



# STEAM TUBES

# A WORLDWIDE REFERENCE FOR BAKING QUALITY





After years of hard work, we can now boast of a range of very high performance ovens: part of a series of projects based on the steam tube technology developed by us, that allows you to use energy sources such as natural gas and diesel. Each oven has specific features, but all have been designed with the goal of creating the best baking conditions for quality products, to minimize energy consumption and optimize production.

### **Gentle heat that envelops the product**



Polin Steam Tubes, maintain uniform temperature between the core and the surface of the product. Heat in the chamber is gentle, uniform, and spreads evenly through a high radiating surface.

### **Gentle steam on the dough surface**



The quantity and quality of steam for baking are crucial for optimal baking.

A Polin Steam Oven, envelops your product with moist steam, that easily sticks to the product because it almost reaches condensing temperature.

## BIG SAVINGS ON CONSUMPTION AND MAINTENANCE

### Planned for energy saving



Various technological innovations contribute to significant energy savings: materials used for thermal insulation and low-emissivity glass, from the combustion chamber that provides high efficiency to a motorized shutter on the chimney that better retains the heat, making better use of the calories.

compared to other ovens in the same category, and that the savings increase significantly in relation to traditional, previous generation ovens.

Our ovens represent an energy system, that reduces consumption by at least 25% compared to other traditional oven tubes, and by 50% when compared with cyclothermic ovens.

The efficiency of the Polin steam tubes heat system can be seen by measuring the temperature of the combustion exhaust fumes, which is only a few degrees higher than that of the deck during baking.

### + Consumption reduction by 25% in comparison to traditional tube ovens



We can state with satisfaction that surveys carried out on energy consumption of the Polin steam pipes, guarantee the highest absolute savings





Certified efficiency  
filed at the DVGW  
Certifying Body

### **Faster recovery times and 40% lower calories**



We succeeded in constructing an oven with a reduced quantity of calories installed (lower up to 40% in comparison to the traditional tube ovens) at the same time increasing the temperature recovery speed.

### **Increased productivity**



The Polin Steam Tube can reach its operating temperature in about an hour from when it is turned on.

This characteristic and rapidity of recovery, results in reducing production time, i.e. make 5 bakings in the same time you used to make 4, while always maintaining your baking quality.

### **Large and big mass steam generators**



A specific goal was set with steam generator to ensure the highest yield.

Its large mass accumulates a large amount of energy, for prompt and large steam production.

### **Easy maintenance and completely removable steam generators**



To help with cleaning and ordinary maintenance, all components of the steam tubes are positioned so as to be easily accessed from the front. There are double deck lights located at the door granting resistance and easy replacement.

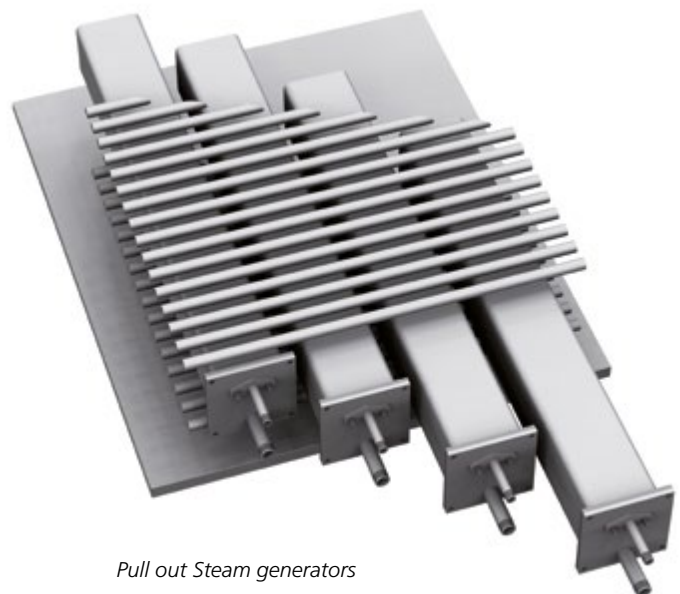
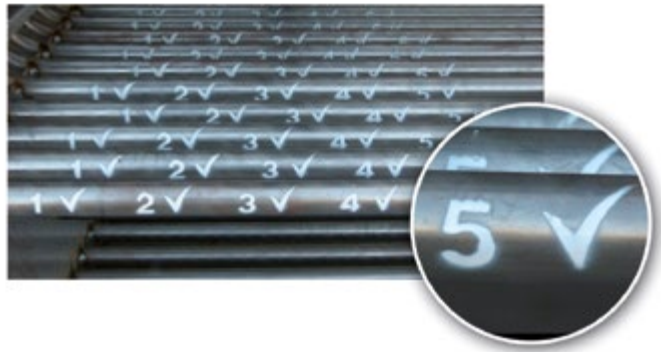
The prefabricated steam generators, can be easily extracted and make cleaning and maintenance easy, resulting in lower costs.

### **Great reliability: tubes tested 5 times each**



Tubes thickness was increased to guarantee higher resistance, and implemented a constructive geometry suitable for minimising thermal stress. The tubes are not tested based on one sample only which is tested several times or all tested once as a bulk. Each individual tube is tested 5 times with a pressure of 700 atmospheres (about 8 times greater than the normal operating pressure).

This special testing activity is used exclusively by Polin and is indicated on the tubes upon delivery of the oven. This complex testing technology for very individual machine guarantees a long oven life.



*Pull out Steam generators*

T.V. SYNT

# GENTLE BAKING, MAXIMUM FLEXIBILITY

## Fast temperature change



Compared to other ovens of the same category, T.V. Synt has the best temperature control when loading the oven, which also makes it possible to increase or decrease the baking temperature faster.

This offers the possibility of flexible production, from pastry items, to small, medium and large sized bread products.

## Maximum flexibility in controlling steam



In T.V. Synt steam generators are positioned in the baking chamber in a manner that guarantees a constant and even flow of steam, ready to envelope the product.

When you need to quickly get rid of the steam, you can rely on an exclusive independent dual channel exhaust system that eliminates it evenly.





### Easy to move



If the oven needs to be moved, T.V. Synt makes all disassembly, transport and reassembly operations easy and quick because of its prefabricated modular structure.

### Planned to occupy less floor space




T.V. Synt has been designed to occupy less floor space and can be delivered fully assembled. It has been designed for small laboratories and pastry shops with reduced dimensions, to offer the flexibility and quality of Polin Steam Tubes baking system.



# T.V. SYNCRON

## FOR GREATER PRODUCTION DIVERSIFICATION

**The flexibility  
of a separate electric deck** 

T.V. Synchron unites all the production force and the quality of a steam tube baking oven, to the flexibility and convenience of an electric oven. An additional deck is included to the three decks,

heated by Polin's exclusive ceramic heating elements, guaranteeing the gentle baking effect thanks to their high thermal mass.







### Special electroceramic heating for gentle T.V. baking

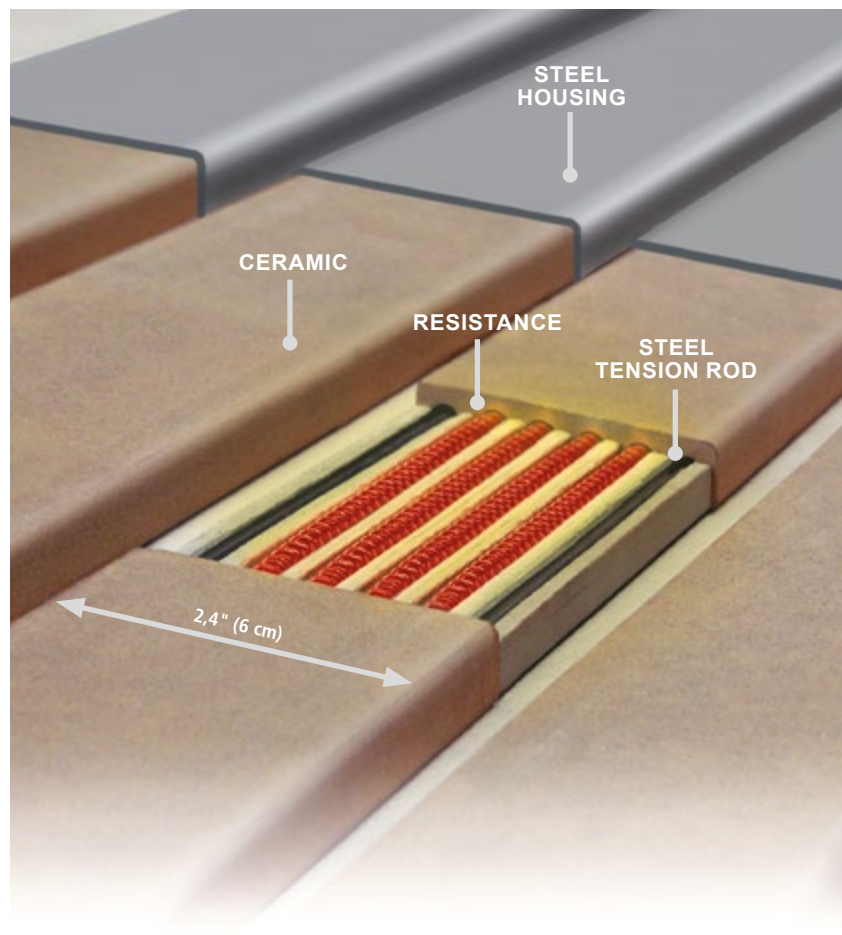


Electric deck of T.V. Synchron offers gentle baking, comparable to that of tube decks, being warmed up by special heating systems.

The solid ceramic mass that surrounds them, releases the heat at a lower temperature more evenly compared to the traditional armored heating system. This determines 5 important advantages:

- 1) gentle and homogeneous baking to ensure you will bake properly, thanks to the higher uniform temperature;
- 2) high quality baking results for all products, both large and small-sized, due to the higher uniform temperature (while the armored heating systems are not ideal to bake big bread);
- 3) lower temperature decrease when baking;
- 4) saves precious time between baking cycles (thus increasing productivity);
- 5) better heat accumulating electrical parts resulting in greater duration and reliability of the heating elements.

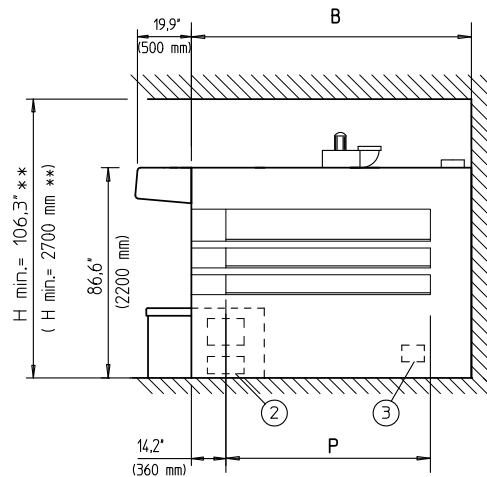
*Constructive elements of the large mass electroceramic heating items*



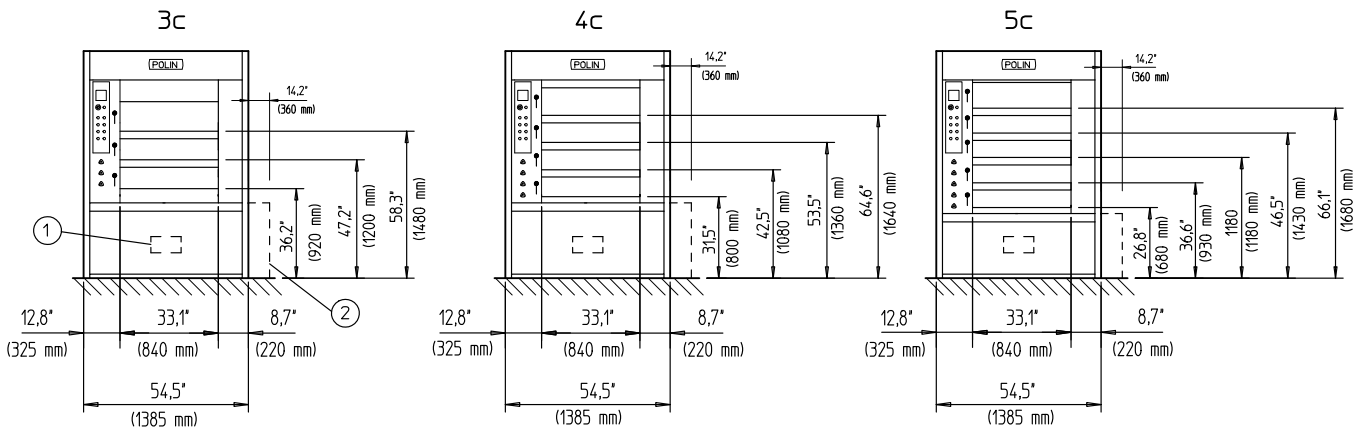
YOU CAN FIND THE IDEAL OVEN FOR YOU FROM THIS WIDE RANGE

T.V. SYNT

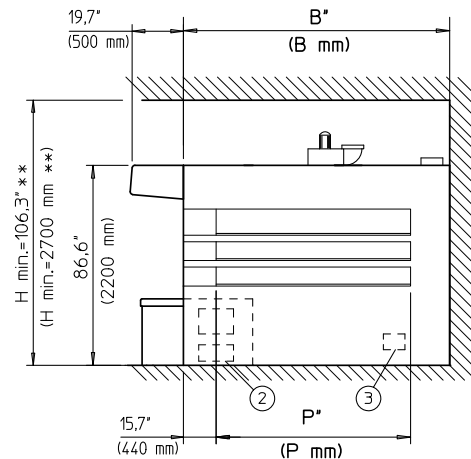
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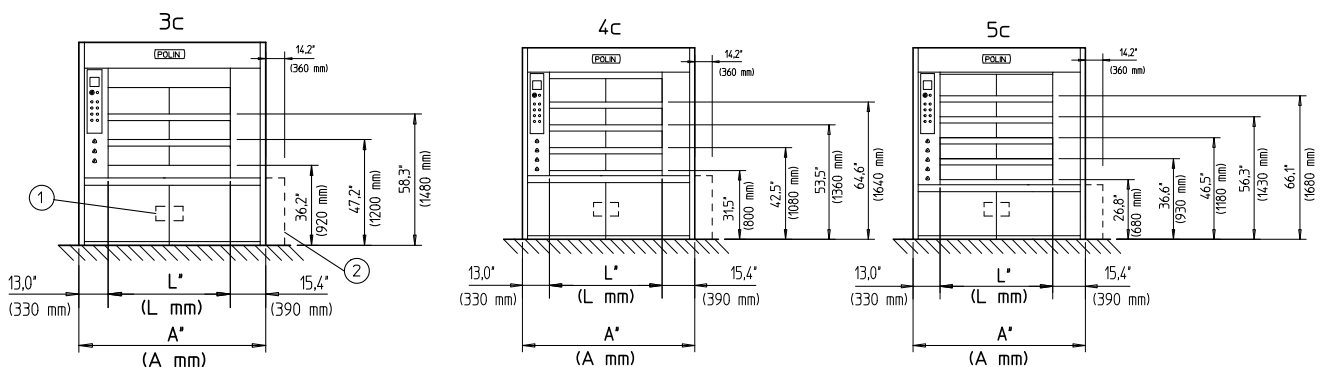
\*\* 108" (2750 mm) with a 2 speed motor



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\*\* 110" (2800 mm) with a 2 speed motor



AVAILABLE ENERGY: L.P.G., METHANE, DIESEL, FIREWOOD, BIOMASS (WOODEN CHIPS...)

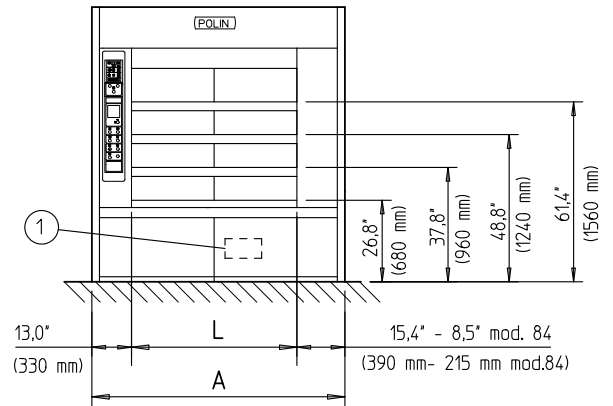
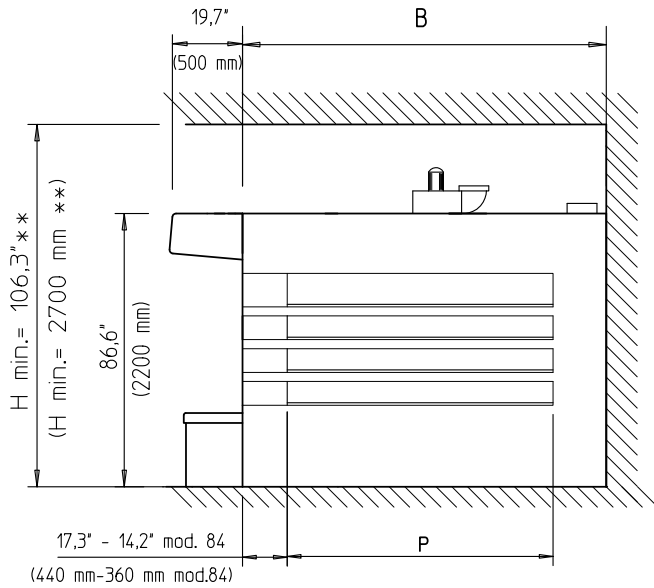
# CHARACTERISTICS

	Decks	Baking sup. in <sup>2</sup> (mq)	Overall dimensions		Deck useful dimensions							Installed power		Min. door clearance in (mm)	Weight lb (kg)	
					Width	Depth	Height					Thermal	Electric			
	n°	A in (mm)	B in (mm)	L in (mm)	P in (mm)	1° in (mm)	2° in (mm)	3° in (mm)	4° in (mm)	5° in (mm)	BTU/h (kcal/h)	kW	in (mm)	lb (kg)		
3,2 / 84x126-3	3	4.960 (3,2)	54,5 (1385)	75,2 (1910)	33,1 (840)	49,6 (1260)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	126.986,3 (32000)	1	25,6x72,9 (650x1850)	4.180,0 (1900)	
4,2 / 84x126-4	4	6.510 (4,2)		75,2 (1910)		49,6 (1260)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	-		126.986,3 (32000)	25,6x78,7 (650x2000)	4.840,0 (2200)
5,3 / 84x126-5	5	8.215 (5,3)		75,2 (1910)		49,6 (1260)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	138.891,2 (35000)		25,6x82,7 (650x2100)	5.500,0 (2500)	
4,3 / 84x170-3	3	6.665 (4,3)		92,5 (2350)		66,9 (1700)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	138.891,2 (35000)		25,6x72,9 (650x1850)	5.500,0 (2500)	
5,7 / 84x170-4	4	8.835 (5,7)		92,5 (2350)		66,9 (1700)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	158.732,8 (40000)		25,6x78,7 (650x2000)	6.160,0 (2800)	
7,1 / 84x170-5	5	11.00 (7,1)		92,5 (2350)		66,9 (1700)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	190.479,4 (48000)		25,6x82,7 (650x2100)	6.820,0 (3100)	
5,4 / 84x214-3	3	8.370 (5,4)		109,8 (2790)		84,3 (2140)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	158.732,8 (40000)		25,6x72,9 (650x1850)	6.600,0 (3000)	
7,2 / 84x214-4	4	11.160 (7,2)		109,8 (2790)		84,3 (2140)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	222.226,0 (56000)		25,6x78,7 (650x2000)	7.480,0 (3400)	
9,0 / 84x214-5	5	13.95 (9)		109,8 (2790)		84,3 (2140)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	238.099,3 (60000)		25,6x82,7 (650x2100)	8.360,0 (3800)	
6,5 / 84x258-3	3	10.075 (6,5)		129,5 (3290)		101,6 (2580)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	222.226,0 (56000)		25,6x72,9 (650x1850)	7.810,0 (3550)	
8,7 / 84x258-4	4	13.485 (8,7)		127,2 (3230)		101,6 (2580)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	238.099,3 (60000)		25,6x78,7 (650x2000)	8.800,0 (4000)	
10,8 / 84x258-5	5	16.740 (10,8)		127,2 (3230)		101,6 (2580)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	257.940,9 (65000)		25,6x82,7 (650x2100)	9.790,0 (4450)	
6,3 / 124x170-3	3	9.765 (6,3)	77,2 (1960)	95,7 (2430)	48,8 (1240)	66,9 (1700)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	190.479,4 (48000)	1	25,6x72,9 (650x1850)	7.150,0 (3250)	
8,4 / 124x170-4	4	13.020 (8,4)		95,7 (2430)		66,9 (1700)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	222.226,0 (56000)		25,6x78,7 (650x2000)	8.140,0 (3700)	
10,5 / 124x170-5	5	16.275 (10,5)		95,7 (2430)		66,9 (1700)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	238.099,3 (60000)		25,6x82,7 (650x2100)	9.130,0 (4150)	
8,0 / 124x214-3	3	12.400 (8)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	222.226,0 (56000)		25,6x72,9 (650x1850)	8.250,0 (3750)	
10,6 / 124x214-4	4	16.430 (10,6)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	238.099,3 (60000)		25,6x78,7 (650x2000)	9.570,0 (4350)	
13,3 / 124x214-5	5	20.615 (13,3)		113,0 (2870)		84,3 (2140)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	277.782,5 (70000)		25,6x82,7 (650x2100)	10.890,0 (4950)	
9,6 / 124x258-3	3	14.880 (9,6)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	238.099,3 (60000)		25,6x72,9 (650x1850)	9.350,0 (4250)	
12,8 / 124x258-4	4	19.840 (12,8)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	277.782,5 (70000)		25,6x78,7 (650x2000)	10.780,0 (4900)	
16,0 / 124x258-5	5	24.800 (16)		130,3 (3310)		101,6 (2580)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	297.624,1 (75000)		25,6x82,7 (650x2100)	12.210,0 (5550)	

# T.V. SYNT

	Decks		Overall dimensions		Deck useful dimensions							Installed power		Min. door clearance	Weight
	n°	in <sup>2</sup> (mq)	A in (mm)	B in (mm)	Width L in (mm)	Depth P in (mm)	Height					Thermal BTU/h (kcal/h)	Electric kW		
							1° in (mm)	2° in (mm)	3° in (mm)	4° in (mm)	5° in (mm)				
8,0 / 156x170-3	3	12.400 (8)	89,8 (2280)	95,7 (2430)	61,4 (1560)	66,9 (1700)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	222.226,0 (56000)	1	25,6x72,9 (650x1850)	8.030,0 (3650)
10,6 / 156x170-4	4	16.430 (10,6)		95,7 (2430)		66,9 (1700)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	257.940,9 (65000)		25,6x78,7 (650x2000)	9.240,0 (4200)
13,3 / 156x170-5	5	20.615 (13,3)		95,7 (2430)		66,9 (1700)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	277.782,5 (70000)		25,6x82,7 (650x2100)	10.450,0 (4750)
10,0 / 156x214-3	3	15.500 (10)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	257.940,9 (65000)		25,6x72,9 (650x1850)	9.350,0 (4250)
13,5 / 156x214-4	4	20.925 (13,5)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	297.624,1 (75000)		25,6x78,7 (650x2000)	10.890,0 (4950)
16,7 / 156x214-5	5	25.885 (16,7)		113,0 (2870)		84,3 (2140)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	317.465,7 (80000)		25,6x82,7 (650x2100)	12.430,0 (5650)
12,0 / 156x258-3	3	18.600 (12)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	277.782,5 (70000)		25,6x72,9 (650x1850)	10.670,0 (4850)
16,0 / 156x258-4	4	24.800 (16)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	317.465,7 (80000)		25,6x78,7 (650x2000)	12.430,0 (5650)
20,0 / 156x258-5	5	31.000 (20)		130,3 (3310)		101,6 (2580)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	357.148,9 (90000)		25,6x82,7 (650x2100)	13.310,0 (6050)
9,4 / 186x170-3	3	14.57 (9,4)	101,8 (2585)	95,7 (2430)	73,2 (1860)	66,9 (1700)	7,9 (200)	9,8 (250)	9,8 (250)	-	-	238.099,3 (60000)	1,2	25,6x72,9 (650x1850)	8.910,0 (4050)
12,5 / 186x170-4	4	19.375 (12,5)		95,7 (2430)		66,9 (1700)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	277.782,5 (70000)		25,6x78,7 (650x2000)	10.230,0 (4650)
15,8 / 186x170-5	5	24.490 (15,8)		95,7 (2430)		66,9 (1700)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	309.529,0 (78000)		25,6x82,7 (650x2100)	11.550,0 (5250)
12,0 / 186x214-3	3	18.600 (12)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	277.782,5 (70000)		25,6x72,9 (650x1850)	10.450,0 (4750)
16,0 / 186x214-4	4	24.800 (16)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	309.529,0 (78000)		25,6x78,7 (650x2000)	12.210,0 (5550)
20,0 / 186x214-5	5	31.000 (20)		113,0 (2870)		84,3 (2140)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	357.148,9 (90000)		25,6x82,7 (650x2100)	13.970,0 (6350)
14,0 / 186x258-3	3	21.700 (14)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	309.529,0 (78000)		25,6x72,9 (650x1850)	11.990,0 (5450)
19,0 / 186x258-4	4	29.450 (19)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	345.243,9 (87000)		25,6x78,7 (650x2000)	13.970,0 (6350)
24,0 / 186x258-5	5	37.200 (24)		130,3 (3310)		101,6 (2580)	6,7 (170)	6,7 (170)	6,7 (170)	6,7 (170)	9,8 (250)	388.895,5 (98000)		25,6x82,7 (650x2100)	15.950,0 (7250)
12,6 / 248x170-3	3	19.530 (12,6)	126,4 (3210)	95,7 (2430)	97,6 (2480)	66,9 (1700)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	277.782,5 (70000)	1,2	25,6x72,9 (650x1850)	10.670,0 (4850)
16,8 / 248x170-4	4	26.040 (16,8)		95,7 (2430)		66,9 (1700)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	317.465,7 (80000)		25,6x78,7 (650x2000)	12.320,0 (5600)
16,0 / 248x214-3	3	24.800 (16)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	309.529,0 (78000)		25,6x72,9 (650x1850)	12.650,0 (5750)
21,2 / 248x214-4	4	32.860 (21,2)		113,0 (2870)		84,3 (2140)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	388.895,5 (98000)		25,6x78,7 (650x2000)	14.850,0 (6750)
19,2 / 248x258-3	3	29.760 (19,2)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	9,8 (250)	-	-	357.148,9 (90000)		25,6x72,9 (650x1850)	14.630,0 (6650)
25,6 / 248x258-4	4	39.680 (25,6)		130,3 (3310)		101,6 (2580)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)	-	416.673,7 (105000)		25,6x78,7 (650x2000)	17.160,0 (7800)

# T.V. SYNCRON



\*\* 110" (2800 mm) with a 2 speed motor  
Available on demand model with deck width 33,1" (840 mm)

Decks	Baking sup.	Overall dimensions		Deck useful dimensions				Installed power			Min. door clearance	Weight												
				Width	Depth	Height		Thermal	Electric	Super power														
						1° in (mm)	2° in (mm)						3° in (mm)	4° in (mm)	BTU/h (kcal/h)	kW	kW							
n°	in² (mq)	A in (mm)	B in (mm)	L in (mm)	P in (mm)																			
4,2 / 84x126-4	6.510 (4,2)	54,5 (1385)	75,2 (1910)	33,1 (840)	49,6 (1260)																			
5,7 / 84x170-4	8.835 (5,7)	54,5 (1385)	92,5 (2350)												66,9 (1700)	138.891,2 (35.000)	8,7	12,8	25,6x46,5 (650x1180)	4,730 (2.150)				
7,2 / 84x214-4	11.160 (7,2)	54,5 (1385)	109,8 (2790)												84,3 (2140)						158.732,8 (40.000)	9,9	15,1	7,370 (3.350)
8,7 / 84x258-4	13.485 (8,7)	54,5 (1385)	127,2 (3230)												101,6 (2580)									
8,4 / 124x170-4	13.020 (8,4)	77,2 (1960)	95,7 (2430)	66,9 (1700)	222.226,0 (56.000)	13,9	22,6	7,920 (3.600)																
10,6 / 124x214-4	16.430 (10,6)	77,2 (1960)	113,0 (2870)	48,8 (1240)					84,3 (2140)	190.479,4 (48.000)	11,7	18,0	9,350 (4.250)											
12,8 / 124x258-4	19.840 (12,8)	77,2 (1960)	130,3 (3310)	61,4 (1560)	84,3 (2140)	7,9 (200)	7,9 (200)	7,9 (200)	9,8 (250)					238.099,3 (60.000)	15,9	26,4	10,560 (4.800)							
10,6 / 156x170-4	16.430 (10,6)	89,8 (2280)	95,7 (2430)							66,9 (1700)	222.226,0 (56.000)	13,4	21,0					9,020 (4.100)						
13,5 / 156x214-4	20.925 (13,5)	89,8 (2280)	113,0 (2870)							84,3 (2140)									257.940,9 (65.000)	15,9	26,1	10,670 (4.850)		
16,0 / 156x258-4	24.800 (16,0)	89,8 (2280)	130,3 (3310)							101,6 (2580)	277.782,5 (70.000)	18,5	31,2					12,210 (5.550)						
12,5 / 186x170-4	19.375 (12,5)	101,8 (2585)	95,7 (2430)	66,9 (1700)	238.099,3 (60.000)	13,9	22,0	10,010 (4.550)																
16,0 / 186x214-4	24.800 (16,0)	101,8 (2585)	113,0 (2870)	73,2 (1860)					84,3 (2140)	277.782,5 (70.000)	16,6	27,4	11,990 (5.450)											
19,0 / 186x258-4	29.450 (19,0)	101,8 (2585)	130,3 (3310)	101,6 (2580)	309.529,0 (78.000)	19,3	32,0	13.750 (6.250)																

AVAILABLE ENERGY: L.P.G., METHANE, DIESEL