	58.4 195 55.2				
81.7 272 61.6	79 263 64.2	78 260 66.5	77.4 258 68.8	73.1 244 75.2			
128 427 89.6	127.6 425 95.6	126.8 423 100.8	127.2 424 101.6	126.4 421 106.8	125.6 419 112		



Tipo Type	CS-M80C4TBX						
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144	162	168	180	198	216		
641	721	748	801	881	961		
2400	2700	2800	3000	3300	3600		

32.7							
109							
18.1							
40.2	39.9	39.6					
134	133	132					
22.3	23.1	24					
47.1	46.5	46	45.6				
157	155	153	152				
27.9	29.3	31.8	32.4				
54	52.2	50	49.3				
180	174	167	164				
37.6	39.2	41.3	43				
68.8	67	65.8	65.2	61.5			
229	223	219	217	205			
48	50.5	52	54	59			
107.6	107.4	106.8	107.2	106.6	106		
359	358	356	357	355	353		
69.6	74	78.4	78.4	82.8	87.2		



Tipo Type	CS-M150BTBX
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210	225	240	270	300			
935	1,001	1,068	1,202	1,335			
3500	3750	4000	4500	5000			
16.5	15	12.5					
55	50	42					
17.6	17.8	18					
21.5	20	18.5					
72	67	62					

23.7	23.8	24					
25.5	24	23					
85	80	77					
28.3	28.5	29					
30	29	28	24	22			
100	97	93	80	73			
36	37.2	38.4	40	42.4			



Tipo Type	CS-M150ATBX
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210	225	240	270	300			
935	1,001	1,068	1,202	1,335			
3500	3750	4000	4500	5000			
7.5							
25							
11.2							
13.5							
45							
15.8							
21	20	19	15.6				
70	67	63	52				
23.4	23.7	24	24.5				
29	27.5	26.5	23.5				
97	92	88	78				
31.5	32	33	33.2				
34.5	33	32	29				
115	110	107	97				
39	39.2	39.5	39.5				
38	37	36	34	30			
127	123	120	113	100			
48.8	48.4	48	51.2	52			



Tipo Type	CS-M100ATBX
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150	165	180	195	210	225	240	270
668	734	801	868	935	1,001	1,068	1,202

2500	2750	3000	3250	3500	3750	4000	4500
54	52	49	48	47			
180	173	163	160	157			
44	45.5	47	52	53			
80	78.5	77	75.5	72	69	67	
267	262	257	252	240	230	223	
70	73	76	79.5	83	87.5	92	
105	104	102	101	98	95	93	86
350	347	340	337	327	317	310	287
94	98	103	109	113	118	122	136

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210	240	270	300	330	400		
935	1,068	1,202	1,335	1,469	1,780		
3500	4000	4500	5000	5500	6666		
27.3	24.9	22	18.5	14.3			
91	83	73	62	48			
26.7	28	29	29.9	30			
42	41.5	39.5	36	32	21		
140	138	132	120	107	70		
44	45.5	46.9	49	51	52.7		
58	54.8	54	51.5	47	39.5		
193	183	180	172	157	132		
59.6	65.5	67.8	70	73	77		
74	73	69	68	65	57		
247	243	230	227	217	190		
84	93	96	99	103	104		
91	90	85	84	80	70		
303	300	283	280	267	233		
113.5	115	127	132	136	141		

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210	240	270	300	330	400		
935	1,068	1,202	1,335	1,469	1,780		
3500	4000	4500	5000	5500	6666		
22.8	20	17	13.5	9.5			
76	67	57	45	32			
22.7	23.5	24	24.4	24.5			

36.3	34.5	30.5	29	16.7	14		
121	115	102	97	56	47		
37.5	39	40.4	41.3	42	43		
50.3	47.4	45	39.8	37.8	21.5		
168	158	150	133	126	72		
53.7	55.9	58	60	61.5	63		
64.5	63.5	60	57	50	37		
215	212	200	190	167	123		
72	76	79.5	82	85	88		
80	79.5	78	74	70	55		
267	265	260	247	233	183		
95	98	104	108	112	118		

400							
1,780							
6666							
62							
207							
130							

210	240	270	300	330	400		
935	1,068	1,202	1,335	1,469	1,780		
3500	4000	4500	5000	5500	6666		
55.7	53.5	50.5	46.5	42.5			
186	178	168	155	142			
57.6	61.6	65.6	69.4	72.5			
84	81.5	79.5	76.5	72.5	61		
280	272	265	255	242	203		
93	99	103.5	108	115	129		
110	109	106	103	99	87.5		
367	363	353	343	330	292		
126	138	147	153	161	175		

210	240	270	300	330	400		
935	1,068	1,202	1,335	1,469	1,780		
3500	4000	4500	5000	5500	6666		
27.3	24.9	22	18.5	14.3			
91	83	73	62	48			
26.7	28	29	29.9	30			
42	41.5	39.5	36	32	21		
140	138	132	120	107	70		
44	45.5	46.9	49	51	52.7		
58	54.8	54	51.5	47	39.5		
193	183	180	172	157	132		
59.6	65.5	67.8	70	73	77		
74	73	69	68	65	57		
247	243	230	227	217	190		
84	93	96	99	103	104		
91	90	85	84	80	70		
303	300	283	280	267	233		
113.5	115	127	132	136	141		

210	240	270	300	330	400		
935	1,068	1,202	1,335	1,469	1,780		
3500	4000	4500	5000	5500	6666		
22.8	20	17	13.5	9.5			
76	67	57	45	32			
22.7	23.5	24	24.4	24.5			
36.3	34.5	30.5	29	16.7	14		
121	115	102	97	56	47		
37.5	39	40.4	41.3	42	43		
50.3	47.4	45	39.8	37.8	21.5		
168	158	150	133	126	72		
53.7	55.9	58	60	61.5	63		
64.5	63.5	60	57	50	37		
215	212	200	190	167	123		
72	76	79.5	82	85	88		
80	79.5	78	74	70	55		
267	265	260	247	233	183		
95	98	104	108	112	118		

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400							
1,780							
6666							
62 207 130							

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210	240	270	300	330	400		
935	1,068	1,202	1,335	1,469	1,780		
3500	4000	4500	5000	5500	6666		
55.7	53.5	50.5	46.5	42.5			
186	178	168	155	142			
57.6	61.6	65.6	69.4	72.5			
84	81.5	79.5	76.5	72.5	61		
280	272	265	255	242	203		
93	99	103.5	108	115	129		
110	109	106	103	99	87.5		
367	363	353	343	330	292		
126	138	147	153	161	175		

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360	390	420	450	480	500	575	
1,602	1,736	1,869	2,003	2,136	2,225	2,559	
6000	6500	7000	7500	8000	8333	9583	
49.5	47	44	41	37.5			
165	157	147	137	125			
82.6	85.6	83	90	91.2			
79	76	74	70	68	65	55	
263	253	247	233	227	217	183	
135	140	147	150	154	156	162	

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420	480	540	600				
1,869	2,136	2,403	2,670				
7000	8000	9000	10000				
7.8 26 14.2							
19.2 64 39	17.4 58 40.7	15 50 41.7					
31.7 106 68.5	30.5 102 72	28.4 95 75	25 83 76				

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420	480	540	600				
1,869	2,136	2,403	2,670				
7000	8000	9000	10000				
6.5 22 12.5							
17.2 57 35.3	15.5 52 36.7	13.4 45 37.2					
29 97 62	27.5 92 65	25.2 84 67	21.4 71 67				

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420	480	540	600				
1,869	2,136	2,403	2,670				
7000	8000	9000	10000				
15.2	13.6	11.4					

51	45	38					
31.5	32.6	33					
25.7	24	21.7	18				
86	80	72	60				
54.5	57.4	59	59				

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540	600						
2,403	2,670						
9000	10000						
7.2							
24							
24.2							
14	9.8						
47	33						
44	43.7						

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720	840	900	1020				
3,204	3,738	4,005	4,539				
12000	14000	15000	17000				
19.7	17.4	15.9	12.3				
66	58	53	41				
64.8	65.8	65	62				

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